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New Mexico's Renewable Portfolio Standard: Analysis of Existing Policy Design Elements and Compliance Obligations Beyond 2020

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By Gabriel Pacyniak[1]

I. Executive Summary

In 2016 and 2017, the New Mexico Energy Minerals and Natural Resources Department (EMNRD), along with its contractor New Mexico First, convened a process of over 70 stakeholders to develop the New Mexico Energy Roadmap.[2] The goal of the Roadmap was to detail ways to "strengthen and diversify New Mexico's energy economy to build greater resiliency."[3]

In January 2018 EMNRD issued a final Energy Roadmap identifying 15 goals and accompanying strategies.[4] Goal 2 identified in the Energy Roadmap was to "evaluate the future" of New Mexico's Renewable Portfolio Standard (RPS) as well as other renewable energy incentives and complementary rulings and policies.[5]

New Mexico's Renewable Energy Act (REA)—the law establishing the RPS—was first enacted in 2004. It requires utilities to supply an increasing portion of their electricity sales from renewable resources. Under the current REA, electric investor-owned utilities (IOUs) will be required to supply a nominal 20 percent of their electricity from renewable resources by 2020, although the actual amount will be lower because of cost caps on large customers and other exemptions. Rural electricity cooperatives are similarly required to supply a nominal 10 percent renewable electricity by 2020.

This white paper seeks to analyze two issues arising from the "Goal 2" of the Energy Roadmap, both related to New Mexico's RPS. First, the paper surveys key policy design elements of New

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[2] The process was supported by the federal Department of Energy. New Mexico First, Final Report: New Mexico Energy Roadmap 5 (2018), http://www.emnrd.state.nm.us/ECMD/documents/FINALPublicEnergyRoadmapReport_001.pdf.

[3] *Id.* at 4.

[4] *Id.* at 6.

[5] *Id.*

Mexico's RPS, compares those elements to other state RPSs, and identifies "policy considerations" that may inform legislative or regulatory action related to the RPS. Second the paper analyzes whether the current RPS statute establishes an ongoing compliance obligation for utilities after 2020.

This analysis is supported by New Mexico First and is a collaboration with the Utton Transboundary Resources Center based at the University of New Mexico School of Law.

A. Summary of Analysis of Existing REA Policy Design Elements

With regards to the first issue, this paper examines nine policy design elements of the REA and compares them with RPS policy designs in the other 28 states that have RPSs. This analysis can inform the Roadmap's strategy 2.b., which seeks to evaluate the "strengths and weaknesses of the current RPS law."

Highlights from this part of the analysis include the following: (N.B. some policy design elements are omitted in these highlights):

RPS Final Target:

- Eleven states have adopted higher RPS targets then New Mexico—some requiring 50 to 100 percent renewable energy—most through amendments to their RPS in recent years. States cite economic benefits, health benefits, fuel diversity, and GHG reductions as key reasons for adopting RPSs.
- The most comprehensive analysis to date—conducted by the National Renewable Energy Laboratory (NREL) and the Lawrence Berkeley National Laboratory (LBNL)—has found expanding RPSs on a national level would yield more benefits then costs in *all* scenarios they analyzed. These benefits include improvements to public health, reductions in water usage, and jobs. Increasing RPS targets *may* cause cost increases to the utility and/or the customer (analyses differ), but in New Mexico such increases would be limited by the REA's cost containment mechanisms. In recent years, incremental RPS costs have been found to remain flat nationally as falling REC prices have offset increasing RPS targets.
- Several analyses have found that achieving high renewable penetration is a key strategy for achieving the deep decarbonization necessary to address climate change. RPSs are the leading state policy tool to drive such changes, but New Mexico's current targets are not sufficient. In addition, other policies that expressly require greenhouse gas (GHG) reductions may be necessary as a complement to an RPS to ensure deep decarbonization in the electricity sector.

- Significantly increasing variable renewables resources on the grid poses new grid management challenges. Two major western grid studies have found that dramatically increasing renewables is feasible even with existing technologies, but that infrastructure and grid operation improvements will likely be necessary. An organized market structure (such as the Western Energy Imbalance Market (EIM)) and operational changes would, however, reduce costs and improve reliability in such scenarios.
- Increasing RPS targets could also better prepare New Mexico to comply with future federal air pollution or clean energy standards, and could better prepare New Mexico to take advantage of clean energy export opportunities on the western grid.

Scope:

- The REA applies lesser targets to rural electricity cooperatives and does not cover municipal utilities at all. Some other states do cover both of these entities, and treat all entities equally; others similarly apply lesser targets or exempt entities.

Cost Containment Mechanisms:

- The REA has two cost containment mechanisms intended to limit costs impacts: a cost cap on large electricity customers and a Reasonable Cost Threshold (RCT) that exempts utilities from additional renewable procurement requirements if incremental costs exceed three percent of retail utility sales.
- The large customer cap (LCC) is a "hard" cap that is intended to prevent large customers from "exiting" the utility; such exits could raise costs for all customers. The cap significantly reduces costs incurred by these customers.
- The large customer cap also has the effect of substantially reducing renewable procurement compared to the nominal RPS targets. In 2020, the "net" RPS for the two largest utilities is projected to be 13 and 16 percent as compared to the nominal 20 percent target. New Mexico is one of a few states with this kind of mechanism, and is unique in the degree that this reduces overall renewable procurement. Due in large part to the LCC, New Mexico is one of only three states that was significantly below its nominal target every year between 2011 and 2017.
- The RCT acts as a "soft" cap that limits additional procurement, and therefore indirectly limits bill impacts to residential customers and smaller commercial and industrial customers ("other customers"). All three IOUs are projected to be over the RCT in 2020.
- The large customer cap provides much stronger cost impact protections to large customers than the RCT does to "other customers"; "other customers" shoulder a significantly greater share of RPS compliance costs.
- The RCT level can be changed by the PRC through rulemaking, but the large customer cap level can only be changed by the legislature.

- In recent years New Mexico's RPS compliance costs as a percentage of average electricity bills are in the middle-high range compared to other states (between 2.5 and 3.5 percent). New Mexico's retail electricity rates are below average.

Resource Diversity Mechanisms:

- Many RPS states have some mechanism to promote a diversity of renewable resources (e.g., both wind *and* solar). These mechanisms can help balance the grid or promote development of less-mature technologies, but they typically make RPS compliance more expensive.
- New Mexico's Public Regulation Commission (PRC) has promulgated specific targets for wind, solar, distributed generation, and "other" resources for IOUs. The IOUs have struggled to consistently meet these targets, particularly the "other" resources target.
- The targets have likely driven some significant resource diversity that would not have otherwise occurred.
- New Mexico's "resource diversity" targets are ambitious compared to other states, but New Mexico is also unique in the degree to which utilities are regularly allowed to fall short of these targets through the operation of the RCT.

Acceptance of Out-of-State, Unbundled RECs:

- Utilities comply with the RPS by submitting tradable renewable energy certificates (RECs). PRC regulations nominally allow utilities to use RECs from other states for compliance, but in practice the PRC disfavors unbundled "paper" RECs that are not tied to renewable energy delivered into the state. This policy promotes development of in-state generation and the accompanying health and economic benefits, but also likely increases compliance costs.

Planning and Reporting:

- The REA requires annual procurement planning and reporting. Procurement planning in particular has been identified in analyses as an important element for promoting a long-term shift to renewable energy. There is no requirement that any state agency compile statewide compliance data, however, making it difficult assess statewide performance. In addition, plans and reports can be inconsistent in their form and content.

Penalties:

- New Mexico's REA is one of a few RPSs not to have a penalty mechanism that affects a utility's bottom line.

Other Considerations:

- Energy efficiency is a key complementary policy to an RPS. New Mexico is one of 26 states that has an energy efficiency resource standard, however leading states have much stronger incremental savings targets.
- Increased coordination across the western electricity grid is another key to greater renewable penetration. One potential pathway is having utilities join an organized market. The Western Energy Imbalance Market (EIM) is one such market, and Public Service Company of New Mexico (PNM) has already applied to join.
- Additional transmission infrastructure will also help integrate a higher degree of renewables onto the grid. Several transmission projects are under consideration in New Mexico, although permitting is complicated and time-consuming.

A summary table of all policy elements analyzed is included as an appendix.

B. Summary of Analysis of Current REA Compliance Obligations Beyond 2020

The second issue this paper analyzes is whether New Mexico's existing RPS statute requires continued compliance with the RPS beyond 2020. This question was raised by stakeholders in the Energy Roadmap process, and can inform the Roadmap's strategy 2.a., which seeks to "assess options and develop recommendations" related to the future of New Mexico's RPS.

This analysis applies New Mexico's law of statutory construction and concludes that a court would very likely find that both IOUs and rural electricity cooperatives are required to continue to comply with the RPS after 2020. For IOUs this conclusion is based on other provisions of the statute that demonstrate the Legislature intended to continue requiring compliance with the RPS after 2020. In particular, NMSA 1978, Section 62-16-4(D), requires utilities to continue filing forward-looking RPS compliance plans with the PRC "until 2022, and thereafter as determined necessary by the [PRC]." This conclusion is also consistent with the PRC's interpretation of the statute in its RPS implementing regulations.

For rural electricity cooperatives, this conclusion is based on the fact that the 2007 Amendment created a very similar RPS scheme for rural electricity cooperatives to the RPS scheme for IOUs. According to New Mexico law, provisions in the same or similar statute are to be "harmonized and construed together when possible." Although there is no express indication in the rural electricity cooperative RPS law that the legislature intended the RPS to apply beyond 2020, there is also no indication that the legislature intended the cooperative RPS to sunset in 2020 and therefore to divert from the structure of the RPS scheme used for the IOU RPS.

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II. Background: New Mexico's Renewable Portfolio Standard

New Mexico's RPS requires electric public utilities in New Mexico to source an increasing amount of the electricity that they supply to customers from renewable resources. Initially enacted by the New Mexico Legislature in 2004,[6] the Renewable Energy Act (REA) targets were amended in 2007.[7] Currently, the REA requires that by 2020, "renewable energy shall comprise no less than twenty percent of each public utility's total retail sales to New Mexico customers."[8]

This target applies to the three electric investor-owned utilities regulated by the New Mexico Public Regulation Commission (PRC): Public Service Company of New Mexico (PNM), El Paso Electric Company (EPE) and Southwestern Public Service Company (SPS, a subsidiary of Xcel Energy).

The 2007 amendment to the REA also enacted RPS targets for New Mexico's rural electricity distribution cooperatives, which were previously not covered by the law. The cooperatives are required to supply 10 percent of electricity from renewable resources by 2020.[9] The third type of electricity provider in New Mexico, municipal power companies, are not covered by the RPS.[10]

Under the law, renewable energy is defined to include solar, wind, and geothermal resources; newer hydropower facilities; fuel cells; and biomass facilities.[11] The law requires that utilities have a "diversified" portfolio of renewable electricity generation resources.[12] The PRC has promulgated regulations specifying that for IOUs this requirement means that at least 30 percent of the RPS target is met using wind energy, at least 20 percent using solar, and at least 5 percent using other qualifying renewable resources.[13] In addition, at least three percent of the portfolio must come from distributed generation resources, meaning renewable resources sited on a customer's premises, such as rooftop solar generation.[14]

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[6] 2004 N.M. Laws ch. 65; N.M. S.B. 43 (2004 Reg. Session). Prior to enactment of the Renewable Energy Act, the New Mexico Public Resources Commission (PRC) had established renewable energy targets by regulation in PRC Rule No. 573. At the time of the passage of the REA, these administratively established targets were being challenged in court by the El Paso Electric Company. *See* Fiscal Impact Report, S.B. 43 at 1-2, Feb. 13, 2004.

[7] 2007 N.M. Laws ch. 4; N.M. S.B. 418 § 8 (2007 Reg. Session). The REA was also amended in 2011 and 2014, although those amendments were minor in comparison to the 2007 amendment.

[8] NMSA 1978 § 62-16-4 (A)(1). A utility's total retail sales have been defined by the PRC to be a "utility's projected weather adjusted retail energy sales, measured in kwh, adjusted for projected energy efficiency reductions and adjusted further by reductions in energy sales to: (i) large nongovernmental customers that qualify under § 69-16-4(A)(2) of the REA; and (ii) customers exempted under § 6~-16-4(A)(3) of the REA." 17.9.572.7(L) NMAC.

[9] NMSA 1978 § 62-15-34 (A)(1).

[10] *C.f.* NMSA 1978 § 62-16-4 (A)(1) (exempting municipalities).

[11] Electricity generated by fossil fuels or nuclear energy does not qualify. NMSA 1978 § 62-16-3 (E).

[12] NMSA 1978 § 62-16-4 (A)(4).

[13] 17.9.572.11 NMAC (requiring utilities to generally achieve full diversification by 2011); 17.9.572.7 (G) NMAC (defining a "fully diversified" portfolio).

[14] 17.9.572.7 G. NMAC (defining "fully diversified renewable energy portfolio").

The REA allows utilities to recover any costs that are incurred to meet RPS requirements through the general rate regulation process established by New Mexico's Public Utility Act.[15] (At the time the REA was passed, purchasing renewable energy typically cost more than other types of energy; now wind energy is often one of the cheapest forms of energy on the market, and utility-scale solar energy is competitive with the least-expensive fossil fuel energy).[16]

The REA exempts from the RPS "political subdivisions of the state" and educational institutions that generate their own renewable energy, and includes two mechanisms to mitigate potential cost impacts to consumers that also have the effect of reducing RPS compliance obligations.

First, political subdivisions of the state and large educational institutions that consume over 20 million kilowatt hours (kWh) per year are exempted from RPS-related charges if they spend at least 2.5 percent of their annual electricity charges to develop their own renewable energy generation.[17] The PRC allows utilities subject to the RPS to exclude sales to these exempt customers when calculating their renewable procurement obligations.

Second, the REA caps costs to large commercial and industrial customers, and limits utility renewable procurement obligations for these customers.[18] Utilities are required to limit costs to customers consuming over 10 million kWh per year to the lower of $99,000 (adjusted for inflation) or two percent of the customer's annual electric charges.[19] For capped large customers, the statewide RPS target does not apply—the utility is only required to procure as much renewable energy as the capped dollar amount allows, regardless of the customer's total electricity consumption.

Finally, the law requires that the PRC set a "reasonable cost threshold" (RCT),[20] and the PRC has established this threshold to be three percent of a utility's annual revenues.[21] If in any given year a utility's costs in procuring renewable electricity in order to meet the RPS would exceed the threshold, it is exempted from procuring additional renewable energy in that year.[22]

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[15] NMSA 1978 § 62-16-6 (A)(4).
[16] *See* Lazard, Levelized Cost of Energy Analysis — Version 11.0 at 2 (2017), https://www.lazard.com/perspective/levelized-cost-of-energy-2017. This industry-leading analysis for the United States finds that for 2017, wind energy on a dollar per megawatt hour (MWh) basis may be lower than the most inexpensive form of fossil fuel energy—combined cycle natural gas (CCNG)—and that both wind and utility-scale solar energy are competitive with CCNG plants. Both wind and utility-scale solar beat out coal.
[17] NMSA 1978 § 62-16-4 (A)(3).
[18] NMSA 1978 § 62-16-4 (A)(3).
[19] *Id.* In 2019, the inflation-adjusted statutory cap is $113,099. Recommended Decision at 15, NMPRC Case No. 18-00158-UT.
[20] NMSA 1978 § 62-16-4 (B) (2018).
[21] 17.9.572.12 NMAC.
[22] NMSA 1978 § 62-16-4 (B) (2018).

New Mexico is not alone in enacting an RPS. Since the mid-1990s, 29 states and the District of Columbia have implemented binding RPSs.[23] Taken together, these state policies have driven the growth of renewable energy in the United States during the past two decades.[24] Many states—including New Mexico—have updated their statutes to add higher RPS targets in future years. In recent years, some states have established very ambitious standards, with a number of states adopting standards of 50 percent by 2030 and 2040 and three states setting goals of 75 to 100 percent in the long term.[25]

One consequence of this widespread adoption of RPSs is the development of a multi-state market for the trading of renewable energy certificates (RECs). These RECs allow utilities the option of complying with RPS requirements by procuring the renewable "attribute" of energy produced elsewhere.[26] New Mexico PRC rules allow utilities to use RECs for compliance issued by other states as long as the other state accepts New Mexico RECs, [27] although the PRC requires they give preference to energy generated in New Mexico if other factors are equal.[28]

[23] GALEN BARBOSE, U.S. RENEWABLES PORTFOLIO STANDARDS: 2017 ANNUAL STATUS UPDATE 6 (2017), https://emp.lbl.gov/publications/us-renewables-portfolio-standards-0.
[24] Vicki Arroyo et al., *State Innovation on Climate Change: Reducing Emissions from Key Sectors While Preparing for a New Normal*, 10 HARV. LAW POLICY REV. 385–430, 398 (2016); RYAN H. WISER ET AL., A RETROSPECTIVE ANALYSIS OF THE BENEFITS AND IMPACTS OF U.S. RENEWABLE PORTFOLIO STANDARDS: (2016), https://www.nrel.gov/docs/fy16osti/65005.pdf (last visited Oct 17, 2018) (finding fifty-eight percent "of all non-hydroelectric RE capacity built in the United States from 1998 through 2014 is being used to meet RPS requirements.").
[25] California and New York have set standards requiring 50% by 2030; Oregon requires 50% by 2040; Vermont requires 75% by 2032; Hawaii requires 100% by 2045. BARBOSE, *supra* note 23 at 6.
[26] Arroyo et al., *supra* note 24 at 399.
[27] 17.9.572.17 (I) NMAC. The REA requires that in order to qualify for RPS compliance, renewable electricity needs to be "contracted for delivery, or consumed or generated by an end-use customer of the public utility in New Mexico" *unless* the PRC determines that there is a national or regional market for exchanges RECs. NMSA 1978 § 62-16-5 (B)(1)(b). The PRC has determined that there is a national or regional market for any RECs issued by states that accept New Mexico RECs. 17.9.572.17 (I) NMAC.
[28] 17.9.572.10 (A) NMAC.

III. RPS Design Policy Considerations

The first issue this paper analyzes is how key policy features of the current RPS compare with RPS policy designs in the 29 other states, along with the District of Columbia, that have these laws, and what policy considerations attend to these design features. This can inform the Roadmap's strategy 2.b., which seeks to evaluate the "strengths and weaknesses of the current RPS law."

This analysis covers nine RPS policy design choices:

(1) the level and year of the final target;
(2) the scope of the RPS, or what entities are subject to the law;
(3) what renewable resources qualify;
(4) what cost containment mechanism are employed, if any;
(5) what are the resource diversity requirements and preferences, if any;
(6) whether the program accepts out-of-state RECs;
(7) what compliance flexibilities are allowed;
(8) what planning and reporting is required; and
(9) what, if any, penalty mechanisms are employed.

For each RPS design element, the analysis describes the REA's requirements, and contrast them with design choices made by other states. It also identifies high-level policy considerations for each design choice. Given the limited resources available for this analysis, not all policy issues are considered, and contrasts to other state policies are based on surveys of state RPSs, some of which may be several years old. This analysis also focuses chiefly on how the REA policy design choices apply to IOUs, as opposed to rural electricity cooperatives, because of resource limitations.

A summary table is included after the discussion of each policy element, and a table compiling all summary tables is included as an appendix.

A. Final Year Target

The principal policy consideration in a RPS is how high a percentage of renewable generation to require and in what year it should be required. This Section compares New Mexico's targets to those of other states and discusses some of the key policy considerations related to setting a higher final year target.

Part 1 describes the current REA targets and recent actions by other states to increase their RPS targets. Part 2 surveys national literature on the benefits and costs of higher RPS targets. Part 3 discusses the use of RPS policies by states as a tool to address climate change. Part 4 discusses literature related to the challenge of accommodating a higher degree of variable renewable energy resources on the grid. Finally, Part 5 concludes by discussing other potential regulatory and economic benefits of higher RPS targets.

1. REA Targets and Recent Actions by States to Increase RPS Targets

As of 2015, the REA requires the three IOUs in New Mexico to have renewable generation comprise at least 15 percent of their total retail sales to New Mexico customers (subject to exceptions for exempt customers and large customers described below). In 2020, renewable generation will be required to comprise at least 20 percent of total retail sales.[29]

New Mexico rural electricity cooperatives have a lesser standard of 5 percent in 2015, increasing one percent each year until it reaches 10 percent in 2020.[30]

RPS policies were first adopted in substantial numbers in the 1990s.[31] Today 29 states and the District of Columbia have RPS policies.[32] States have cited many reasons for adopting RPSs, including promoting a diverse energy mix, protecting consumers from fuel price volatility, boosting local economic development related to renewable resources, and reducing conventional and greenhouse gas pollution.[33]

As renewable energy became more prevalent over time, utilities gained experience integrating renewable energy into the grid, and prices for renewable energy dropped. As experience with these policies grew, many states amended their RPSs to add new, higher compliance requirements.[34]

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[29] NMSA 1978 § 62-16-4(A)(1).
[30] NMSA 1978 § 62-15-34(A).
[31] BARBOSE, *supra* note 23 at 6.
[32] *Id.* at 6.
[33] Lincoln L. Davies, *State Renewable Portfolio Standards: Is There a Race and is It to the Top*, 3 SAN DIEGO J. CLIM. ENERGY LAW 3, 20–24 (2011); BARRY G RABE, THE EXPANDING ROLE OF U.S. STATE RENEWABLE PORTFOLIO STANDARDS 6–7 (2006), https://www.issuelab.org/resource/race-to-the-top-the-expanding-role-of-u-s-state-renewable-portfolio-standards.html.
[34] BARBOSE, *supra* note 23 at 8.

In recent years, many states have amended their RPSs to adopt standards significantly higher than 20 percent. This includes the following 11 states:

- California enacted SB 100, a bill that increases the state's RPS target to 60 percent by 2030. The bill also establishes a 100 percent *zero carbon* energy target by 2045.[35]
- Hawaii increased its RPS of 40 percent by 2030 to 100 percent by 2045. [36]
- Vermont, which had a voluntary RPS prior to 2015, set a mandatory RPS target of 75 percent by 2032.[37]
- New York established a Renewable Energy Standard that built on its prior RPS and requires 50 percent renewable energy by 2030 in 2016.[38]
- New Jersey increased its RPS to 50 percent by 2030.[39]
- Oregon increased its RPS from 20 percent by 2020 to 50 percent by 2040.[40]
- The District of Columbia raised its RPS of 20 percent by 2020 to 50 percent by 2032.[41]
- Connecticut increased its RPS from 23 percent by 2020 to 40 percent by 2030.[42]
- Rhode Island increased its RPS to 38.5 percent by 2035.[43]
- Colorado increased its RPS to 30 percent by 2020.[44]
- Maryland increased its RPS to 25 percent by 2020.[45]

In addition, Nevada voters advanced a ballot initiative this past November that would amend the state's constitution to require 50 percent renewable energy by 2030 (another vote will be required in 2020 to enact the amendment).[46] Nevada's target is currently 25 percent by 2025. A similar ballot initiative in Arizona failed.[47]

In total, "more than half of all RPS states have raised their overall RPS targets or carve-outs since initial RPS adoption; many in recent years."[48] In contrast, only two states have weakened,

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[35] S.B. 100, 2017-2018 session (Cal. 2018).
[36] *Hawaii and Vermont Set High Renewable Portfolio Standard Targets*, U.S. ENERGY INFO. ADMIN (June 29, 2015), http://www.eia.gov/todayinenergy/detail.php?id=21852 [hereinafter *Hawaii and Vermont*].
[37] Hawaii and Vermont, supra note 18.
[38] NY PSC Order, Case 15-E-0302, Order adopting Clean Energy Standard.
[39] A.B. 3723, 218th Legislature (N.J. 2018).
[40] Or. Sen. Bill 1547 § 5 (2016).
[41] D.C. Code § 34-1431(a-1). (2017).
[42] Conn. Gen. Stat. § 16-245a et seq.
[43] GALEN BARBOSE, U.S. RENEWABLES PORTFOLIO STANDARDS: 2018 ANNUAL STATUS UPDATE 10 (2018), https://emp.lbl.gov/publications/us-renewables-portfolio-standards-1.
[44] 4 Colo. Code Regs. § 723-3-3650 et seq.
[45] Md. Public Utilities Code § 7-701 et seq.
[46] Mick Akers, *Nevada Ballot Questions: Voters Reject Breaking Up NV Energy, Pass Marsy's Law*, LAS VEGAS SUN NEWSPAPER, November 7, 2018, https://lasvegassun.com/news/2018/nov/07/nevada-ballot-questions-voters-reject-breaking-up/ (last visited Dec 4, 2018).
[47] Arizona Election Results, THE NEW YORK TIMES, November 6, 2018, https://www.nytimes.com/interactive/2018/11/06/us/elections/results-arizona-elections.html.
[48] BARBOSE, *supra* note 23 at 9.

frozen, or rescinded their RPS.[49] In 2014 Ohio froze its RPS for two years and pushed back the final target,[50] and in 2015 Kansas turned its RPS into a voluntary goal.[51]

2. Benefits and Costs of Increasing RPS Targets

NREL and LBNL have jointly completed the most comprehensive assessments of the benefits and costs of U.S. RPS policies over the past several years.[52] Such analyses are complex given the variability in state policies, the interconnected nature of the electricity grid, and the interstate market for RECs.

In a 2017 study, NREL and LBNL modeled both existing RPS policies and a hypothetical expanded RPSs scenario into the future.[53] NREL found that on a national level, monetized benefits of RPSs are projected to exceed costs in *all* scenarios they modeled, even when considering the highest cost and lowest benefit scenarios.[54]

The benefits modeled and retrospectively assessed in NREL studies include:

- **Air quality benefits:** increases in renewable energy displace electricity generation from coal- and natural gas-fired power plants that produce harmful conventional pollutants, including sulfur dioxide (SO_2), nitrogen oxides (NO_x), and particulate matter. The resulting improvements in public health—including reductions in asthma and premature deaths—are projected to provide a-five-cents-per kWh benefit under a national expanded RPS scenario.[55]
- **Reductions in GHG emissions:** the study also found that in the national expanded RPS scenario, cumulative life-cycle GHG emissions would decrease 23 percent from 2015-2030,[56] equivalent to a 5.4 cents per kWh benefit.[57]

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[49] BARBOSE, *supra* note 43 at 9.
[50] Ohio RPS, DSIRE, http://programs.dsireusa.org/system/program/detail/2934.
[51] Kansas RPS, DSIRE, http://programs.dsireusa.org/system/program/detail/3401.
[52] These include three major studies that sequentially build on each other. The first examined state level data on RPS costs and benefits for years 2010-2012, JENNY HEETER ET AL., A SURVEY OF STATE-LEVEL COST AND BENEFIT ESTIMATES OF RENEWABLE PORTFOLIO STANDARDS (2014), https://emp.lbl.gov/publications/survey-state-level-cost-and-benefit. The second was a uniform national assessment of RPS costs and benefits focused on renewable energy projects developed to meet 2013 RPS compliance requirements, WISER ET AL., *supra* note 24. The final study modeled projected costs and benefits for years 2015 and 2050 under a no RPS, existing RPS, and expanded RPS scenarios, TRIEU MAI ET AL., A PROSPECTIVE ANALYSIS OF THE COSTS, BENEFITS, AND IMPACTS OF U.S. RENEWABLE PORTFOLIO STANDARDS: (2017), https://escholarship.org/uc/item/0fv3k3m8#author (last visited Oct 2, 2018).
[53] The expanded RPS or "High RE" scenario assumed that all states would meet their compliance requirements under the now-rescinded Clean Power Plan through renewable energy. MAI ET AL., *supra* note 52 at 8.
[54] *Id.* at xi.
[55] The 5 cents per kilowatt hour figure represents the levelized benefit from the average "central" estimate. *Id.* at 30.
[56] *Id.* at 32.
[57] Estimate for a "central" trajectory for a social cost of carbon. *Id.* at 34.

The costs modeled and retrospectively assessed in the NREL studies include:

- **Electricity system costs:** The studies find that meeting renewable generation requirements under the expanded RPS scenario is projected to increase costs to electricity providers in the range of 0.26 to 1.5 cents per kWh.[58] Nationally, NREL has found that RPS compliance costs for *existing* RPSs were on average 1.6 percent of retail electricity bills in 2015 (although as described below, New Mexico IOUs reported compliance costs equal to the REA's three percent Reasonable Cost Threshold).[59] LBNL finds that costs have remained flat since 2015 because the increased demand for renewables—driven by increasing RPS targets—has been offset by falling REC prices.[60]
- **Retail electricity costs**: the incremental retail costs to consumers are also projected to increase. In the expanded RPS scenario, retail electricity costs are projected to increase 2.9 cents per kWh on average.[61]

In addition, the study also found other non-monetized benefits and impacts. These include:

- **Water use reduction:** Conventional power plants represent the second largest category of water use in the United States.[62] On a national level, shifting to a greater degree of renewable energy will reduce water withdrawals and water use. In the expanded RPS scenario, water consumption from the electric power sector is 26 percent lower in 2050 and water withdrawals are 26 percent lower in 2050.[63] These savings tend to be much more substantial in the eastern part of the U.S., where much more water is withdrawn and used by the power sector.[64]
- **Job increases**: The NREL report found that the expanded RPS scenario would lead to a nationwide 46 percent boost in renewable energy-related jobs compared to a no RPS scenario over the 2015-2050 period.[65] This is not a *net* statistic, however—the report does not evaluate how many of these increases would be offset by jobs lost related to fossil fuel power generation.[66]
- **Natural gas price reduction impacts**: The NREL report finds that higher national RPS goals would lower demand for natural gas, and therefore lead to lower natural gas prices. This would reduce electricity consumer costs, but would also reduce revenues for the natural gas industry.

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[58] *Id.* at 23.
[59] BARBOSE, *supra* note 23 at 35.
[60] BARBOSE, *supra* note 43 at 31.
[61] MAI ET AL., *supra* note 52 at 24.
[62] CHERYL A. DIETER ET AL., ESTIMATED USE OF WATER IN THE UNITED STATES IN 2015 9 (2018), http://pubs.er.usgs.gov/publication/cir1441 (last visited Oct 17, 2018).
[63] MAI ET AL., *supra* note 52 at 35.
[64] *Id.* at 37–38.
[65] *Id.* at 39.
[66] MAI ET AL., *supra* note 52.

A 2017 Union of Concerned Scientists' study examined a potential increase in New Mexico's RPS to 80 percent by 2040.[67] The study found that such an expansion could drive $7.2 billion in new capital investments by 2040; support 590 jobs annually by 2030; create $21 million in tax revenue by 2030; and result in up to $9.5 million in lease payments to land owners by 2030.[68] The report found only minor near-term impacts on consumer costs, and cost *reductions* in the long term. By 2030, consumer costs rise 0.2 percent, or 15 cents per month, compared to a business as usual. By 2040, consumer costs are about 0.2 percent lower, or 17 cents per month.[69] The study also found cumulative health benefits from reduction of conventional pollutants valued at $305 million through 2030 and GHG reduction benefits valued at $2.96 billion in the same time frame.[70]

In short, the monetized benefits of expanding RPS policies have been found to exceed costs, and include improved health outcomes, reduced water use, reduced GHG emissions, and job growth.

Setting higher RPS targets *may* lead to higher cost impacts for consumers, however this is dependent on both market developments and the type of cost-containment measures included in the policy. In recent years, costs have remained flat despite increasing RPS targets because of falling renewable prices.[71] As described below, New Mexico's RPS as currently implemented has relatively restrictive cost containment measures compared to other states, meaning that the RPS constrains the incremental cost impact that can be passed onto consumers.

3. Increasing RPS Targets as a Strategy to Address Climate Change

States adopting higher renewable targets increasingly cite addressing climate change as a key policy rationale.[72]

Many studies have found that reducing GHG emissions to prevent the worst harms of climate change will require a "near-complete decarbonization of electricity," and that dramatic increases in renewable energy by mid-century are a key strategy to achieve this decarbonization.

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[67] UNION OF CONCERNED SCIENTISTS, COMMITTING TO RENEWABLES IN NEW MEXICO (2017), https://www.ucsusa.org/clean-energy/increase-renewable-energy/new-mexico-renewables#.W82xqUtTnIU.
[68] *Id.* at 8–10.
[69] According to the report, the near-term cost increase is driven by responding to a coal plant retirement and the longer term cost decrease is driven by the reduced need to pay for fossil fuel. *Id.* at 10.
[70] *Id.* at 11.
[71] BARBOSE, *supra* note 43 at 31.
[72] *See e.g.,* Liam Dillon, *California to rely on 100% clean electricity by 2045 under bill signed by Gov. Jerry Brown*, L.A. TIMES, September 10, 2018, http://www.latimes.com/politics/la-pol-ca-renewable-energy-law-signed-20180910-story.html (last visited Oct 18, 2018); Governor Cuomo Announces Establishment of Clean Energy Standard that Mandates 50 Percent Renewables by 2030, WEBSITE OF NEW YORK STATE GOVERNOR ANDREW M. CUOMO (2016), https://www.governor.ny.gov/news/governor-cuomo-announces-establishment-clean-energy-standard-mandates-50-percent-renewables (last visited Oct 18, 2018).

For example, the United Nation's Intergovernmental Panel on Climate Change (IPCC)—which draws on the work of thousands of leading scientists around the world and whose work is subject to review by 195 countries—found in its comprehensive 2014 report that decarbonizing electricity generation "is a key component of cost effective mitigation strategies."[73] The report found that in the majority of scenarios that were successful in preventing the worst harms of climate change, "low-carbon electricity supply (comprising renewable energy (RE), nuclear and CCS) increases from the current share of approximately 30% to more than 80% by 2050, and fossil fuel power generation without CCS is phased out almost entirely by 2100."[74]

A more recent report focused on limiting warming to 1.5 degrees Celsius found that the most likely pathways to meet this temperature target would include boosting renewable electricity to supply between 70 to 85 percent of global demand by 2050.[75]

Similarly, in 2016 the United States developed a "mid-century strategy" to achieve the levels of deep decarbonization required to limit global warming and submitted this strategy to the IPCC.[76] The strategy identified the "near-complete decarbonization of electricity" by 2050 as one of the three pillars of the mid-century strategy.[77]

Decarbonization of the electric sector requires shifting generation to some combination of three types of technologies: renewable energy (resources promoted by an RPS); nuclear energy; and fossil-fuel or bio-energy generating resources that use carbon capture and sequestration.[78] A number of studies show that deep decarbonization of the electricity sector could be achieved under a variety of combinations of these resources.[79] At this time, however, the levelized cost of adding renewable energy generation is significantly lower than either nuclear energy or fossil-fuel fired generation options with CCS.[80]

Achieving deep decarbonization will likely require not only decarbonizing the electricity sector, but also electrifying more of the economy—for example by switching to electric vehicles and electric heating.[81] So not only will the world need to transition to clean sources of electricity, it

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[73] INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2014: SUMMARY FOR POLICYMAKERS, CONTRIBUTION OF WORKING GROUP III TO THE FIFTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 22 (2014), http://www.ipcc.ch/report/ar5/wg3/.

[74] *Id.* at 22.

[75] INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, GLOBAL WARMING OF 1.5 °C: SUMMARY FOR POLICYMAKERS SPM-21 (2018), http://www.ipcc.ch/report/sr15/. The 70-85% number is for the interquartile range of 1.5 degree pathways. Note that this is for 1.5 degree Celsius pathways "with no or limited overshoot," meaning that they do not assume that the scenario will temporarily overshoot the temperature goal.

[76] THE WHITE HOUSE, UNITED STATES MID-CENTURY STRATEGY FOR DEEP DECARBONIZATION (2016), https://unfccc.int/files/focus/long-term_strategies/application/pdf/mid_century_strategy_report-final_red.pdf.

[77] *Id.* at 42.

[78] *Id.* at 47.

[79] *Id.* at 47–48.; INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, *supra* note 73 at 5.

[80] U.S. ENERGY INFORMATION ADMINISTRATION, LEVELIZED COST AND LEVELIZED AVOIDED COST OF NEW GENERATION RESOURCES IN THE ANNUAL ENERGY OUTLOOK 2018 5 (2018), https://www.energy.gov/sites/prod/files/2015/08/f25/LCOE.pdf.

[81] *See e.g.,* THE WHITE HOUSE, *supra* note 76 at 48.

will also likely need to produce more electricity to power other sectors that have traditionally relied on fossil fuels.

State RPSs have historically been the primary policy driver for increasing renewable energy in the U.S., and they continue to be one of the top policy drivers even as renewable energy prices drop. RPSs are not the only policy driver; other drivers include federal and state tax credits, renewable energy technology cost declines, and corporate procurement requirements.[82] Nevertheless, LBNL analyses find that historically RPSs are responsible for approximately 56 percent of the renewable energy that has been developed in the United States since 2000.[83]

A number of studies show that by driving increases in renewable energy, RPSs have also resulted in reduced GHG emissions from the power sector and are projected to drive further reductions in the future. For example, a 2016 LBNL study found that state RPSs in 2013 drove a three percent reduction in U.S. GHG emissions from the power sector in that year.[84] A projected high RPS scenario was found to achieve a 27 percent reduction in GHG emissions by 2030 as compared to a no RPS scenario.[85]

While state RPSs have been a primary driver of the shift to renewable energy, they may not be sufficient to achieve deep decarbonization of the electricity sector alone. This is because they do not directly require reductions of GHG emissions, and it is possible for GHG emissions from the power sector to rise on an absolute basis even as the proportion of electricity generated by renewable energy increases. GHG emissions from the electricity sector could *increase* under an RPS if electricity loads increase—for example because of widespread adoption of electric vehicles—and the additional demand is met in significant part by additional fossil-fuel generation, such as by new natural gas power plants. Similarly, GHG emissions could also increase if nuclear facilities were to retire and their generation were to be replaced in significant part by fossil-fuel generation.[86] For these reasons, states with GHG reduction goals have typically combined RPSs with policies that directly require GHG reductions, such as a cap-and-trade policies.[87]

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[82] BARBOSE, *supra* note 23 at 26.
[83] *Id.* at 14.
[84] WISER ET AL., *supra* note 24 at 31.
[85] MAI ET AL., *supra* note 52 at 32.
[86] At least nine nuclear plants have announced plans to retire by 2025, some because they are too expensive to operate without a carbon policy in place. *See* Future of U.S. nuclear power fleet depends mostly on natural gas prices, carbon policies, U.S. ENERGY INFORMATION ADMINISTRATION (EIA), https://www.eia.gov/todayinenergy/detail.php?id=36112 (last visited Dec 5, 2018).
[87] *See e.g.,* descriptions of state strategies to reduce GHG emissions in GABRIEL PACYNIAK ET AL., AN EXAMINATION OF POLICY OPTIONS FOR ACHIEVING GREENHOUSE GAS EMISSIONS REDUCTION IN NEW JERSEY (2017), https://climatechange.rutgers.edu/resources/options-for-ghg-emissions-reductions-in-nj.; *see also* Arroyo et al., *supra* note 24.

Nevertheless, in the absence of comprehensive federal clean energy or climate policy, state RPSs continue to be one of the best policy tools available for achieving the level of renewable deployment necessary to decarbonize the electricity sector.

4. Feasibility of High Levels of Renewable Penetration

One of the policy questions related to requiring a high level of renewables is how variable generation resources—resources like wind and solar that ramp up or down depending on the weather—can be integrated into the grid at high levels of penetration. This is especially true given that the electricity grid has historically operated largely without energy storage, meaning that electricity demand and supply are required to be balanced in real time.

A variety of studies—combined with real world experience—have found that high renewable penetration is feasible with existing technologies, although additional infrastructure and grid management tools will likely be necessary.

For example, a 2012 NREL study found that "renewable electricity generation from technologies that are commercially available today, in combination with a more flexible electric system, is more than adequate to supply 80% of total U.S. electricity generation in 2050 while meeting electricity demand on an hourly basis in every region of the United States."[88] A 2015 follow-on study that focused specifically on the western grid, including New Mexico, similarly found that operation of the Western grid is feasible with renewable generation levels in the range of 80 to 90 percent.[89] Similarly, an earlier 2010 study found that 35 percent renewable generation could be met in a western sub-region, including New Mexico.[90]

These studies, however, also identify changes to grid infrastructure and operations that would reduce costs and improve reliability, and that would be necessary in very high renewable scenarios. In the western grid, these changes would include increased balancing authority cooperation or an organized market structure and sub-hourly scheduling of generation.[91] (As discussed in Section III.J.2 below, some of these changes could occur through expansion of the Western Energy Imbalance Market). Other beneficial changes include additional interstate transmission infrastructure, more flexibility in generation supply and in the ability to reduce electricity demand, and incorporating state-of-the-art solar and wind forecasting.[92] The further development and deployment of energy storage technology is also helpful.[93]

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[88] TRIEU MAI ET AL., RENEWABLE ELECTRICITY FUTURES STUDY: EXECUTIVE SUMMARY iii (2012), https://www.nrel.gov/analysis/re-futures.html.

[89] Gregory Brinkman, *Renewable Electricity Futures: Operational Analysis of the Western Interconnection at Very High Renewable Penetrations*, RENEW. ENERGY 53, 2 (2015).

[90] GE ENERGY & NATIONAL RENEWABLE ENERGY LABORATORY, WESTERN WIND AND SOLAR INTEGRATION STUDY (2010), https://www.nrel.gov/grid/wwsis.html (last visited Oct 18, 2018).

[91] *Id.* at 17–19.

[92] MAI ET AL., *supra* note 88 at 3; GE ENERGY AND NATIONAL RENEWABLE ENERGY LABORATORY, *supra* note 90 at 20.

[93] MAI ET AL., *supra* note 88 at 22.

States that are seeking to decarbonize the electricity system have recognized that renewable energy is not the only technology that can be used to fully decarbonize the electricity system, although it is usually viewed as the primary strategy. Most notably, California has set both a 60 percent RPS and a 100 percent clean energy target, reflecting that while its goal is a complete decarbonization of the electricity system, nuclear generation and fossil or bio-energy with CCS may also play a role in getting from 60 to 100 percent clean energy. Other states—including New York—have established policies that support nuclear energy as one element of a shift to a decarbonized electricity system.[94]

5. Other Potential Benefits to Increasing RPS Target

Setting a higher RPS target can also better prepare New Mexico for likely future GHG or clean energy regulation. Despite the Trump Administration's proposed weakening of GHG standards, most utility executives expect and are preparing for stricter future GHG or federal clean energy policies.[95]

Setting higher targets can also better prepare New Mexico to take advantage of expected regionalization in the Western electricity market. In particular, California will need to import increasing quantities of zero-emission electricity to meet its Clean Energy Policies (including both its GHG cap-and-trade program and its RPS). If New Mexico develops the renewable energy generation and transmission resources to provide this energy, it can be poised to become a renewable energy exporter.[96]

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[94] Vivian Yee, *Nuclear Subsidies Are Key Part of New York's Clean-Energy Plan*, THE NEW YORK TIMES, December 21, 2017, https://www.nytimes.com/2016/07/21/nyregion/nuclear-subsidies-new-york-clean-energy-plan.html (last visited Oct 22, 2018). A recent study has also show that nuclear power plants can operate more flexibly to complement variable renewable resources at very high level of penetration. J. D. Jenkins et al., *The benefits of nuclear flexibility in power system operations with renewable energy*, 222 APPL. ENERGY 872–884 (2018).

[95] *See e.g.,* AMY GAHRAN, 2018 STATE OF THE ELECTRIC UTILITY SURVEY, https://content.industrydive.com/state-of-the-electric-utility-2018/ (utilities plan to continue investments in clean energy and a substantial majority identify a preference for federal carbon regulation).

[96] The environmental attribute from renewable energy may not be double-counted for the purposes of complying with RPS programs – renewable energy generated for compliance with New Mexico's RPS can not also be used for compliance with California's RPS. Under current regulations, however, energy generated from New Mexico could be used as a zero-emission energy resource for purposes of California's Cap and Trade program, while the RECs from that generation could be used for compliance with New Mexico's RPS. At least one organization has argued that this is a form of double counting, however, and should not be allowed. *See* Center for Resource Solutions, Comments of Center for Resource Solutions (CRS) on IEMAC Meeting Materials for Sept. 21, 2018.

Summary of Considerations Related to RPS Final Year Target:

Design Element	Current REA	Contrast to Other States	Considerations
Final Year Target	**IOUs:** 20% by 2020 **Coops:** 10% by 2020	[Main or IOU target only] HI: 100% by 2045 CA: 60% by 2030* VT: 75% by 2032 NY: 50% by 2030 NJ: 50% by 2030 OR: 50% by 2040 DC: 50% by 2032 CT: 40% by 2030 RI: 38.5% by 2035 CO: 30% by 2020 MD: 25% by 2020 *CA also 100% zero carbon by 2045 NV voters advanced ballot measure to require 50% by 2030 (2nd vote required)	• Benefits of expanding RPSs policies have been found to exceed costs, and include improved health outcomes, reduced water use, and job growth • Addressing climate change will require a "near-complete decarbonization of electricity," including a dramatic shift to renewable energy. New Mexico's current target is not sufficient to put the state on that trajectory. • RPSs have driven have driven more than 50 percent of renewable growth in the U.S., and continue to be a key policy driver. • Setting higher targets may lead to higher cost impacts (analyses are mixed), however this is dependent on both market developments and the type of cost-containment measures included in the policy (see Section III.D.) • Setting higher targets will lead to new challenges in grid management given the variability of wind and solar resources; changes to grid management, infrastructure, and operations would help integration • Setting higher RPS targets can better prepare New Mexico for likely future federal GHG or clean energy regulation • Setting higher targets can better prepare New Mexico to take advantage of expected regionalization in the Western electricity market and increase clean energy exports

B. Scope – What Load Serving Entities are Required to Comply with the RPS?

A second key policy design question is what types of electric utilities should be subject to a state RPS. In New Mexico, there are three types of utilities: large IOUs, rural electricity cooperatives, and municipal power companies.

As described above, New Mexico's RPS establishes one set of targets for the state's three IOUs and a less stringent set of targets for rural electricity cooperatives.[97]

There is no RPS obligation for the municipal power companies that serve Aztec, Farmington, Gallup, Los Alamos County, Raton, Springer, and Truth or Consequences.[98]

Most rural electricity distribution cooperatives in New Mexico receive the bulk of their electricity from a power supply cooperative. This is a "cooperative of cooperatives" established by the distribution cooperatives to provide generation and transmission services.[99] The distribution cooperatives enter into long-term contracts with the power supply cooperative, and the contracts typically require that the distribution cooperatives procure at least 95 percent of their electricity from the power supply cooperative.[100] Often most of the RPS compliance obligation for rural electricity cooperatives falls on the power supply cooperative.[101]

Like New Mexico, Colorado has a less ambitious standard for rural electricity cooperatives compared to IOUs, although Colorado's standard for coops was increased to 20 percent by

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[97] NMSA 1978 § 62-16-4; NMSA 1978 § 62-15-34(A) .

[98] *See Id.* List of municipal utilities from *Public Power in New Mexico*, American Public Power Association, https://www.publicpower.org/public-power-new-mexico.

[99] The power supply cooperatives that serve New Mexico electricity distribution cooperatives are Tri-State Generation and Transmission Association, Inc.; Western Farmers Electric Cooperative; and Arizona Electric Power Cooperative.

[100] *See* Federal Pre-emption in Rate Making in Connection With Power Supply Borrowers, 55 Fed. Reg. 12194, 12195 (proposed April 2, 1990); Power Supply Contract between Delta Montrose Electric Association and Tri-State Generation and Transmission Association at Provision 1, Exhibit B, Petition of Delta Montrose Electric Assoc., Delta-Montrose Electric Assoc., 151 FERC ¶ 61,238, *reh'g denied*, 153 FERC ¶ 61,028 (2015).

[101] Cooperatives may procure their own renewable energy to meet an RPS as long as it is within the self-generation limit of their power supply contract. *See e.g.,* Tri-State Generation and Transmission Association Policy 117, Member System Local Renewable Project Renewable Energy Credit Purchase Policy, https://www.lpea.com/sites/lpea/files/pdf/policies/TriState/TSGTBP117.pdf (Providing that member distribution cooperatives may develop local renewable projects under five percent cap and sell credits to Tri-State to meet an RPS, or if they decline to do so Tri-State will procure required renewable electricity or RECs.). In addition, a 2015 Federal Energy Regulatory Commission (FERC) order held that small renewable generation facilities that qualify under the Public Utility Regulatory Policies Act (PURPA) Section 210 have a right to interconnect and sell power to a distribution cooperative that supercedes a power supply contract with a power supply cooperative. Delta-Montrose Electric Assoc., 151 FERC ¶ 61,238, at 62,578-79, *reh'g denied*, 153 FERC ¶ 61,028 (2015).

2020 in 2013.[102] Oregon's RPS also creates lesser standards for smaller utilities, based on the utility's share of the state's electricity load.[103]

Many states do not require municipal power companies to meet RPS standards and some states have also excluded rural electricity cooperatives.[104] One reason given for excluding these sources is that they are self-regulated, meaning that they are subject to municipal boards or city councils that can impose RPS standards or similar policies on these utilities. [105] At least one analysis argues that political factors are the main reason for exempting these utilities or providing weaker standards.[106]

The State Federal RPS Collaborative—a forum of state and federal officials that work on RPSs—recommends that "State RPS program costs should be shared as fairly and as broadly among all ratepayers as possible, as the benefits of increased renewable energy production will accrue to all energy customers and the public at large." It specifically recommends that an RPS "should apply to all load serving entities—investor owned, municipal, and electric cooperatives, including suppliers of last resort."[107]

[102] Colorado S.B. 252. North Carolina also has a slightly lower standard for rural electricity cooperatives and municipal utilities as compared to investor-owned utilities: 10% by 2018 vs. 12.5% by 2021. BARBOSE, *supra* note 23 at 6.

[103] Oregon RPS Program Overview, DSIRE, http://programs.dsireusa.org/system/program/detail/2594 (last visited Oct 19, 2018).

[104] According to a 2013 study, 11 states completely exempt cooperatives and municipal power companies, while six have reduced requirements. Miriam Fischlein & Timothy M. Smith, *Revisiting renewable portfolio standard effectiveness: policy design and outcome specification matter*, 46 POLICY SCI. 277–310, 281 (2013).

[105] WARREN LEON, DESIGNING THE RIGHT RPS: A GUIDE TO SELECTING GOALS AND PROGRAM OPTIONS FOR A RENEWABLE PORTFOLIO STANDARD 44 (2012), https://www.cleanegroup.org/new-cesa-report-designing-the-right-rps/.

[106] Fischlein and Smith, *supra* note 104 at 281.

[107] LEON, *supra* note 105 at 44.

Summary of Considerations Related to RPS Scope:

Design Element	Current REA	Contrast to Other States	Considerations
Scope: What Load Serving Entities Must Comply?	**RPS covers:** IOUs (PNM, EPE, SPS) Rural electricity cooperatives (but have less strict target) **Not covered:** Municipal utilities	CO, NC also have lesser standards for rural coops, though CO increased its standard to 20% by 2020 in 2013 Many states exempt municipal utilities; some exempt coops	• Different types of entities are subject to different levels of state regulatory oversight; municipal utilities are typically overseen by municipal boards or councils • The State Federal RPS Collaborative urges that an RPS—and it costs—should apply to all ratepayers as benefits will accrue to all

C. Qualifying Renewable Resources

A third policy design question is what resources should be allowed to count toward RPS compliance.

The REA defines renewable energy to include solar, wind, and geothermal resources; newer hydropower facilities; fuel cells; and biomass facilities (including landfill gas).[108] This definition applies to the RPS obligations for both IOUs and rural electricity cooperatives.[109]

New Mexico's RPS has a fairly broad definition of eligible renewable resources. For example, some other states do not allow biogas, geothermal, or new hydropower facilities to qualify.[110]

One resource that does not qualify for New Mexico's REA, but that is allowed by some other state RPSs, is power from municipal solid waste facilities (i.e., waste to energy).[111]

New Mexico also does not allow energy from hydropower facilities brought into service prior to 2007 to be eligible; many other states do allow pre-existing hydropower facilities.[112] Since power from older hydropower facilities is fairly fixed and allocated, this policy design decision was important for establishing the baseline for New Mexico's RPS—how much *new* renewable energy would need to be procured to meet initial targets. The purpose of extending an RPS is to require additional development of new renewable resources beyond the baseline, and therefore there would be little reason to revisit this element.

Several states include in their RPS policies other *non-renewable* resources that the state wants to promote.[113]

For example, at least eight states allow energy efficiency to be used to comply with RPS requirements, usually with some cap on the maximum level of compliance that it can be used to achieve. Implementing energy efficiency measures to reduce electricity demand is another tool to decarbonize the electricity grid and has the benefit of reducing consumer electricity bills. But many states, including New Mexico,[114] have stand-alone energy efficiency resource standards (EERS) that promote energy efficiency.[115] Although energy efficiency standards are a very important complementary policy—and a key component of a high renewable energy

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[108] Electricity generated by fossil fuels or nuclear energy does not qualify. NMSA 1978 § 62-16-3 (E).
[109] *Id.*, NMSA 1978 § 62-15-37(B).
[110] Fischlein and Smith, *supra* note 104 at 283–284.
[111] Fischlein and Smith, *supra* note 104.
[112] *Id.* at 281–83.
[113] Four states even allow energy from nuclear or advanced fossil fuel power plants to count toward their standards. *Id.* at 285.
[114] Efficient Use of Energy Act, NMSA 1978 § 62-17-1 et seq.
[115] Summary Map, Energy Efficiency Resource Standards and Goals, DSIRE (2018), http://ncsolarcen-prod.s3.amazonaws.com/wp-content/uploads/2016/10/Energy-Efficiency-Resource-Standards.pdf.

future (*see* discussion below at III.J.1)—there is no clear benefit to incorporating efficiency into an RPS versus mandating it through a stand-alone EERS.

Summary of Qualifying Renewable Resources:

Design Element	Current REA	Contrast to Other States	Considerations
Qualifying Renewable Resources	Eligible resources: • solar • wind • geothermal • new hydropower • fuel cells • biomass	NM has relatively broad eligibility Some other states do not allow geothermal, biomass Some states do allow municipal solid waste power, energy efficiency	• New Mexico's broad resource eligibility provides compliance flexibility to utilities, subject to the diversity constraint • New Mexico has a stand-alone energy efficiency resource standard; some other states combine this with their RPS. Energy efficiency is a very important complement to renewable energy, but there is no clear benefit to having a combined RPS/EERS over two stand alone programs

D. Cost Containment

A fourth design question is whether to include mechanisms to limit the incremental costs of complying with an RPS. These mechanisms usually aim to directly or indirectly limit rate impacts to customers. Most state RPSs have a cost containment mechanism that exempts utilities from procuring renewable energy to meet the full RPS target if doing so would exceed a cost threshold. If they are triggered, these mechanisms reduce the overall amount of renewable energy procured under the RPS.

In states with traditionally regulated electricity markets, such as New Mexico, a common cost containment mechanism is a cap on the annual aggregate incremental cost of procuring renewables incurred by the utility to meet the RPS.[116] These caps are often expressed as a percent of total utility's retail revenue.

In states with competitive retail electricity markets, a more common cost-containment mechanism is the alternative compliance payment (ACP), which allows a utility to pay a set dollar-per-MWh fee instead of procuring RECs.[117] The ACP acts as an "escape valve" if REC prices get too high.

[116] HEETER ET AL., *supra* note 52 at 45.
[117] *Id.* at 45.

New Mexico's REA includes two cost containment mechanisms for IOUs: a cap on costs to large individual electricity consumers (the large customer cap or LCC) and a limit on incremental procurement costs (the Reasonable Cost Threshold or RCT).

New Mexico's RPS for rural electricity cooperatives has in place similar cost containment mechanisms—an RCT and caps on customer bills—though there are some differences.

New Mexico's REA also exempts from renewable energy charges large government and education customers that invest into on-site renewable procurement, but this functions more as a voluntary shift of RPS compliance obligations to other government entities instead of a cost-containment mechanism.[118]

As described below, New Mexico is unique among states in that its large customer cap substantially limits costs to—and RPS procurement on behalf of—large customers. It has the effect of significantly reducing overall renewable energy procurement under the RPS.

Part 1 of this section describes the operation of the large customer cap and how it significantly limits both large customer costs and renewable procurement. Part 2 describes the operation of the RCT, which is a soft cap that limits additional procurements of new resources. Part 3 highlights how the different structures of these two mechanisms result in a higher degree of cost protection for large customers than for residential or small commercial and industrial customers. Part 4 briefly describes the REA cost containment measures for rural electricity cooperatives. Finally, Part 5 compares the measures to cost containment mechanisms in other states.

[118] Exempt customers are large government or educational institution customers that certify in a given year that they will spend at least 2.5 percent of their annual electricity expenditures to develop customer owed renewable generation. NMSA 1978 § 62-16-4 (A)(3). The utility that provides electricity service to these customers does not charge these customers for renewable procurement under the RPS and excludes electricity sales to these exempt customers in determining its overall renewable electricity procurement obligation under the RPS. 17.9.572.16 NMAC; *see also* Recommended Decision at 8-9, NMPRC Case No. 18-00158-UT (in calculating RPS obligation utility is to exclude sales to exempt customers). Exempt customers therefore reduce the amount that the utility spends on procurement overall. However, this exemption does not operate primarily as a cost containment mechanism because it in effect allows large customers to voluntarily assume the renewable energy procurement obligation from the utility. The exempt customers agree to invest an amount equal to at least 2.5 percent of their annual electricity charges—close to the 3 percent RCT that serves a limit on the utility's procurement—into developing renewable energy in that year.

1. Large Customer Cap on IOU RPS

The REA first caps costs to large commercial and industrial customers.[119] The legislature enacted these caps because large customers "may have the capacity to self-generate their energy needs or simply close their plants in areas where energy costs are high." Where large customers "exit" a utility's service in this way, "utility rates have to be raised even further for remaining customers, which exacerbates the potential for other customer exits."[120]

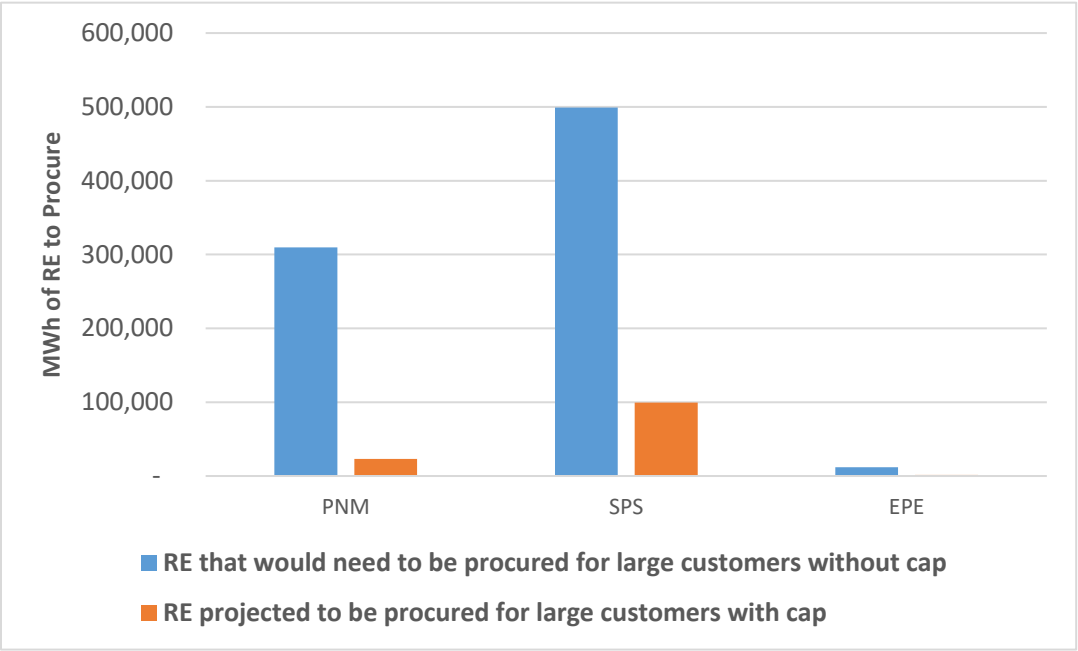
Beginning in 2012, costs to large customers (i.e., those with consumption of over 10 million kWh per year) are capped at the lower of (1) $99,000 a year (adjusted for inflation),[121] or (2) two percent of that customer's annual electric charges.[122] A utility is not required to procure renewable energy for large customers under the RPS once the incremental cost of such procurement exceeds the large customer cap.[123] Importantly, these cap levels are set by the statute, not by PRC rulemaking.

In practice, the large customer cap has the effect of substantially reducing the costs that would otherwise be incurred by large customers and the amount of renewable energy procured on behalf of these customers. It also has the effect of significantly reducing the overall renewable energy procured by the utility to meet the RPS.

For example, without the cap, SPS would be required to procure nearly 500,000 MWh of RECs for its 46 large customers in 2020 (i.e., 20 percent of forecast sales). With the cap, SPS forecasts needing to procure just under 100,000 MWh, or approximately one fifth of what would have been its RPS obligation for large customers without the cap. This amounts to procuring four percent renewable electricity for these large customers as compared to their total consumption. PNM similarly projects being required to procure just 1.5 percent renewable electricity for its 27 large customers in 2020, and EPE 2.4 percent for its 4 large customers. (*See* Figure 1; Table 1, Rows 4, 7, and 8).

[119] NMSA 1978 § 62-16-4 (A)(2).
[120] *N.M. AG v. N.M. Pub. Regulation Comm'n*, 2015-NMSC-032 at ¶30.
[121] In 2019, the inflation-adjusted statutory cap is $113,099. *See* Recommended Decision at 15, NMPRC Case No. 18-00158-UT,
[122] NMSA 1978 § 62-16-4 (A)(2) (2018).
[123] The New Mexico Supreme Court held in 2015 that the PRC has "discretion to decline to reduce renewable energy procurement, even when large customer cap costs arise." *N.M. AG v. N.M. Pub. Regulation Comm'n*, 2015-NMSC-032 at ¶44.

Figure 1: 2020 Large Customer 20% Procurement v. Projected Procurement Under Large Customer Cap[124]



The cap significantly reduces costs charged to these large customers as well. Across the three IOUs, the large customer cap is projected to result in 2020 procurement costs of between 1.2 and 2 percent of the total projected electricity sales of these customers. (*See* Table 1, Rows 5 and 6). In contrast, utility procurements for all other customers tends to be close to—and can exceed—3 percent of projected electricity sales to those customers, the level of the reasonable cost threshold.[125]

Because large customers make up a substantial share of total sales for SPS and PNM—41 percent and 18 percent respectively—the large customer adjustment has the effect of significantly reducing the actual percentage of the renewable electricity that is required in these utilities' overall electricity portfolios.[126] (*See* Table 1, Rows 1, 2, 3).

For example, while the nominal RPS goal in 2020 is 20 percent, SPS forecasts needing to only procure renewable energy equal to 13.4 percent of its projected sales in that year because of the large customer cap.[127] PNM similarly forecasts needing to only procure 16.1 percent

[124] Data compiled from same sources as for Table 1.
[125] *See* discussion *supra* at Section II.D.2.
[126] *See generally* Direct Testimony of Heidi M. Pitts on behalf of New Mexico Public Regulation Commission Utility Division Staff at 18-22, NMPRC Case No. 18-00158-UT, PNM Plan Year 2019 REA Plan.
[127] Calculated based on Recommended Decision at 28, NMPRC Case No. 18-00201-UT, SPS Plan Year 2019 REA Plan.

renewable energy in 2020.[128] (EPE's four large customers make up less than four percent of the utility's total sales, and therefore the large customer cap has less impact on EPE's overall RPS obligations).[129]

Table 1: Projected IOU Large Customer Cap for 2020[130]

		PNM	SPS	EPE
1	Total Projected Electricity Sales in 2020 for All Customers	8,488,036 MWh	6,045,805 MWh	1,632,713 MWh
2	# of Large Customers	27	46	4
3	Large Customers Sales as Percentage of Total Utility Sales	18.2%	41.3%	3.7%
4	MWh of Renewable Energy That Would Need to Be Procured for Large Customers Without the Cap	309,709 MWh	499,096 MWh	11,972 MWh
5	Aggregate $ Cap on RPS Costs to Large Customers (Large Customer Adjustment)	$ 980,118	$ 2,170,146	$ 85,916
6	Cap as % of Aggregate Large Customer Revenue	1.2%	1.8%	2.0%
7	MWh of Renewable Energy to Be Procured for Large Customers With Cap	23,081 MWh	99,515 MWh	1,412 MWh
8	Large Customer Renewable Procurement (MWh) With Cap as Percentage of Large Customer Sales (MWh)	1.5%	4.0%	2.4%
9	Net RPS for Utility as a Whole (MWh required to be procured as % of Total Forecast sales for all customers)	16.1%	13.4%	19.4%

[128] Recommended Decision at 14, NMPRC Case No. 18-00158-UT, PNM Plan Year 2019 REA Plan. In PNM's case, a small percentage of reduction in actual compliance is due to its two exempt customers, the University of New Mexico and the Albuquerque Bernalillo County Water Utility Authority. *Id.*

[129] EPE Application at Exhibits MC-2 and OG-1, NMPRC Case No. 18-00109-UT, EPE Plan Year 2019 REA Plan.

[130] Figures based on data taken from Recommended Decision at 28 and SPS Application Exhibits RML-1 and RML-2, NMPRC Case No. 18-00201-UT, SPS Plan Year 2019 REA Plan; Recommended Decision at 14 and PNM Application Exhibit SG-2, NMPRC Case No. 18-00158-UT, PNM Plan Year 2019 REA Plan; and Recommended Decision at 19-22 and EPE Application Exhibits OG-1 and MC-2, NMPRC Case No. 18-00109-UT, EPE Plan Year 2019 REA Plan,.

According to a review of Renewable Energy Act compliance reports by LBNL, the large customer cap significantly reduced the aggregate IOU RPS goal starting in 2015 when the RPS nominal increased from 10 percent to 15 percent.

Table 2: New Mexico RPS "Nominal" RPS Goal vs. "Net" RPS Goal[131]

	2011	2012	2013	2014	2015	2016	2017
Nominal RPS for IOUs	10%	10%	10%	10%	15%	15%	15%
Net RPS for IOUs	9.5%	9.5%	9.6%	9.4%	12.6%	12.7%	12.4%

It is important to note that the structure of the cap—where the lower of the two cap options applies—operates in such a way that for customers with annual charges over $99,000 the cap will remain largely the same year after year even if their electricity demand grows significantly.[132] That means that if industrial energy use grows—as it is projected to grow for PNM's large customers, for example—the effect of the cap in diluting the overall portfolio procurement will grow as well.[133]

Large Customer Cap Calculation Methodology Also Affects Cost Impacts and Procurement

There have also been disagreements before the PRC over how utilities should calculate the number of RECs to be procured under the large customer cap. The chosen methodology has a significant impact on the total renewable energy procured under the cap and the overall costs or benefits that accrue to large customers.[134]

In calculating the large customer cap, utilities first forecast electricity sales to large customers and identify the applicable cap level for each customer. They then sum the caps for all of their large customers to arrive at an aggregate dollar amount—referred to as the large customer adjustment—that they are to spend to procure renewable energy on behalf of large customers. (See Table 1, Row 5).

[131] Figures based on data provided to the author by Galen Barbose of LBNL drawn from NMPRC filings. Net RPS represents REC obligations for each IOU after large customer adjustment as a percentage of total retail sales of obligated IOUs (excluding exempt customer load). On file with the author.

[132] A PRC staff economist assessed that the inflation-adjusted cap grew between 1.1 and 2.5 per year between 2015 and 2019 Plan Year assessments, and actually decreased in Plan Year 2018. Direct Testimony of Heidi M. Pitts at 27-28 on behalf of New Mexico Public Regulation Commission Utility Division Staff at 18-22, NMPRC Case No. 18-00158-UT.

[133] For example, PNM's large customers are forecast to increase gross revenues to the utility by 20 percent between 2019 and 2020. Direct Testimony of Heidi M. Pitts at 27-28 on behalf of New Mexico Public Regulation Commission Utility Division Staff at 18-22, NMPRC Case No. 18-00158-UT.

[134] *See* Recommended Decision at 7-24, NMPRC Case No. 17-0029-UT,.

In order to translate that dollar amount to a level of renewable energy to be procured, the utilities must divide the total capped dollar amount by a dollar-per-REC price.

There are two basic approaches to determining this price: the utility can either (1) apply the *gross* cost of procuring the RECs (also called the procurement cost), or (2) apply the *net* cost of procuring the RECs, defined as procurement cost minus avoided fuel cost (also called the compliance cost). The first approach ensures that dollar amount represented by the large customer adjustment is sufficient to procure the RECs assigned to large customers. At the same time, this approach results in fewer RECs being procured. The second approach procures more RECs under the large customer cap—around three times as many in some years—but it also poses a challenge of who pays for the difference between full procurement cost and the net cost, since the large customer adjustment is only sufficient to pay for the net cost under this approach.[135]

In 2015, the PRC ruled that the net cost approach should be used, reasoning that this was in keeping with the language of the statute and the intent of the REA to promote renewable energy growth, and because it was more consistent with the RCT calculation methodology.[136] In 2017, the PRC reversed itself, determining that the legislative intent would only allow the use of procurement cost.[137]

2. Application of the Reasonable Cost Threshold on IOU RPS

The REA also requires that the PRC set a "Reasonable Cost Threshold," in practice a *soft* cap on the incremental cost of renewable procurement. Beginning in 2013, the RCT set by the PRC has been three percent of a utility's "plan year total revenues," which means revenues forecast for that year.[138]

PRC regulations require that the utility compare its projected "revenue requirements" for renewable procurement to the RCT for the year in question.[139] The revenue requirement is to

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[135] *See generally Id;* Recommended Decision at 12-19, NMPRC Case No. 15-00166-UT, as adopted in Final Order Superceding Vacated Final Order Issued on November 18, 2015.

[136] Recommended Decision at 18-19, NMPRC Case No. 15-00166-UT, as adopted in Final Order Superceding Vacated Final Order Issued on November 18, 2015.

[137] Recommended Decision at 24-25, NMPRC Case No. 17-0029-UT, as adopted in Final Order Partially Adopting Recommended Decision. A related issue is pending in litigation before the New Mexico Supreme Court: whether the PRC improperly approved a mechanism to remedy "disproportionate benefits" accruing to large and exempt customers because of how avoided fuel costs are accounted for between the large customer cap and a separate reduction in fuel charges. *See* N.M. Indus. Energy Consumers Brief in Chief, Pub. Service Co. of N.M. v. N.M. Pub. Reg. Comm'n, NMSC Case No. S-1-SC-36,115.

[138] There is some inconsistency in how this is interpreted by utilities, and in particular, whether there should be an RCT specifically applied to the "other" class of customers.

[139] 17.9.572.12 (A) NMAC . The "revenue requirement" is to be calculated using a traditional "revenue requirement impact approach." 17.9.572.14 NMAC. This is a complicated calculation or modelling exercise that takes into account the avoided fuel and power purchase costs that result from procuring renewable energy, as well as cost increases or decreases due for capacity, generation, transmission, or distribution, operation and maintenance

be calculated to include projected cost savings of renewable energy procurement, specifically including avoided fuel costs.[140] This typically requires modeling a counterfactual scenario where the renewable energy was not available to the utility's electricity system.[141]

Unlike the Large Customer Cap, the RCT does not function like a "hard cap" that flatly prohibits all expenditures beyond the three percent limit. It also does not directly constrain what RPS charges may be applied to "other customers"—small commercial and industrial customers and residential customers.

Instead, in any given year, a utility is already committed to some level of renewable procurement through pre-existing—and previously PRC-approved—power purchase agreements and renewable generation that the utility owns. The RCT therefore serves as a check on whether the utility may add *additional* renewable energy resources to its portfolio to meet its overall RPS or resource diversity obligations.

As an example, in its REA plan for compliance year 2019, EPE listed the previously-approved renewable resources that would be generating RECs during 2019. These included five power purchase agreements with solar facilities, a similar agreement with a biomass facility, and the development of an EPE-owned solar facility.[142] In its REA Plan, EPE concluded that procuring the renewables from these resources would exceed the RCT, but since these resources were previously approved, the PRC still approved the plan.[143]

At the same time, EPE concluded that these existing resources would not generate sufficient RECs to meet EPE's overall RPS obligations in 2019 and 2020 or its resource diversity obligation.[144] Because EPE's procurement costs from its existing resources already exceeded the RCT, EPE did not seek approval to add additional resources to fully meet its RPS obligations.

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expense, back-up and load following generation, off-system sales opportunity impacts, or other facilities . *Id.* See also, e.g., discussion of calculation of RCT in SPS Application at 15-38, NMPRC Case. No. 18-00201-UT (in response to prior commission order, SPS offers three different RCT scenarios to show that it has no headroom in all three scenarios).

[140] 17.9.572.14(C) NMAC requires that "For RCT purposes, the plan year revenue requirements … shall be determined by applying a traditional revenue requirements impact approach" and goes on to require that the approach "include net avoided fuel and purchased power costs, cost savings resulting from environmental credits … cost savings or increases for capacity, generation, transmission, or distribution, operation and maintenance expense, back-up and load following generation, off-system sales opportunity impacts, or other facilities and improvements or functions that may be required and that can be shown to result in actual reductions or increases in plan year revenue requirements to be collected from ratepayers."

[141] *See e.g.,* Direct Testimony of Ruth M. Sakaya at 25-27, Application of SPS, NMPRC Case No. 18-00201-UT, SPS Plan Year 2019 REA Plan; Direct Testimony of Omar Gallegos at 25-29, Application of EPE, NMPRM Case No. 18-00109-UT, EPE Plan Year 2019 REA Plan.

[142] Direct Testimony of Omar Gallegos at 17-19, Application of EPE, NMPRM Case No. 18-00109-UT, EPE Plan Year 2019 REA Plan.

[143] Final Order Adopting Recommended Decision with Modifications, NMPRM Case No. 18-00109-UT, EPE Plan Year 2019 REA Plan. EPE did request, and received, approval for an extended REC contract with the biogas facility.

[144] *Id.* at 13, 29-35.

Instead, it requested partial waivers from the PRC that would allow it to fall short of the total required RECs in 2019 and 2020, and variances that would allow it to fall short of resource diversity requirements in those years.[145]

SPS similarly anticipates exceeding the RCT in 2019. For year 2020, all three IOUs expect to exceed the RCT largely based on the costs of their existing resources alone.[146] (*See* Table 3 below).

EPE is the only one of the three IOUs that has requested a waiver from overall RPS compliance (the total RECs needed to be procured) because of the RCT in these years.[147] PNM and SPS both anticipate meeting their overall compliance requirements with existing resources in 2019 and 2020, although the cost of this compliance will exceed the RCT in one or both years. Like EPE, SPS did request variances from diversity targets in 2019 and 2020.[148]

The three utilities do not calculate the RCT in a uniform way, and there are uncertainties over what methodology the REA and PRC requires. For example, PNM calculates the RCT for "other customers" separately (i.e., excluding capped large customers) and then calculates an RCT for "all customers," but the other two IOUs do not follow this methodology. (*See* Table 3 below). In its 2019 REA Plan, SPS developed three different scenarios for its RCT calculation because "it is unclear how the [PRC] intends for the RCT calculations to be made."[149] EPE also argued for an alternate RPS calculation in 2019 REA plan.[150]

As with the large customer cap, some of these methodological issues can have significant impacts on how much the RCT constrains renewable procurement. One issue is whether utilities should account for the avoided need to procure additional fossil fuel generation *capacity* (in addition to accounting for avoided *fuel costs* from fossil generation, which is clearly required). In other words, should the utility take into account the ongoing cost savings from not needing to build additional power plants or to ensure that it can purchase such generation when needed. This is one of the "uncertain" issues that SPS pointed to in its 2019 RCT

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[145] The PRC granted the waiver and variance for 2019 but held off on granting the waiver for 2020. Recommended Decision at 16, 76-77, NMPRM Case No. 18-00109-UT, EPE Plan Year 2019 REA Plan.

[146] Recommended Decision at 16, 76-77, NMPRM Case No. 18-00109-UT, EPE Plan Year 2019 REA Plan; Direct Testimony of Shane Gutierrez at 4, 7, Application of PNM, NMPRC Case No. 18-00158-UT, PNM Plan Year 2019 REA Plan; Direct Testimony of Ruth Sakaya at 15, Application of SPS, NMPRC Case No. 18-00201-UT, SPS Plan Year 2019 REA Plan.

[147] *Compare* Recommended Decision at 16, 76-77, NMPRM Case No. 18-00109-UT, EPE Plan Year 2019 REA Plan *with* Direct Testimony of Shane Gutierrez at 4, 7, Application of PNM, NMPRC Case No. 18-00158-UT, PNM Plan Year 2019 REA Plan; Direct Testimony of Ruth Sakaya at 15, Application of SPS, NMPRC Case No. 18-00201-UT, SPS Plan Year 2019 REA Plan.

[148] *See* discussion *supra* at Section III.E.

[149] Direct Testimony of Ruth Sakaya at 26-27, Application of SPS, NMPRC Case No. 18-00201-UT, SPS Plan Year 2019 REA Plan.

[150] Direct Testimony of Manuel Carrasco at 18-22, Application of EPE, NMPRM Case No. 18-00109-UT, EPE Plan Year 2019 REA Plan.

calculation.[151] Environmental advocates have also argued that incorporating the value to customers of avoided capacity on an ongoing basis is required by existing PRC rules.[152] Large industrial customers have conversely argued that utilities have failed to explicitly take into account all relevant potential additional *costs* of integrating more renewables on the grid, particularly load following and back up generation.[153] This latter issue is being litigated before the New Mexico Supreme Court.[154]

A number of other factors contribute to the IOUs exceeding their RCT. One is that although the price of renewables has fallen tremendously, many of the renewable resources procured in any given year were procured five or ten years earlier and are locked into higher prices. A second reason is that natural gas prices have been low, and therefore the avoided fuel costs that are part of the "revenue requirement" calculation are diminished.[155]

[151] Direct Testimony of Ruth Sakaya at 26-27, Application of SPS, NMPRC Case No. 18-00201-UT, SPS Plan Year 2019 REA Plan.
[152] Exception to Recommended Decision, Coalition for Clean Affordable Energy and Western Resource Advocates at 7-14, NMPRC Case No. 17-00129-UT.
[153] N.M. Indus. Energy Consumers Brief in Chief at 25-33, N.M. Indus. Energy Consumers v. N.M. Pub. Reg. Comm'n, NMSC, Docket No. 36772.
[154] *Id.; see also* Coalition for Clean Affordable Energy Answer Brief to N.M. Indus. Energy Consumers Brief in Chief at 15-18, N.M. Indus. Energy Consumers v. N.M. Pub. Reg. Comm'n, NMSC, Docket No. 36772 (arguing that PNM testimony shows these cost increases were taken into account, if not explicitly broken out).
[155] *See* Direct Testimony of Ruth Sakaya at 29, Application of SPS, NMPRC Case No. 18-00201-UT, SPS Plan Year 2019 REA Plan.

Table 3: 2020 Reasonable Cost Threshold Analysis from Utility Plan Year 2019 REA Plans[156]

		PNM	SPS	EPE
1	**Total Revenues**	$899,760,350	$377,982,937	$166,279,833
2	**Total Revenues for "Other Customers"** (Total Revenues less revenues from exempt, large capped customers)	$797,636,867	$270,275,919	
3	**RCT for "Other Customers"** (3% of Total Revenues for "Other Customers")	$23,929,106	$8,108,278	
4	**Large Customer Adjustment**	$980,118	$2,170,146	
5	**RCT for "All Customers"** (RCT for "Other Customers + Large Customer Adjustment)[157]	$24,909,224	$10,278,424	$4,988,395
6	**REA Plan Revenue Requirement for All Customers**	$26,536,757	$17,763,288	$ 6,462,994
7	**Utility Revenue Requirement as a % of All Customer Total Revenue**	2.9%	4.9% (Exceeds 3% RCT)	3.9% (Exceeds 3% RCT)
8	**REA Plan Revenue Requirement for "Other Customers"[158]**	$25,556,639		
9	**Utility Revenue Requirement as a % of "Other Customer" Revenue**	3.2% (Exceeds 3% RCT)		

3. Differential Impact of Large Customer Cap and RCT on Customers

It is important to note that the large customer cap is more stringent than the RCT for three reasons: the level of the cap, the direct vs. indirect effect of the cap on customer charges, and the authority of the PRC to change the RCT level but not the large customer cap. The sum of these differences is that the REA constrains RPS-related charges to large customers more than it does to residential customers and smaller commercial and industrial customers (the "other" customers).

[156] Data compiled from Exhibit SG-2, Application of PNM, NMPRC Case No. 18-00158-UT, PNM Plan Year 2019 REA Plan; Exhibit RML-4, Application of SPS, NMPRC Case No. 18-00201-UT, SPS Plan Year 2019 REA Plan; Exhibit MC-4, Application of EPE, NMPRM Case No. 18-00109-UT, EPE Plan Year 2019 REA Plan.

[157] EPE simply takes three percent of what it lists as "Compliance Cost," and does not adjust for large customers. *See* Exhibit MC-4, Application of EPE, NMPRM Case No. 18-00109-UT, EPE Plan Year 2019 REA Plan.

[158] Only PNM appears to assess the RCT to "other customers" specifically.

First, the large customer cap has a more stringent capped level in that it limits RPS customer charges to no more than two percent of forecast total large customer charges.[159] In contrast, the RCT threshold has been set by the PRC at three percent of a utility's charges to customers.[160]

Second, the large customer cap is in practice a *hard cap* that directly limits utilities from imposing RPS-related charges to large customers above the cap.[161] The statute provides that the cap is to operate "so that the additional cost of the renewable portfolio standard to each customer does not exceed" the cap level.[162] In contrast, the RCT is a *soft cap* that does not directly constrain that RPS charges to "other" customers—the REA's RCT provisions do not say anything about limiting costs to "individual customers."[163] Instead, the RCT is a constraint on the utility's renewable resource procurements, and even there the RCT does not create a binding limit on the total RPS-related expenditures a utility can make.[164]

Third, the REA delegates the setting of the RCT to the PRC, and expressly authorizes the PRC to amend the RCT.[165] If complying with increasing RPS targets requires more "headroom" in the RCT, the PRC could seek to raise the RCT to 4 percent through a notice and hearing process. The large customer cap, on the other hand, is established in the statutory text, and the statute does not authorize the PRC to change the cap level—legislative action would be required.[166]

As a result of these factors, large customers are guaranteed to pay proportionately less for incremental RPS costs than "other" customers. RPS-related charges to large customers will be no more than two percent of large customer charges, and are often less.[167] In contrast, the overall compliance costs in recent years have been greater than two percent of all customer charges.[168] Under the REA's two cost containment mechanisms, "other" customers shoulder a

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[159] The large customer cap can be no more than two percent, because it is the lower of two percent or $99,000 adjusted for inflation. NMSA 1978 § 62-16-4(A)(2).

[160] 17.9.572.12 (B) NMAC. As discussed in Section III.D.2, there is some inconsistency as to whether this is three percent of all sales or three percent of sales to other customers. *See infra* at Table 3, comparing EPE method with SPS and PNM.

[161] *See N.M. AG v. N.M. Pub. Regulation Comm'n*, 2015-NMSC-032 at ¶30 ("In light of the potential for large customers to exit the grid, the Legislature enacted Section 62-16-4(A)(2), which limits the annual amount large customers can be charged for renewable energy procurement.")

[162] NMSA 1978 § 62-16-4(A)(2).

[163] NMSA 1978 § 62-16-4(B),(C).

[164] *See* discussion *infra* accompanying note 143.

[165] "The commission may thereafter modify the reasonable cost threshold as changing circumstances warrant, after notice and hearing." Notice and a hearing is required, and the PRC is also required to take into account enumerated factors including the price of renewable energy and cost impacts. NMSA 1978 § 62-16-4(C).

[166] *See* NMSA 1978 § 62-16-4(A)(2).

[167] *See infra* Table 3, Row 6, showing aggregate large customer cap to be 1.2 and 1.8 percent of projected sales to large customers in 2020.

[168] *See infra* Table 3, Row 7 showing the RPS charges as a percent of all customer revenue to be between 2.9 and 4.9 percent.

higher share of paying for incremental RPS costs when viewed as a percentage of overall electricity bills.

In addition, if large customers' electricity consumption increases and the $99,000-adjusted-for-inflation cap is binding (as opposed to the two percent cap), the cost burden shifts even more to "other customers" because the large customers pay an even smaller proportion of their annual bills for RPS charges.

4. Cost Containment for Rural Electricity Cooperatives

New Mexico rural electricity cooperatives are subject to similar incremental procurement caps and a cap for large customers, although these operate differently from the IOU cost containment measures and are nominally more stringent.[169]

Cooperatives are also subject to an RCT, but for cooperatives the RCT is set in the statute at one percent of the cooperative's gross receipts in a given year.[170]

Rural electricity cooperatives are authorized to charge a renewable energy and conservation fee on customer bills to cover procurements. This fee is limited to being no more than one percent of *any* customer's bill.[171] This contrasts with the IOU cost containment measures, where there is no hard cap on charges to "other" customers.

The renewable energy and conservation fee is also capped at $75,000, with no adjustment for inflation.[172] This acts as a large customer cap.

It was beyond the scope of this report to review how either the RCT or renewable energy and conservation fee caps have been implemented by rural electricity cooperatives.

5. Comparison to Other States

According to a 2014 analysis,[173] New Mexico's RCT level is relatively restrictive compared to many states, though not as restrictive as some others. States with competitive electricity markets relying on an ACP cost-containment mechanism generally have an effective cap that is less restrictive than New Mexico's, in that their ACP payments translate into a cap that allows procurements at more than five percent of average retail rates, and in some cases, more than ten percent.[174]

Among states with similar revenue requirement caps, and not ACP mechanisms, several states have more permissive caps. Maryland has a ten percent cap, Washington and Oregon have four

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[170] NMSA 1978 § 62-15-36(B); 17.9.572.23 (F) NMAC.
[171] NMSA 1978 § 62-15-36(A); 17.9.572.23 (G) NMAC.
[172] NMSA 1978 § 62-15-36(A); 17.9.572.23 (G) NMAC.
[173] The 2017 RPS Status Update is less detailed than the 2014 report but confirms the same general analysis on the relative level of cost caps. BARBOSE, *supra* note 23 at 37.
[174] HEETER ET AL., *supra* note 52 at 50 (Figure 11).

percent caps.[175] Two states, Ohio and Delaware, also have three percent caps like New Mexico.[176] Colorado, Illinois, Kansas, and Missouri have more restrictive caps of one or two percent.[177] Some states, such as Nevada and Arizona, do not have set caps.

While a cap on the overall incremental cost of procuring renewables is fairly common, a cost containment mechanism specific to large customer is rare.[178] The three exceptions that the author is aware of are Delaware,[179] Maryland,[180] and North Carolina.[181]

Importantly, New Mexico is one of the few states where cost-containment mechanisms—and the large customer cap in particular—have significantly constrained renewable procurement that would otherwise be required under the RPS. According to data compiled by LBNL for their 2018 U.S. Renewable Portfolios Status Report, between 2011 and 2017 New Mexico fell significantly short of meeting the "gross" RPS goal each year (i.e, the MWh of renewable energy that would required if the RPS target is applied to all sales of covered utilities without adjusting for the large customer cap or exemptions).[182] Only six other states posted shortfalls of more than five percent for any year during that time period, and only two other states—New Hampshire and Illinois—posted significant shortfalls every year like New Mexico.[183] LBNL analyst Galen Barbose, who publishes a survey of state RPS policies each year, said that New Mexico is the only state to his knowledge where a large customer cap operates to significantly reduce overall RPS achievement.[184]

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[175] *Id.* at 47.
[176] *Id.* at 47. In Delaware, the 3 percent cap applies to IOUs, and there is a separate 1 percent IOU cap for its solar carve out RPS requirement. Delaware has a 4 percent cap for municipal utilities.
[177] *Id.* at 47.
[178] *See* Fischlein and Smith, *supra* note 104 at 293–95.
[179] Delaware has an RPS of 25% by 2025-26 and exempts from the RPS sales to industrial customers with a peak demand in excess of 1,500 kilowatts. 26 Del. C. § 353(b).
[180] Maryland has an RPS of 25% by 2025 and allows its Utility Commission to waive the recovery of a compliance fee "assessed on the load of a particular industrial or nonretail commercial customer for a particular year, based on a demonstration by the applicant of an extreme economic hardship that significantly impairs the continued operation of the applicant." Md. Pub. Util. Code Ann. § 7-706(d).
[181] North Carolina has an RPS of 12.5% by 2021 for IOUs that establishes annual caps for incremental RPS charges on customer accounts by customer class. Commercial accounts are capped at $150 and industrial accounts are capped at $1000. N.C. Gen. Stat. § 62-133.8(h)(4).
[182] RPS Compliance Data accompanying 2018 Status Report, *available at* http://eta-publications.lbl.gov/sites/default/files/rps_compliance_data_nov_2018.xlsx.
[183] *Id.* In some cases, data was not available.
[184] Author interview with Galen Barbose.

Table 4: New Mexico Renewable Procurement as Percentage of Gross RPS Obligation
(Based on All Customer Sales without regard for exempt or capped sales)[185]

	2011	2012	2013	2014	2015	2016	2017
Total RPS Achievement (RECs Retired) as % of Gross RPS Obligation	80%	90%	89%	92%	80%	86%	83%

The same LBNL and NREL studies mentioned above find that New Mexico is in the middle to higher end when it comes to compliance costs as a percentage of average retail electricity bills. New Mexico's compliance costs for years 2015-2016 were between 2.5 and 3.5 percent of average retail electricity bills.[186] A few traditionally regulated states, such as Arizona, Colorado, and Minnesota, have had higher cost ratios in recent years, as have several restructured states.[187]

New Mexico's retail electricity prices are below average in the U.S. In 2016 the New Mexico average retail electricity price was 9.12 cents per kWh, whereas the average in the U.S. was 10.27 cents per kWh.[188]

[185] *Id.*
[186] BARBOSE, *supra* note 43 at 33.
[187] *Id.*
[188] State Electricity Profiles, U.S. Energy Information Administration, https://www.eia.gov/electricity/state/.

Summary of Considerations Related to Cost Containment:

Design Element	Current REA	Contrast to Other States	Considerations
Cost Containment Mechanism	**IOUs:** Large customer cap (LCC): lower of (A) $99K + inflation or (B) 2% of bills Reasonable Cost Threshold (RCT) limiting renewable procurement. PRC rule set RCT to 3% of utility's retail revenue **Coops:** 1% Reasonable Cost Threshold 1% limit on RPS and EE charges to bills of all customers, and $75K total cost cap on RPS and EE charges for any customer	NM is one of the few states with a LCC, and the only state where a LCC has such a substantial impact in reducing overall renewable procurement under the RPS Most traditionally regulated states have a cost threshold; states in wholesale markets typically use alternative compliance payments NM's RCT level is relatively restrictive. Many states have 5% or higher caps; several states also have more restrictive caps of 1-2% NM compliance costs as a % of bills are in the middle to high-middle among states, between 2.5 and 3.5%	• A more restrictive cost-containment mechanism means that the RPS is less likely to create substantial rate impacts; it also makes it more likely that the full RPS will not be met • New Mexico's LCC aims to prevent utility "exit" by large industrial and commercial consumers; such exits could result in higher rates for all • The LCC also significantly reduces the actual RPS compliance obligation; for the two IOUs with many large customers, the real-world RPS obligations in 2020 will be 13 and 16 percent, not the nominal 20 percent. • The RCT acts as a soft cap, meaning utilities need not procure *additional* renewable resources once the cap is triggered • All three IOUs are projected to be over the RCT in 2020, but only one utility is expected to fall short of the "net" RPS goal (after accounting for the LCC) • The LCC provides more cost protection to large customers than the RCT does to "other" customers; "other" customers shoulder a greater proportion of RPS costs • New Mexico RPS compliance costs as compared to bills are in the high middle compared to other states; electricity rates are below average • There is significant uncertainty and inconsistency over how to calculate both the LCC and RCT.

E. Resource Diversity and Preference Mechanisms

A fifth policy design question is whether to include mechanisms that require or encourage utilities to use a *mix* of renewable resources to meet RPS targets—for example a combination of wind, solar, distributed generation, and other resources. Resource diversity can be beneficial for grid management and can help promote emerging technologies, but it also tends to increase compliance costs. States have increasingly been using resource-specific targets or other preference mechanisms to promote such diversity. New Mexico's REA requires utilities to have a diverse portfolio, and for IOUs the PRC has defined this to mean specific targets for wind, solar, distributed generation and other resources. These targets are ambitious when compared to similar "carve outs" in other states. In practice, however, New Mexico IOUs are not required to consistently meet these targets because of the operation of the RCT.

Early RPSs were technology neutral, in that they often did not require utilities to meet the RPS target with a diversity of renewable technologies.[189] Because wind energy was often the most economic form of qualifying renewable energy, wind energy "dominated early RPS compliance, constituting approximately 94% of new induced renewable energy generation." [190]

As RPSs took hold, many policymakers saw value in requiring some level of renewable resource diversity.[191] RPSs were often initially enacted to diversify energy portfolios away from coal and natural gas, in part to help hedge against risks associated with overreliance on those resources (e.g., price spikes, fuel shortages). Requiring *renewable* resource diversity was a natural extension, as each renewable resource has unique attributes that provide benefits and challenges to the electricity system. For example, the different generation profiles of wind and solar energy complement each other—wind is often strongest at night, whereas the sun shines during the day—and mixing the two can help balance the grid. Requiring resource diversity can also encourage immature technologies that may not be economic at the present time, but may be important to a diversified low-carbon energy system in the future. Requirements for solar and distributed generation may also require or result in more in-state generation, or may provide other benefits to the grid that are currently undervalued (e.g., avoided distribution costs). Finally, distributed generation carve outs may provide economic benefits to customers that install such generation.

For all of these reasons, many RPSs have been amended to include diversity or preference policies.

One approach is to require a specific percentage of electricity to be supplied by a particular resource, most often solar or distributed generation. These resource specific targets are often

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[189] Sanya Carley et al., *Empirical evaluation of the stringency and design of renewable portfolio standards*, NAT. ENERGY 1, 755 (2018).
[190] *Id.* at 755.
[191] *See generally Id.* at 756.; Fischlein and Smith, *supra* note 104 at 286; BARBOSE, *supra* note 23 at 9.

referred to as RPS "carve-outs." Twenty-two states plus the District of Columbia have carve-outs for either solar or distributed generation.[192]

Another approach is to use credit "multipliers" for certain resources, making those resources more valuable for RPS compliance. For example, a one MWh REC of solar may count as two RECs for compliance purposes. Nine states provide such credit multipliers for solar or distributed generation.[193]

Some states have combined a carve-out with a credit multiplier for the same technology.[194]

While resource diversity can provide the benefits noted above, requiring or incentivizing resource diversity also tends to increase RPS compliance costs. This is because such policies constrain or discourage utilities from solely procuring the least expensive renewable resource available (usually wind). At the national level, analyses of RPS compliance costs have found that solar or distributed generation carve outs drove 40 percent of overall RPS compliance costs in 2015.[195]

In New Mexico, the REA requires that utilities have a "diversified" portfolio of renewable electricity generation resources.[196] The PRC has promulgated regulations for IOUs defining this requirement to mean that at least 30 percent of the RPS target be met using wind energy, at least 20 percent with solar energy, and at least 5 percent using other qualifying renewable resources such as geothermal, newer hydropower, fuel cells, or biomass.[197] In addition, the PRC regulations require that at least 3 percent of total RPS requirement be met through distributed generation.[198]

These diversity requirements interact with the RCT, in that a utility may be granted a variance from the diversity requirement if procuring additional renewable resources to meet the requirement would exceed the RCT.

New Mexico's three IOUs regularly fail to meet the full diversity requirement.

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[192] JENNY HEETER ET AL., CASE STUDIES OF RPS BEST PRACTICES: SOLAR CARVE-OUTS, SREC TRACKING, AND THERMAL INCLUSION 5 (2018).
[193] Carley et al., *supra* note 189 at 755.
[194] LEON, *supra* note 105 at 41–42.
[195] BARBOSE, *supra* note 23 at 37..
[196] "[T]he renewable portfolio shall be diversified as to the type of renewable energy resource, taking into consideration the overall reliability, availability, dispatch flexibility and cost of the various renewable energy resources made available by suppliers and generators; NMSA 1978 § 62-16-4 (A)(4).
[197] 17.9.572.11 NMAC (requiring utilities to generally achieve full diversification by 2011); 17.9.572.7 (G) NMAC (defining a "fully diversified" portfolio).
[198] 17.9.572.7 (G) NMAC. Distributed generation is defined as "electric generation sited at a customer's premises, providing electric energy to the customer load at that site or providing electric energy to a public utility or a rural electric distribution cooperative for use by multiple customers in one or more contiguous distribution substation service areas." 17.9.572.7 (I) NMAC. Electricity used to meet the distributed generation requirement may not also be used to meet resource-specific diversity requirements, such as solar. 17.9.572.11 (D) NMAC.

All three IOUs have struggled to meet the "other resource" carve out in recent years. PNM has sought to meet this requirement with the Dale Burgett Geothermal Facility, but this facility has underperformed and has not produced the required level of generation.[199] EPE has procured RECs from a landfill biogas facility, but these have also been short of requirements.[200] SPS has not procured any "other" RECs in recent years.[201] Both PNM and EPE are projecting that improvements at their facilities will increase production that will allow them to meet the "other" diversity requirement in future years.[202]

Two of the three utilities have also struggled to meet the solar, distributed generation, or wind diversity targets in recent years. SPS regularly falls short of meeting the solar requirement and the distributed generation requirement.[203] EPE does not procure any wind energy.[204] (PNM has met its diversity requirement for wind, solar, and distributed generation in recent years.)[205] (*See* Table 5 below).

Since each IOU is projected to be at or above the RCT in coming years, none of the utilities has proposed to procure additional renewable resources to cure these diversity target shortfalls.

[199] "Since the Dale Burgett Facility went into service in January 2014, the generating plant has not met an annual projection, and thus, has failed to produce the electricity needed to satisfy the 5% diversity target for "other" renewable energy in any REA plan year pursuant Rule 572.7(G)" Recommended Decision at 22, NMPRC Case No. 18-00158-UT, PNM Plan Year 2019 REA Plan. The PRC has approved an amended procurement that includes repowering the facility. *Id.*

[200] *See* Recommended Decision at 24, 29, NMPRC Case No. 18-00109-UT, EPE Plan Year 2019 REA Plan (stating that Camino Real Landfill to Energy Facility is projected to undergo improvements that will significantly increase its output). Note that this facility's RECs had previously been credited at a 2-1 ratio under a grandfathered crediting scheme, but will not be so credited in the future. Final Order Adopting Recommended Decision with Modifications, NMPRC Case No. 18-00109-UT, EPE Plan Year 2019 REA.

[201] *See* Recommended Decision at 32, NMPRC Case No. 18-00201-UT, SPS Plan Year 2019 REA Plan; 2016 SPS Annual Renewable Energy Portfolio Report at 4.

[202] Recommended Decision at 24, 29, NMPRC Case No. 18-00109-UT, EPE Plan Year 2019 REA Plan; Recommended Decision at 22, NMPRC Case No. 18-00158-UT, PNM Plan Year 2019 REA Plan.

[203] *See* Recommended Decision at 31-34, NMPRC Case No. 18-00201-UT, SPS Plan Year 2019 REA Plan;

[204] *See* Recommended Decision at 27-30, NMPRC Case No. 18-00109-UT, EPE Plan Year 2019 REA Plan

[205] *See e.g.*, PNM 2016 Renewable Energy Portfolio Report at 2.

Table 5: Projected 2019 and 2020 Diversity Compliance for IOUs [206]

	PNM		SPS		EPE	
	2019	**2020**	**2019**	**2020**	**2019**	**2020**
Wind - 30%	Projected to Meet	Projected to Meet	Projected to Meet	Projected to Meet	Shortfall (0%)	Shortfall (0%)
Solar - 20%	Projected to Meet	Projected to Meet	Shortfall (90%)	Shortfall (67%)	Projected to Meet	Projected to Meet
Other - 5%	Projected to Meet	Projected to Meet	Shortfall (0%)	Shortfall (0%)	Shortfall (66%)	Shortfall (50%)
Distributed Generation – 3%	Projected to Meet	Projected to Meet	Shortfall (74%)	Shortfall (55%)	Projected to Meet	Projected to Meet

The REA also institutes a diversity requirement for rural electricity cooperatives,[207] however the PRC has not promulgated regulations that set specific resource targets for cooperatives.[208] Rural electricity cooperatives also receive a three times credit multiplier for solar electricity generated from facilities that were developed by the cooperative or its wholesale power supplier prior to 2012.[209]

On paper, New Mexico's IOU diversity targets are among the most ambitious in the nation. For example, when the solar target is compared against the targets of the 15 other states that have such policies, it is the fifth most ambitious (and three of the four more ambitious policies are close to New Mexico's level).[210]

New Mexico, however, is also unique among states in the degree to which utilities fail to meet these carve-outs.[211] Because of the operation of the RCT, there is usually no penalty for a

[206] Data compiled from: SPS Application Exhibit RMS-3, NMPRC Case No. 18-00201-UT, SPS Plan Year 2019 REA Plan; PNM Application Exhibit SG-2, NMPRC Case No. 18-00158-UT, PNM Plan Year 2019 REA Plan; and EPE Application Exhibits OG-2, NMPRC Case No. 18-00109-UT, EPE Plan Year 2019 REA Plan.
[207] NMSA 1978 § 62-15-34(A)(3). The rural electricity cooperative portion of the statute has the same language as the IOU portion: "the renewable portfolio standard of each distribution cooperative shall be diversified as to the type of renewable energy resource, taking into consideration the overall reliability, availability and dispatch flexibility and the cost of the various renewable energy resources made available to the distribution cooperative by its suppliers of electric power." *Id.*
[208] PRC Rule 572 expressly exempts the definitions portion of the rule from applying to rural electricity cooperatives. 17.9.572.2 B. NMAC. The definitions section defines a "fully diversified renewable energy portfolio" with specific set asides. 17.9.572.2 G. NMAC.
[209] 17.9.572.23 (D) NMAC.
[210] *See* WILL HORNE, AN INVESTIGATION OF SOLAR FRIENDLY POLICIES IN AMERICAN STATES' RENEWABLE PORTFOLIO STANDARDS 33 (2018), http://closup.umich.edu/files/closup-swp-32-Horne-An-Investigation-of-Solar-Friendly-Policies-in-American-States'-Renewable-Portfolio-Standards.pdf.
[211] Comment from Galen Barbose, LBNL author of annual survey of RPS policies.

diversity target shortfall.[212] One analyst characterized New Mexico's diversity targets more as "aspirational targets."[213]

This result occurs in part because the diversity targets increase the utility costs of compliance in New Mexico, as they do elsewhere. For example, a 2014 analysis found that in New Mexico, Arizona, and Colorado, distributed generation requirements "constituted the bulk of total RPS compliance costs in most years" in those states.[214]

At least one analysis identifies flexibility and adaptability to be an important aspect of RPS design, "particularly as technologies and market conditions evolve."[215] New Mexico's current RPS has some flexibility built into its resource diversity requirement, in that while the diversity requirement is required by statute, the specific carve outs for each individual resource are established through rulemaking by the PRC and can therefore be amended by PRC rulemaking.

[212] *But see* discussion *supra* accompanying note 250.
[213] Comment from Galen Barbose, LBNL author of annual survey of RPS policies.
[214] Galen Barbose, *Costs and Benefits of Renewables Portfolio Standards in the United States* (2014), https://escholarship.org/uc/item/2m72p1d9 (last visited Oct 1, 2018). N.B. that in some cases the "apparently high cost of the DG set-asides is partially because the costs are heavily front-loaded: rebates and performance-based incentives are paid upfront (or over several initial years of production) in exchange for RECs delivered over each DG system's lifetime." *Id.* at 7.
[215] Carley et al., *supra* note 189 at 761.

Summary of Resource Diversity Considerations:

Design Element	Current REA	Contrast to Other States	Considerations
Resource Diversity and Preference Mechanisms	**IOUs:** Diversity requirement in statute. PRC regs require: 30% wind 20% solar 5% other 3% distributed generation Utilities need not meet diversity if procurement exceeds RCT or is technically constrained **Coops:** Diversity requirement in statute, but no levels specified. Pre-2012 coop solar gets 3X multiplier	22 states have carve outs for solar or distributed generation 9 states have credit multipliers NM diversity targets are ambitious; solar target 5th among 16 states	• Resource diversity can help balance the grid (e.g., mix of solar and wind), promote still-maturing technologies, and potentially promote in-state generation and associated economic development • Resource-specific requirements reduce utilities' flexibility in how they comply with an overall RPS goal, and therefore usually raise the overall cost of compliance • In the past, distributed generation requirements have driven higher compliance costs in New Mexico and other states (but are subject to cost containment) • Full diversity requirements are not currently being met by NM utilities due to the RCT, although they are still driving substantial resource diversification; utilities particularly have trouble with meeting "other resource" target • NM diversity requirement is flexible in that percentages can be adjusted by PRC regulation

F. Acceptance of Out-of-State RECs (Bundled or Unbundled)

The sixth RPS policy design element this paper considers is whether to allow RECs from other states to be used for compliance with a state's RPS, and whether to allow the utility to procure RECs without also procuring the actual energy produced (i.e., whether to allow RECs that are "unbundled" from energy).

Utilities comply with RPS requirements by submitting renewable electricity certificates, or RECs. RECs are "electronic record[s] showing that one unit of eligible renewable electricity (usually one MWh but in some states one kWh) has been generated."[216] They are issued by states or regional tracking systems as authorized by state law.[217] RECs are usually registered with tracking systems that allows for transferability among states and prevent double counting.[218] In the west, the tracking system used by most states including New Mexico is the Western Renewable Energy Generation Information System (WREGIS).[219]

RECs represent the "environmental attribute" of the energy produced, and they can be procured separately from the actual electricity that is produced by renewable facilities (these are "unbundled" RECs). A renewable producer can sell RECs to one entity and the underlying electricity to another.

As a tradable instrument, RECs provide utilities with compliance flexibility. For example, a utility may comply with an RPS by developing their own renewable generation facilities (that then generate RECs), by entering into a power purchase agreement with another renewable energy supplier (who then provides RECs to the utility), or by purchasing RECs on the market.

Allowing out-of-state unbundled RECs generally lowers the price of compliance, because it means that utilities can procure the least cost "environmental attribute" of renewable energy being produced wherever it can be found.

On the other hand, allowing out-of-state RECs means that there is no guarantee that the renewable energy resources used to meet the RPS will be sited in the state, or even on the regional electricity grid. States may have an interest in seeing in-state development of these resources because they provide economic development (jobs, rent payments, tax revenue) and are more likely to displace generation from fossil fuel power plants that create harmful pollution and have high water consumption.

The REA requires that in order to qualify for RPS compliance, renewable electricity needs to be "contracted for delivery, or consumed or generated by an end-use customer of the public utility

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[216] ED HOLT, POTENTIAL RPS MARKETS FOR RENEWABLE ENERGY GENERATORS 2 (2016), https://www.cesa.org/assets/2016-Files/Potential-RPS-Markets-Report-Holt.pdf.
[217] *Id.*
[218] *Id.*
[219] *See* 17.9.572.17 (E) NMAC.

in New Mexico" *unless* the PRC determines that there is a national or regional market for exchanges of RECs.[220]

The PRC determined in regulation that a national or regional market exists for any RECs issued by states that also accept New Mexico RECs.[221] A 2016 report assessing which RECs can be used in which states found that Colorado, Illinois, Missouri, North Carolina, North Dakota, South Dakota, Kansas, Arizona, California, and Oregon would accept New Mexico RECs.[222]

In addition, PRC regulations more broadly allow utilities to "seek approval" to use individual RECs issued within the region.[223]

At the same time, the PRC requires that utilities give preference to energy generated in New Mexico if other factors—including cost—are equal.[224] The PRC has historically disfavored "paper" REC-only transactions.[225]

In sum, New Mexico regulations technically allow the use of unbundled, out-of-state RECs from states that accept New Mexico RECs, but in practice the PRC disfavors the use of such RECs.

One exception to this preference for "bundled" RECs is that in 2014 the PRC approved a stipulated agreement that requires PNM to procure unbundled RECs if PNM experiences a REC shortfall for overall RPS compliance and unbundled RECs are available below a "do not exceed price" (this has been $2 or $3 per MWh-REC in recent years).[226]

At the national level, a 2013 survey listed only three states—Arizona, Nevada, and Wisconsin—that completely forbid the use of unbundled RECs.[227] At the same time, most states require that the underlying electricity be delivered to the state or to the region.[228] States in the northeast and Midwest tend to accept RECs from within electricity grid or region.[229]

In its 2016 RPS compliance report, SPS described the New Mexico REC market as "limited, with only a few buyers and a bi-lateral market." [230] It also noted that "questions have been raised regarding the transferability of RECs within the market,"[231] citing to a 2011 PRC order that

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[220] NMSA 1978 § 62-16-5 (B)(1)(b).
[221] 17.9.572.17 (I) NMAC.
[222] HOLT, *supra* note 216 at 8–10. The same report found that New Mexico utilities can procure RECs only from their neighboring states—Arizona, Colorado, Oklahoma, and Texas—and only when the energy is contracted for delivery. This is consistent with the PRC's preference favoring procurement of bundled RECs and electricity. *Id.*
[223] 17.9.572.17 (H) NMAC.
[224] 17.9.572.10 (A) NMAC.
[225] *See* Recommended Decision at 69, NMPRC Case No. 18-00109-UT, EPE Plan Year 2019 REA Plan.
[226] Stipulation at ¶ 7, NMPRC Case No. 14-00158-U; *see also* Direct Testimony of Patrick J. O'Connell at 6-7, PNM Application, NMPRC Case No. 18-00158-UT, PNM Plan Year 2019 REA Plan.
[227] Fischlein and Smith, *supra* note 104 at 288.
[228] *Id.* at 291.
[229] *See* HOLT, *supra* note 216 at 6–10.
[230] SPS 2016 RPS Compliance Report at 11.
[231] *Id.*

denied PNM's plan to purchase wind RECs without purchasing the associated electricity delivered into New Mexico (*but see* the PRC approved stipulation described above).[232]

One other important consideration in whether to allow out-of-state RECs for compliance is potential legal risk. A number of legal commentators have warned about potential legal challenges under the dormant Commerce Clause, which prohibits state laws that discriminate against out-of-state commerce or would balkanize interstate markets.[233] They have warned that RPS policies that give preference for in-state renewable energy could be challenged as violating this doctrine.[234]

[232] "The Commission finds that … the ultimate effect of the proposed transaction would not be to increase the amount of renewable energy generated and delivered to New Mexico customers. The Commission thus finds that the plan should be modified to require PNM instead to use its best efforts to purchase in 2011 actual wind and associated RECs up to the RCT as calculated by PNM in this case." Final Order, NMPRC Case No. 10-00373-UT.
[233] *See e.g.*, Felix Mormann, Constitutional Challenges and Regulatory Opportunities for State Climate Policy Innovation 41 Harv. Env. L. Rev. 190 (2017); Sam Kalen & Steven Weissman, The Electric Grid Confronts the Dormant Commerce Clause, 45 ECOL. LAW CURR. 132–148 (2018); Daniel K. Lee & Timothy P. Duane, *Putting the Dormant Commerce Clause Back to Sleep: Adapting the Doctrine to Support State Renewable Portfolio Standards*, 43 ENVTL. L. 295 (2013); Carley et al., *supra* note 189 at 756.
[234] *See e.g.*, Mormann, *supra* note 233 at 212 (2017) ("in-state requirements and preferences may improve the political appeal of a state's renewable energy sourcing requirement, but do so at the expense of heightened vulnerability to dormant Commerce Clause challenges.").

Summary of Considerations Related to use of Out-of-State RECs:

Design Element	Current REA	Contrast to Other States	Considerations
Acceptance of Out-of-State RECs	Statute requires electricity to be delivered in NM unless PRC determines there is a national or regional REC market. PRC determined there is a market with any state that accepts NM RECs. PRC preference is for electricity delivered in-state PRC disfavors unbundled "paper-only" RECs but has approved their use for PNM to meet shortfalls	Most states allow for unbundled RECs in at least some circumstances; Arizona and Nevada are two notable exceptions Most states have some geographic constraints, requiring delivery of electricity to the state or region in order for REC to be accepted	• Although PRC regulations technically allow for use of out-of-state RECs, in practice the PRC has a strong preference for having utilities acquire both RECs and the underlying electricity • This means that much, if not all, of renewable electricity used to comply with the RPS is developed in-state, providing additional benefits (jobs and more likely benefits from displaced fossil fuel generation: reduced pollution and water use) • Compliance costs may be higher than if utilities could comply with unbundled RECs from a broader pool of states • In-state preference could increase legal risk under dormant Commerce Clause

G. Compliance Flexibilities: Banking and Borrowing RECs

The seventh policy design element examined here is what kind of temporal compliance flexibilities, if any, the RPS policy allows. Many RPS programs allow utilities to *bank* RECs for a period of time, meaning that they can use surplus RECs to comply with RPS obligations in future years. Some states also utilities to *borrow* RECs, meaning they can "comply" with REC shortfall by "borrowing" from projected future surplus.

New Mexico regulations allow utilities to bank RECs for up to four years.[235] In other words, if a utility generated a REC in 2016 by generating one MWh of electricity, the company could choose to hold that REC and submit it for compliance in any future year up to 2020.

Banking makes it easier for utilities to address the difference between a utility's projections for the future year and what actually happens. For example, electricity demand may be higher than expected, requiring more renewable energy than anticipated. Or a utility's renewable generation facilities may have produced more or less electricity than expected because there was more or less sun or wind than forecast; the utility might then either have a shortfall of RECs or an excess. In all of these circumstances, compliance with the RPS is made easier because the utility can choose to dip into their banked RECs if necessary, or bank excess RECs. Banking can also reduce the costs of compliance, because it can protect utilities from fluctuations in REC prices.[236] Finally, banking can accelerate development of renewable resources, because utilities know that they can bank the RECs for future compliance.

At the same time, banking means that in a given year, a utility may not actually procure all of the renewable electricity required by the RPS in that year, because they may use banked RECs from previous years for compliance. In any given year, the economic, health, and environmental benefits of the RPS may be somewhat lessened if banked RECs are used for compliance. Banking also reduces the likelihood of overcompliance.

Twenty six states allow banking to some degree; most states allow banking for periods of two to four years. Five states—Arizona, California, Oregon, Utah, and North Carolina—allow banking indefinitely.[237]

A less common flexibility is REC borrowing, which allows utilities to "borrow" RECs from future years.[238] In effect, a utility can delay meeting a portion of a given years compliance requirement to a future year. New Mexico's RPS does not allow borrowing, and no state RPS allows borrowing for more than one year.[239]

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[235] 17.9.572.17 (C)(4) NMAC.
[236] LEON, *supra* note 105 at 32.
[237] Fischlein and Smith, *supra* note 104 at 291–92.
[238] LEON, *supra* note 105 at 34.
[239] Fischlein and Smith, *supra* note 104 at 292.

Summary of Considerations Related to Compliance Flexibilities:

Design Element	Current REA	Contrast to Other States	Considerations
Compliance Flexibilities	Allows REC banking for up to 4 years Does not allow borrowing	26 states allow banking, most between 2-4 years; 5 states allow unlimited banking Fewer states allow borrowing	• Banking provides increased flexibility to utilities in planning how to meet RPS requirements, because it reduces risk related to shortfalls or overcompliance • May reduce program costs by providing an alternative to REC market in undercompliance situations • Provides more incentive to develop renewable projects earlier • May mean that RPS target can be met in a given year without actually procuring all of the required renewable energy in that year

H. RPS Procurement Planning and Reporting

The eighth policy design element examined is what kind of renewable procurement planning and compliance reporting the RPS policy requires.

The REA requires that each year the three electric IOUs file an annual procurement plan detailing how they plan to procure or generate renewable electricity to meet the RPS requirements for the following two years, and that the plan is reasonable with respect to cost, the diversity requirement, and impacts on the grid.[240]

These utilities are also required to submit an annual report showing how they actually met the RPS in the previous year,[241] which is to include a description of the renewable energy generated and RECs procured, and the cost of compliance.

For example, in 2018 the three IOUs filed procurement plans for 2019 and 2020, and filed a compliance report for how they met 2017 requirements.

Rural electricity cooperatives are also require to submit an annual report detailing renewable energy procurement and cost.[242] The cooperatives are not required to submit procurement plans.

The REA does not require any statewide reporting on compliance, and the PRC does not publicly compile up-to-date compliance information, so it is difficult to assess overall compliance with

[240] NMSA 1978 § 62-16-4 (D); 17.9.572.14 NMAC.
[241] NMSA 1978 § 62-16-4 (D); 17.9.572.19 NMAC.
[242] NMSA 1978 § 62-15-34 (C).

the RPS. In addition, there are inconsistencies in how RPS obligations are calculated (as described above in Section III.D.) and only general requirements for what is to be included in utility plans and reports. As a result, these plans and reports are not uniform in what information is included.

A 2018 study found that RPS stakeholders thought "robust planning processes" were a significant factor in achieving RPS goals, and that long-term planning was also important to encourage the development of grid infrastructure and improvements to grid operations that are helpful for integrating a higher degree of renewables.[243] New Mexico's utilities are also required to engage in integrated resource planning,[244] which may provide some opportunity for this kind of grid infrastructure and operations planning.

Summary of Considerations Related to Planning and Reporting:

Design Element	Current REA	Contrast to Other States	Considerations
Planning and reporting requirements	**IOUs:** REA requires a plan detailing how the utility expects to meet RPS requirements in next 2 years REA requires annual reporting on compliance and costs **Coops:** REA requires annual reporting on compliance and costs		• Planning requirements have been identified as a significant factor in promoting in-state generation; New Mexico's RPS requires planning • There is no statewide reporting required or conducted, making it difficult to assess overall RPS compliance • Plans and reports can be inconsistent in the information they include and how certain calculations are performed • Long-term planning with regards to grid infrastructure and management has also been identified as important; New Mexico's IRP may fill this role

[243] Carley et al., *supra* note 189 at 761.
[244] NMSA 1978 § 62-17-10.

I. Penalties

The final policy design element examined is whether state RPSs include a penalty mechanism.

Most traditionally regulated states that have an RPS include a penalty mechanism such as a fine that is applied to utilities if they do not meet their RPS obligation. [245] Utilities are typically not allowed to recover this fine from consumers.[246]

In the 17 states that use an alternative compliance payment (ACP) as the cost containment mechanism, the ACP is also sometimes not allowed to be recovered from ratepayers by the distribution utility unless it is the least cost option.[247] In these states it also serves as a penalty mechanism that affects the utility's bottom line.[248]

New Mexico is one of the few states without a penalty mechanism in its RPS statute.[249]

The PRC has occasionally required a utility to address shortfalls. For example, as described above, PNM is required by stipulation to purchase unbundled RECs if it would otherwise fall short of its overall RPS obligation and the RECs are available below a do-not-exceed price. In another case, the PRC required SPS to make up a 2011 solar diversity shortfall by 2015 with unbundled RECs plus an eight percent overage.[250] There is no consistent policy or approach to dealing with shortfalls.[251]

The lack of a penalty mechanism in New Mexico's RPS interacts with the Reasonable Cost Threshold, in that if the RCT is triggered it removes the obligation from the utility to procure additional RECs to meet the overall RPS or diversity requirements.

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[245] Ten states have fines. Fischlein and Smith, *supra* note 104 at 292.
[246] *Id.* at 292.
[247] *Id.* at 292.
[248] *Id.* at 292.
[249] *See Id.* at 293–95.
[250] Recommended Decision on SPS Request for a Variance from Solar Diversity Requirement at 14-15, NMPRC Case No. Case No. 09-00258-UT.
[251] Correspondence with Heidi Pitt, NMPRC, on file with the author.

Summary of Considerations Related to Penalty Mechanisms:

Design Element	Current REA	Contrast to Other States	Considerations
Penalty Mechanism	None	26 states have a fine or alternative compliance payment assessed when utilities are not able to meet RPS obligations	• New Mexico is one of the few states without a penalty mechanism that impacts a utility's bottom line if they are not able to fully comply with the RPS

J. Other Considerations: Complementary Policies

As discussed above, achieving a high degree of renewable penetration will benefit from and an in some cases require additional changes to grid infrastructure and operations.

Some of these changes can be achieved through state policies that can complement an RPS, including an increased energy efficiency resource standard, expansion of transmission infrastructure, and support for western grid expansion.

1. Energy Efficiency Resource Standard

Energy efficiency investments—technology or services that reduce the amount of electricity used for a given task—can reduce overall electricity demand, therefore requiring less generation to meet the demand. Multiple analyses find that energy efficiency is a critical component of deep decarbonization pathways.[252]

This is especially true because a key strategy of deep decarbonization is electrifying new sectors of the economy, such as transportation (through electric vehicles) and building heating.[253] Energy efficiency becomes even more important because the more end-use efficiency can be improved, the less new clean generation will be needed. Because the cost of achieving energy efficiency is cheaper than the cost of producing energy, energy efficiency investments reduce the overall cost of the shift to clean energy.[254]

[252] See e.g., THE WHITE HOUSE, *supra* note 76 at 8; DEPARTMENT OF ENERGY, TRANSFORMING THE NATION'S ELECTRICTY SYSTEM: THE SECOND INSTALLMENT OF THE QUADRENNIAL ENERGY REVIEW at 3-2 (2017), https://www.energy.gov/policy/downloads/quadrennial-energy-review-second-installment.
[253] THE WHITE HOUSE, *supra* note 76 at 8.
[254] DEPARTMENT OF ENERGY, *supra* note 252 at at 3-2.

In addition, energy efficiency investments save consumers money, because they reduce the amount of electricity consumers need to purchase for the same tasks. Energy efficiency services similarly boost local economic growth because investments into energy efficiency must be made locally.[255]

One of the key policies for increasing energy efficiency growth is an energy efficiency resources standard, which operates similar to an RPS in that it requires utilities to increase electricity savings from a baseline by an increasing amount each year.[256]

New Mexico is one of 26 states with an EERS,[257] which requires the three IOUs to achieve savings of eight percent of 2005 total retail sales by 2020.[258] According to the American Council for an Energy Efficient Economy, however, New Mexico ranked only 27 out of 50 states in terms of the strength of its utility and public benefits energy efficiency programs.[259] The state received just 0.5 out of 3 possible points for its EERS in the ranking, reflecting the fact that its efficiency target only requires incremental efficiency savings of less than one percent a year.[260] Top states have targets achieving savings of more than two percent a year.[261]

2. Western Grid Expansion

Another key to greater renewable penetration is increased coordination across the western electricity grid**.** The western grid is currently made up of 37 balancing authorities that make sure that electricity supply and demand are balanced in real time.[262] The balancing authorities make use of bilateral contracts to balance their loads. As renewable energy generation increases, having increased cooperation can smooth out the variability of renewable energy generation—different areas are sunny and windy at different times. It also smooths out the variability of electricity loads, as different areas experience peak demand at different times, and can allow pooling of reserve generation.[263]

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[255] Eric Mackres, ENERGY EFFICIENCY AND ECONOMIC OPPORTUNITY ACEEE (2012), https://aceee.org/blog/2012/09/energy-efficiency-and-economic-opport (last visited Oct 22, 2018).
[256] AMERICAN COUNCIL FOR AN ENERGY-EFFICIENT ECONOMY, STATE ENERGY EFFICIENCY RESOURCE STANDARDS (EERS) (2017), https://aceee.org/policy-brief/state-energy-efficiency-resource-standard-activity.
[257] *Id.*
[258] NMSA 1978 § 62-17-5 (G).
[259] WESTON BERG ET AL., THE 2018 STATE ENERGY EFFICIENCY SCORECARD 22–23 (2018), https://aceee.org/state-policy/scorecard.
[260] *Id.* at 22–23.
[261] *Id.* at 41.
[262] U.S. electric system is made up of interconnections and balancing authorities, U.S. ENERGY INFORMATION ADMINISTRATION (EIA), http://www.eia.gov/todayinenergy/detail.php?id=27152 (last visited Nov 5, 2016).
[263] GE ENERGY AND NATIONAL RENEWABLE ENERGY LABORATORY, *supra* note 90 at 17.

There is already an Energy Imbalance Market (EIM) operating in eight western states. The market allows power companies to purchase power in 15- and 5-minute increments from throughout participating grid areas. The market is operated by the California Independent System Operator (CAISO), but it is open to entities outside of California.[264] PNM has applied to join the EIM beginning in 2021.[265]

3. Expansion of Transmission Infrastructure

Another important complementary action that will help integrate a high degree of renewables on the grid is expanding high-voltage transmission. The Renewable Electricity Futures study found that "As renewable electricity generation increases, additional transmission infrastructure is required to deliver generation from cost-effective remote renewable resources to load centers, enable reserve sharing over greater distances, and smooth output profiles of variable resources by enabling greater geospatial diversity."[266]

A 2013 Western Electricity Coordinating Council Transmission planning study also found that there would likely be a need for additional transmission in the mountain west, including New Mexico, in large part to carry renewable electricity to load centers further west.[267] The Union of Concerned Scientists study also identified expanding the transmission network as a strategy for New Mexico to make high renewable penetration more feasible.[268]

Several transmission projects are under consideration in New Mexico, although permitting is complicated and time-consuming, reflecting in part significant environmental issues.[269]

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[264] Aaron Larson, *How Does the Western Energy Imbalance Market Work?*, POWER MAGAZINE, 2018, https://www.powermag.com/how-does-the-western-energy-imbalance-market-work/ (last visited Oct 22, 2018).
[265] Robert Walton, *PNM looks to join CAISO Energy Imbalance Market*, UTILITY DIVE, https://www.utilitydive.com/news/pnm-looks-to-join-caiso-energy-imbalance-market/530796/ (last visited Oct 22, 2018).
[266] MAI ET AL., *supra* note 88 at 35.
[267] WESTERN ELECTRICITY COORDINATING COUNCIL, 2013 INTERCONNECTION-WIDE TRANSMISSION PLAN 76 (2013), http://www.wecc.biz/2013Plan.
[268] UNION OF CONCERNED SCIENTISTS, *supra* note 67 at 6.
[269] *See* Steve Terrell, *PRC rejects SunZia transmission line project*, SANTA FE NEW MEXICAN, September 5, 2018, http://www.santafenewmexican.com/news/local_news/prc-rejects-sunzia-transmission-line-project/article_ee3c6270-4c5b-5998-8ab4-3e9a04141c46.html (last visited Oct 21, 2018).

IV. Current RPS Targets: Does the Compliance Requirement Continue Beyond 2020?

The second issue this paper analyzes is whether the current RPS statute requires continued compliance after 2020—that is, are the utilities and rural electric cooperatives that are subject to the REA required to continue meeting the renewable energy target and conducting associated reporting after the date of the final RPS target in the law?

This question was raised by stakeholders during the Energy Roadmap process. There is arguably some ambiguity about whether the language of the law requires utilities to continue to meet the RPS after 2020. When the law was amended in 2007 to extend the RPS targets, the structure and language of the target portion of the statute was changed in a way that removed a clause that made clear that the RPS continued to apply beyond the final milestone in place at that time.

The 2004 version of the REA set an initial RPS target for IOUs of five percent by 2006 and then provided that the RPS "shall increase by one percent per year … until January 1, 2011, when the renewable portfolio standard shall reach a level of ten percent … and *shall remain fixed at ten percent for each year thereafter*" (emphasis added).[270]

In contrast, the 2007 amendment changed the structure of the RPS for IOUs to establish four sequentially increasing targets: 5 percent in 2006, 10 percent in 2011, 15 percent in 2015, and 20 percent in 2020. The 2007 amendment used the same language to establish each of the four targets, e.g.: "no later than January 1, 2020, renewable energy shall comprise no less than twenty percent of each public utility's total retail sales to New Mexico customers."[271] Unlike the 2004 statute, the 2007 amendment did not include a percent-per-year ramp up component (the provision that included the "shall remain fixed…thereafter" language in 2004).

In the same 2007 Act, the legislature expanded the RPS to cooperatives, using a similar if simpler RPS structure. For cooperatives, a target of 5 percent is established for 2015, which then ramps one percent each year until it reaches 10 percent in 2020.[272] The statute does not include any express language that the 2020 target "shall remain fixed…thereafter."

This analysis applies New Mexico's law of statutory construction and concludes that under the current statutory language, a court would very likely find that IOUs and rural electricity cooperatives are required to continue to comply with the RPS after 2020.

For IOUs this conclusion is based on other provisions of the statute that demonstrate the Legislature intended to continue requiring compliance with the RPS after 2020. In particular, NMSA 1978, Section 62-16-4(D) requires utilities to continue filing forward-looking RPS

[270] 2004 N.M. Laws ch. 65 § 4(A); N.M. S.B. 43 § 4(A) (2004 Reg. Session).
[271] 2007 N.M. Laws ch. 4 § 8(A)(1); N.M. S.B. 418 § 8(A)(1) (2007 Reg. Session); NMSA 1978 § 62-16-4 (A)(1).
[272] NMSA 1978 § 62-15-34(A).

compliance plans with the PRC "until 2022, and thereafter as determined necessary by the [PRC]." This conclusion is also consistent with the PRC's interpretation of the statute in its RPS implementing regulations.

For rural electricity cooperatives, this conclusion is based on the fact that the 2007 Amendment created a very similar RPS scheme for rural electricity cooperatives to the RPS scheme for IOUs. According to New Mexico law, provisions in the same or similar statute are to be "harmonized and construed together when possible." Although there is no express indication in the rural electricity cooperative RPS law that the legislature intended the RPS to apply beyond 2020, there is also no indication that the legislature intended the cooperative RPS to sunset in 2020 and therefore to divert from the structure of the RPS scheme used for the IOU RPS.

This part first describes New Mexico's law of statutory construction. It then applies the law first to the IOU RPS, then to the rural electricity cooperative RPS.

A. New Mexico Law of Statutory Construction

For statutes enacted after 1997, including the Renewable Energy Act, the interpretation of statutes in New Mexico is governed by both court-developed doctrines and New Mexico's Uniform Statute and Rule Construction Act (USRCA).[273]

When courts in New Mexico analyze the meaning of a statute, they do so by seeking "to determine and give effect to the Legislature's intent."[274]

The Court looks "first to the plain language of the statute, giving the words their ordinary meaning, unless the Legislature indicates a different one was intended."[275] Where the language is "clear and unambiguous," the court will end its inquiry and "refrain from further statutory interpretation."[276] The court will reject, however, a "mechanical statutory construction when the results would be absurd, unreasonable, or contrary to the spirit of the statute."[277]

If the statutory language is "unclear, ambiguous, or reasonably subject to multiple interpretations,"[278] the court will continue its inquiry. In order to interpret the statute, the

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[273] NMSA 1978 § 12-2A-1 et seq. The USRCA applies "to a statute enacted or rule adopted on or after the effective date" of the USRCA. NMSA 1978 § 12-2A-1(B).

[274] Badilla v. Wal-Mart Stores East Inc., 2015 -NMSC- 029 ¶ 12 (cleaned up quotation) (quoting Moongate Water Co. v. City of Las Cruces, 2013–NMSC–018, ¶ 6); *see also* NMSA 1978 § 12-2-19 ("The text of a statute or rule is the primary, essential source of its meaning").

[275] Badilla v. Wal-Mart Stores East Inc., 2015 -NMSC- 029 ¶ 12 (cleaned up quotation) (citing State v. Almanzar, 2014–NMSC–001, ¶ 14, 316 P.3d 183).

[276] *Id.*

[277] State v. Almanzar, 2014-NMSC-001, ¶ 14-15, 316 P.3d 183, 186

[278] New Mexico's Supreme Court has urged "caution in applying the plain meaning rule. Its beguiling simplicity may mask a host of reasons why a statute, apparently clear and unambiguous on its face, may for one reason or another give rise to legitimate (i.e., nonfrivolous) differences of opinion concerning the statute's meaning." Id. ¶ 10.

court will be "informed by the history, background, and overall structure of the statute, as well as its function within a comprehensive legislative scheme."[279] If possible, the statute should be "construed … to: (1) give effect to [the statute's] objective and purpose; (2) give effect to its entire text; and (3) avoid an unconstitutional, absurd or unachievable result."[280] The court looks not only to the statute at issue, but also to statutes related to the same matter or the same subject.[281]

If a statute has been amended, "the amended language must be read within the context of the previously existing language, and the old and new language, taken as a whole, comprise the intent and purpose of the statute or rule."[282]

The court "will not read into a statute … language which is not there, particularly if it makes sense as written."[283] The court has also cautioned, however, that "legislative silence is at best a tenuous guide to determining legislative intent."[284]

The UCSRA further provides that courts may consider a variety of "aids to construction" if an analysis of plain meaning and statutory context (as described above) is not sufficient.[285] In the first instance, this may include looking to "a judicial construction of the same or similar statute" in New Mexico or another state; "an official commentary published and available before the enactment or adoption of the statute or rule;" or "an administrative construction of the same or similar statute."[286] If the meaning is still unclear, then courts may consider a final range of tools, including: "the circumstances that prompted the enactment or adoption of the statute" and "the purpose of a statute … as determined from the legislative or administrative history of the statute."[287]

In circumstances when the state Legislature delegates to an agency "the task of giving meaning to interpretive gaps in a statute" by giving the agency "policy-making authority," the court will defer to the agency's interpretation of the statute.[288] However, even in those circumstances the

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[279] Badilla v. Wal-Mart Stores East Inc., 2015 -NMSC- 029 ¶ 12.
[280] NMSA 1978 § 12-2A-18.
[281] "A fundamental rule of statutory construction is that all provisions of a statute, together with other statutes in *pari materia*, must be read together to ascertain the legislative intent." State v. Young, 2004-NMSC-015 ¶ 12 (citing approvingly Roth v. Thompson, 1992-NMSC-011); Albuquerque Nat'l Bank v. Comm'r of Revenue, 1970-NMCA-123 ¶ 10-12 (defining pari materia as "generally speaking … 'of the same matter' or 'on the same subject').
[282] Vigil v. Thriftway Mktg. Corp., 1994-NMCA-009, ¶ 15; Atencio v. Board of Educ., 99 N.M. 168, 171 (1982).
[283] Pub. Serv. Co. of New Mexico v. New Mexico Pub. Util. Comm'n, 1999-NMSC-040 (cleaned up quotation) (citing Burroughs v. Board of County Comm'rs, 88 N.M. 303, 306 (1975)).
[284] Aeda v. Aeda, 2013-NMCA-095, ¶¶ 10-11 (cleaned up quotation) (citing Swink v. Fingado, 115 N.M. 275, 283 (1993).
[285] The UCSRA also identifies specific technical canons of construction that courts may use in construing the text of a statute. *See* N.M.S.A. §§ 12-2A-2 to 12-2A-7 (2018).
[286] NMSA 1978 § 12-2A-20(B).
[287] NMSA 1978 § 12-2A-20(C) (2018).
[288] New Energy Econ., Inc. v. N.M. Pub. Regulation Comm'n, 2018-NMSC-024, ¶ 25.

court is not bound by the agency's interpretation and may substitute its own judgment if the agency's interpretation is "unreasonable or unlawful."[289]

B. Analysis of REA Compliance Requirements for IOUs After 2020

The narrow text of the REA provisions that establish the RPS targets for IOUs could be read in different ways, and therefore a further inquiry into the meaning of the language in light of the structure and purpose of the statute is required. Looking at the law as a whole, there are multiple provisions that make clear that the Legislature intended to establish ongoing, annual compliance requirements. One provision in particular requires continued reporting and planning for compliance beyond 2022. This strongly supports the construction of the statute to require compliance beyond 2020. The chief counter argument to this construction is that the 2007 amendments removed language that explicitly required continuing compliance. On closer examination, however, the Legislature's intent in making this change is better explained by the Legislature's clear intent to move away from a year-by-year ramp up of the RPS target. This conclusion is supported by the PRC's construction of the statute in its implementing regulations, although a court will not necessarily give deference to the PRC in this case.

1. Text of § 62-16-4(A)

The central provision of the REA states that a "public utility shall meet the renewable portfolio standard requirements … to include renewable energy in its electric energy supply portfolio."[290] The statute then provides that "the requirements of the renewable portfolio standard [for public utilities] are:"

> (a) no later than January 1, 2006, renewable energy shall comprise no less than five percent of each public utility's total retail sales to New Mexico customers;
>
> (b) no later than January 1, 2011, renewable energy shall comprise no less than ten percent of each public utility's total retail sales to New Mexico customers;
>
> (c) no later than January 1, 2015, renewable energy shall comprise no less than fifteen percent of each public utility's total retail sales to New Mexico customers; and
>
> (d) no later than January 1, 2020, renewable energy shall comprise no less than twenty percent of each public utility's total retail sales to New Mexico customers.[291]

[289] *Id.*
[290] NMSA 1978 § 62-16-4(A).
[291] NMSA 1978 § 62-16-4(A)(1).

Focusing narrowly on this provision, the language of the statute does not explicitly state that the target established in year 2020 continues perpetually after 2020, nor that it ends after 2020.

Viewing the provision alone, the language admits some ambiguity. For example, this provision does not make explicit whether utilities are required to meet a renewable portfolio standard between milestones. The language establishing the standards could arguably be held to mean that by January 2006 a utility would need to demonstrate that five percent of its total retail sales were supplied by renewable energy, and that again by 2011 the utility would need to demonstrate achieving 10 percent target. Such a reading would not necessarily require that utilities maintain compliance with the 2006 target until 2011.

In keeping with such a reading, the 2020 target could be read as a final target requiring a one-time demonstration of compliance, and would not necessarily create an ongoing requirement to demonstrate compliance.

At least as plausible, however, is reading the provisions to create a forward-looking, ongoing requirement, i.e., that "no later than" 2011 a utility's portfolio of electricity generation "shall comprise no less" than 10 percent of total sales.

In short, a narrow focus on the plain meaning of § 62-16-4(A) can admit to multiple interpretations.

2. RPS Requirement Read in Light of Entire Statute

As both case law and the UCSRA require, when there is some room for ambiguity, courts are to take into account the "history, background, and overall structure of the statute" and to "give effect to [the statute's] objective and purpose" and "its entire text."[292] This includes taking into account how amendments have changed the law. Given that the statute explicitly requires annual compliance with the RPS, and that it requires both reporting and compliance planning beyond 2020, it is very likely that a court would find that the RPS compliance obligation is maintained beyond 2020.

a. Requirements for Annual, Ongoing RPS Reporting and Planning

A core part of the RPS law is the compliance reporting and planning requirements found in Section 62-16-4(D). The regulatory system established by the law requires not only that utilities meet the statute, but also that utilities report on their renewable procurement "each year" and describe how they plan to meet the RPS for the following year.

[292] NMSA 1978 § 12-2A-18.

The text of Section 62-16-4(D) provides that:

> D. By September 1, 2007 and July 1 of each year thereafter until 2022, and thereafter as determined necessary by the commission, a public utility shall file a report to the commission on its procurement and generation of renewable energy during the prior calendar year and a procurement plan that includes:
>
> (1) the cost of procurement for any new renewable energy resource in the next calendar year required to comply with the renewable portfolio standard; and
>
> (2) testimony and exhibits that demonstrate that the proposed procurement is reasonable as to its terms and conditions considering price, availability, dispatchability, any renewable energy certificate values and diversity of the renewable energy resource; or
>
> (3) demonstration that the plan is otherwise in the public interest.

While Section 62-16-4(A)(1)—the provision establishing the RPS targets—may be ambiguous in whether it creates annual targets between milestones when considered alone, Section 62-16-4(D) makes clear that the REA does establish such annual compliance requirements. The law requires a utility to file a report "*each year*" on procurement of renewables in the prior year and a procurement plan for the next calendar year on "the cost of … any new renewable resource…*required to comply*" with the RPS in that year (emphasis added).

That the law creates a renewable portfolio standard that applies *every year* is supported by other passages. In Section 62-16-4(B), the statute provides that a utility is exempted from the RPS "in any given year" if the cost of procurement exceeds the reasonable cost threshold, "provided that the existence of this condition excusing performance in any given year shall not operate to delay the annual increases in the renewable portfolio standard in subsequent years."[293] Section 62-16-4(A)(2), which sets costs caps for large industrial and commercial customers, establishes that the cap "shall increase by one-fifth percent or ten thousand dollars ($10,000) *per year* until January 1, 2011, when the procurement limit criterion shall remain fixed." (emphasis added).[294] Similarly, the exemption from RPS-related electricity charges for political subdivisions of the state and large educational institutions provides that those entities may be exempt from charges "in a year" that they meet the criteria set forth in the statute.[295]

When the provisions of § 62-16-4(A)(1) are read together with the "overall structure of the statute" and to give effect to the law's "entire text," they can only be reasonably understood to establish a standard that continues to operate in every year, not just in milestone target years.

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[293] The phrase "shall not operate to delay the annual increases in the renewable portfolio standard in subsequent years" may be an unintended artifact from the 2004 version of the statute, which required an annual percentage increase between 2006 and 2011.
[294] NMSA 1978 § 62-16-4(A)(2).
[295] NMSA 1978 §62-16-4(A)(3).

It would make no sense to require utilities to report on renewable procurement in every year, and plan for meeting the standard every year, if the RPS requirement only applied once every four or five years. Nor would it make sense for the statute to allow exemptions from the RPS or RPS-related charges in any year if the RPS did not establish an annual compliance requirement. Read this way, Section 62-16-4(A)(1) establishes a requirement that "no later" than the target date the utility meet the renewable portfolio standard on an *ongoing, annual* basis.

This construction of Section 62-16-4(A)(1) has a bearing on whether the law establishes an RPS standard that ends after 2020 or continues to apply indefinitely. The sentences that establish the milestone targets for years 2006, 2011, 2015, and 2020 are identical. Each sentence requires that "no later than" the target date "renewable energy shall comprise no less" than the target percentage of the utility's total retail sales to New Mexico customers. The language for the 2020 target is no different than the language for the three other targets.

If the 2006 milestone target is necessarily understood to establish a portfolio standard that continues to apply on an ongoing annual basis until the next milestone target applies in 2011, then the most natural reading of the identical language establishing the 2020 target is that it also applies on an ongoing annual basis. There is nothing in the text of Section 62-16-4(A)(1) that suggests that the 2020 target should be understood to operate differently from the other three targets. This is in keeping with the general principle of statutory construction that "similar language contained within the same section of a statute be accorded a consistent meaning."[296]

This reading is supported by the language of Section 62-16-4(D), the provision governing reporting and planning discussed above. The language of Section 62-16-4(D) requires that utilities file reports on renewable procurement and plans for RPS compliance "until 2022, and thereafter as determined necessary by the commission."

The requirement makes most sense if the Legislature intended for the 2020 target to be maintained. It would make little sense for a utility to report on its renewable energy procurement past a final target deadline, much less to plan for compliance in the following year. Yet the statute requires that by July 1, 2022 utilities report on their renewable procurement for calendar year 2021, and submit a plan detailing how they plan to comply with the standard for 2022.

[296] *See* National Credit Union Admin. v. First Nat'l Bank & Trust Co., 522 U.S. 479, 501(1998); *c.f.* Chatterjee v. King, 2012-NMSC- 019 at note 8 ("We interpret identical words used in different parts of the same act as having the same meaning." (cleaned up quotation)).

b. Objective of the Statute

When the plain language meaning of a statutory provision is ambiguous, courts also look to the statute's objective and purpose.

The REA includes a "findings and purpose section" at Section 62-16-2. The legislative findings include that "the generation of electricity through the use of renewable energy presents opportunities to promote energy self-sufficiency, preserve the state's natural resources and pursue an improved environment in New Mexico" and also that with the PRC's oversight, use of renewable energy "can bring significant economic benefits to New Mexico." The findings also include that "a public utility should have incentives to go beyond the minimum requirements of the renewable portfolio standard."[297]

The statute describes its chief purpose as being to "prescribe the amounts of renewable energy resources that public utilities shall include in their electric energy supply portfolios for sales to retail customers in New Mexico by prescribed dates."

Neither the findings nor the purpose statement provides direct evidence of whether the statute imposes an ongoing compliance obligation beyond 2020.

Taken together with the structure of the statute, however, the REA's purpose is best understood to require a continually increasing percentage of renewable energy within utility portfolios through 2020—so long as the procurement of that energy is under a reasonable cost threshold—and to prevent backsliding by utilities.

The REA as amended in 2007 established RPS targets that increase in ambition every four or five years and required utilities to report on and plan for compliance with those targets every year. As the New Mexico Supreme Court stated in 2015, "Section 62-16-4(A) clearly evinces a legislative intent to systematically increase renewable energy use in New Mexico."[298]

This establishes a clear trajectory of increasing ambition, and a mechanism to prevent backsliding by requiring utilities to continue to meet the RPS even in non-milestone years.

In this context, the post-2020 compliance provisions make sense as mechanisms to ensure that the utilities maintain their renewable portfolios beyond 2020. For two years, reporting on continued compliance is required; after that the PRC is given discretion on whether to require further reporting. If utilities continue the trajectory of increasing renewable generation in their portfolios after 2020—for example, through the financial incentive mechanisms in the REA that encourage "going beyond the minimum requirements" of the RPS[299]—annual reporting may no

[297] *See also N.M. AG v. N.M. Pub. Regulation Comm'n*, 2015-NMSC-032 at ¶40 ("the renewable portfolio standard promulgated by the Renewable Energy Act provides a minimum standard").
[298] *N.M. AG v. N.M. Pub. Regulation Comm'n*, 2015-NMSC-032 at ¶41.
[299] NMSA 1978 § 62-16-4(A)(5).

longer be necessary. If, however, they continue to stay right at the 20 percent target, the PRC may find it prudent to require continued reporting.

c. Implications of 2007 Amendment that Removed "shall remain fixed…thereafter"

When the court is looking to the "history, background, and overall structure of the statute," it will also look to the effects of amendments to the law. If a statute has been amended, "the amended language must be read within the context of the previously existing language, and the old and new language, taken as a whole, comprise the intent and purpose of the statute or rule."[300]

When the REA was first enacted in 2004, the provisions setting the RPS target read:

> (1) no later than January 1, 2006, renewable energy shall comprise no less than five percent of each public utility's total retail sales to New Mexico customers;
>
> (2) the renewable portfolio standard shall increase by one percent per year thereafter until January 1, 2011, when the renewable portfolio standard shall reach a level of ten percent of a public utility's annual retail sales in New Mexico *and shall remain fixed at ten percent for each year thereafter*; (emphasis added)[301]

The original REA language therefore included a clear statement that the second—and at that time final—2011 RPS target would continue to apply in years after 2011.

The 2007 REA amendment added two further targets for 2016 and 2020 and, importantly, changed the structure of the 2011 target, but it did not include language explicitly stating that the 2020 target would continue.

The question here is whether the Legislature intended by its 2007 amendment to change the statute so that there would be no ongoing obligation after the final RPS target. On balance, the evidence does not seem to support such a conclusion.

First, it is important to note that the Legislature changed the structure of the RPS target provisions.

In the 2004 statute, the law set a baseline RPS of five percent in 2006, and then established that the RPS would "increase by one percent per year thereafter" until 2011.

In 2007, the Legislature eliminated this year-by-year ramping mechanism. The 2007 language, still currently in effect, used the same language that the 2004 bill used for the baseline 2006

[300] Vigil v. Thriftway Mktg. Corp., 1994-NMCA-009, ¶ 15; Atencio v. Board of Educ., 99 N.M. 168, 171 (1982).
[301] 2004 N.M. Laws ch. 65 § 4(A); N.M. S.B. 43 § 4(A) (2004 Reg. Session).

standard to establish milestone standards for 2011, 2016, and 2020. Unlike the 2004 bill, it did not incrementally advance the standard in the intervening years.

One consequence of including a year-by-year ramping mechanism is that it is important for the legislative drafters to make clear when the ramping mechanism ends. Without the clause "and shall remain fixed at ten percent for each year thereafter" it could have been ambiguous whether ramping continued after 2011. The 2004 drafters therefore had a reason to include the "shall remain fixed … each year thereafter" language other than to indicate that the RPS obligation would continue beyond the final target year.

In contrast, in 2007 all of the milestone targets were phrased in the same way: by "no later than" the target year "renewable energy shall comprise no less than" the target percentage of electricity. Because there was no year-by-year ramping mechanism between milestone years, there was no need to indicate that ramping ceased in the final year. As described above, when read as a whole, the other provisions of the statute provide for an ongoing compliance obligation assessed on an annual basis. On this construction, the milestones' RPS targets in the 2007 statute set a standard that remains in place until a new milestone goes into effect.

It is notable that the Legislature did not make any other changes in 2007 that would indicate it intended to change the statute so that it would sunset after the final target. For example, neither the findings nor purpose were changed to indicate the introduction of a sunset provision. Nor does the fiscal impact report, the sole substantive report available through legislative history, mention the introduction of a sunset provision in its summary of the bill's provisions.[302]

Instead, in the 2007 amendment the Legislature explicitly changed the compliance provision to require reporting and planning for compliance through 2022 and authorized the PRC to require reporting and planning for compliance beyond 2022.

In sum, while at first glance it may seem as if removing language that explicitly says that the RPS "shall remain fixed … each year thereafter" is a meaningful change with regards to post-2020 compliance, on closer examination this change is better understood as solely related to the removal of the ramping language. The text of the REA taken as a whole creates an ongoing RPS obligation with annual compliance and planning requirements. There is no other indication in the statutory language or legislative history that the Legislature intended to introduce a sunset mechanism in 2007.

[302] Fiscal Impact Report, Renewable Energy Portfolio Standards Act, March 2, 2007.
[302] 2007 N.M. Laws ch. 4; N.M. S.B. 418 § 8 (2007 Reg. Session).

d. Agency Interpretation

Finally, the conclusions reached above align with the PRC's own interpretation of the REA.

A court will only defer to an agency if it has been delegated authority by the Legislature to give "meaning to interpretive gaps in a statute" through its "policy-making authority." Even then, courts reserve the right to substitute their own judgment if the agency's interpretation is "unreasonable or unlawful."[303]

Although the REA grants the PRC broad authority to promulgate rules regarding the RPS,[304] it is unlikely that a court would find that a question as fundamental as whether the RPS applies after 2020 is "an interpretive gap" in the statute.

That said, the PRC's interpretation, promulgated through notice-and-comment rulemaking, is additional persuasive evidence.

In its regulations, the PRC explicitly provides that the renewable energy required to be in a utility's portfolio is "(3) no less than 20% for plan year 2020 and thereafter of the utility's plan year total retail energy sales."[305] In other words, the PRC regulations explicitly state the RPS continues indefinitely after 2020.

More broadly, the PRC's implementation of the RPS provisions is consistent with the construction discussed above, in that the regulations require annual reporting and compliance with RPS obligations for every year.[306]

C. Analysis of REA Compliance Requirements for Cooperatives After 2020

The 2007 REA amendment legislation not only added RPS targets for the three IOUs, it also amended the Rural Electricity Cooperative Act to establish RPS targets for rural electricity cooperatives for the first time.[307] Like the original 2004 IOU RPS, the cooperative RPS includes an initial RPS target and a year-by-year ramping mechanism that climbs to a final target. As with the post-2007 statutory language establishing IOU RPS targets, the statute does not include express language stating that the 2020 target for rural electricity cooperatives continues beyond its final target year, in this case 2020. Although the case is not as clear as with the IOU targets, a court would still likely find that the 2020 RPS standard for rural electricity cooperatives continues indefinitely, since the RPS is otherwise very similar in design to the IOU RPS and there is no indication that the legislature intended the RPS to sunset in 2020.

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[303] New Energy Econ., Inc. v. N.M. Pub. Regulation Comm'n, 2018-NMSC-024, ¶ 25.
[304] NMSA 1978 § 62-16-7(A).
[305] 17.9.572.10(B)(3) NMAC.
[306] 17.9.572.14 NMAC.
[307] 2007 N.M. Laws ch. 4 § 1; N.M. S.B. 418 §1 (2007 Reg. Session).

The provisions setting the RPS standard for rural electricity cooperatives read:

> A. Each distribution cooperative organized under the Rural Electric Cooperative Act shall meet the renewable portfolio standard requirements, as provided in this section, to include renewable energy in its electric energy supply portfolio. Requirements of the renewable portfolio standard are:
>
> > 1) no later than January 1, 2015, renewable energy shall comprise no less than five percent of each distribution cooperative's total retail sales to New Mexico customers;
> >
> > (2) the renewable portfolio standard shall increase by one percent per year thereafter until January 1, 2020, at which time the renewable portfolio standard shall be ten percent of the distribution cooperative's total retail sales to New Mexico customers;[308]

This language does not include any express statement that after 2020 the RPS will continue beyond 2020.

The cooperative RPS drafters created a two-target ramping RPS structure very similar to the 2004 IOU RPS, but used different language to achieve their aims. The 2004 IOU RPS language stated that after ramping from an initial 2006 target, the RPS "shall reach a level of ten percent [in 2011] … and shall remain fixed at ten percent *for each year thereafter*" (emphasis added).[309] The 2007 cooperative RPS provides that after the initial 2015 target, the RPS "shall increase by one percent per year thereafter *until [2020]…* at which time the renewable portfolio standard *shall be* ten percent" (emphasis added).[310]

As with the post 2007 IOU RPS standard, a narrow reading of this 2020 target language admits some ambiguity. It is possible to read the provision to mean that for the year 2020, the RPS standard "shall be" ten percent, but not to mean that the RPS continues on at ten percent indefinitely. It is also at least as plausible to read this provision to indicate that for the year 2020 and all future years, the RPS standard "shall be" ten percent.

Reading this text in light of the "history, background, and overall structure of the statute" and to "give effect to [the statute's] objective and purpose" and "its entire text,"[311] the latter reading is significantly more persuasive given the analysis of the IOU RPS standard above. This is especially true when the IOU and cooperative provisions are examined *together*, in keeping with New Mexico's doctrine of statutory construction that requires statutes on the same subject matter, or different parts of the same statute, to be "harmonized and construed

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[308] NMSA 1978 § 62-15-34(A).
[309] 2004 N.M. Laws ch. 65 § 4(A); N.M. S.B. 43 § 4(A) (2004 Reg. Session).
[310] NMSA 1978 § 62-15-34(A)(2).
[311] NMSA 1978 § 12-2A-18.

together when possible, in a way that facilitates their operation and the achievement of their goals."[312]

The portion of the REA that deals with cooperatives contains no language that expressly indicates that the legislature intended the 2020 target to apply beyond 2020, but it also contains no contrary indication that the legislature intended for the cooperative standard to sunset after 2020.[313] Nor does the fiscal impact report from the 2007 amending legislation have any indication that a sunset was intended by the legislature for the cooperative RPS.[314]

The legislature did, however, generally structure the cooperative RPS to generally mirror the design features of the IOU RPS, but with simpler compliance requirements and a lesser degree of PRC oversight.[315]

For example, the cooperative RPS also applies a reasonable cost threshold to rural electricity cooperatives,[316] and a simpler form of a cap on RPS-related costs to large customers.[317] The law requires cooperative renewable energy portfolios to be "diversified,"[318] similar to what is required of IOUs. Cooperatives are also required to report annually on renewable energy procurement to the PRC, similar to IOU requirements, although they are not required to submit forward-looking renewable procurement plans.[319]

Given these structural similarities and the lack of any evidence that the Legislature intended the cooperative RPS to sunset in 2020, a court would likely construe the cooperative RPS language

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[312] Public Serv. Co. v. N.M. PUC, 1999-NMSC-040 ¶ 23 (citing State ex rel. Quintana v. Schnedar 1993-NMSC-033); Albuquerque Nat'l Bank v. Comm'r of Revenue, 1970-NMCA-123 ¶ 10 (rule of *pari materia* applies to construction of "different sections of the same legislative enactment," citing New Mexico Glycerin Co. v. Gallegos, 48 N.M. 65, 145 P.2d 995 (1944)).

[313] One of the ways in which the cooperative RPS has simpler compliance requirements than the IOU statute is that it does not include any requirement that cooperatives submit procurement plans for future years to the PRC. Therefore there is no comparable language to the IOU planning requirement in the REA, which as described above requires IOUs to plan for compliance beyond 2020.

[314] *See* Fiscal Impact Report, Renewable Energy Portfolio Standards Act, March 2, 2007.

[315] Cooperatives in New Mexico are generally subject to a lesser degree of PUC oversight. Unlike for-profit investor-owned utilities, rural electricity cooperatives are non-profit organizations. They are structured as cooperatives where the member-customers elect a board to govern the entity, and this board is assumed to provide much of the oversight on their customers behalf. *See* NMSA 1978 § 62-3-2 (recognizing that "rural electric cooperatives are substantially different from investor-owned utilities, particularly relative to setting rates"); Tri-State Generation & Transmission Ass'n v. N.M. Pub. Regulation Comm'n, 2015-NMSC-013, ¶ 16 (New Mexico legislature "directed that rural electric cooperatives are to be regulated in a limited manner because they are substantially different from public utilities"). In addition, rural electricity cooperatives are also much smaller entities than the investor-owned utilities, with a smaller staff, and therefore may be less capable to deal with complicated regulatory requirements.

[316] NMSA 1978 § 62-15-34(B).

[317] NMSA 1978 § 62-15-36(A).

[318] NMSA 1978 § 62-15-34(A)(3).

[319] NMSA 1978 § 62-15-34(C).

to be “in harmony” with the IOU RPS and determine that the legislature also intended for the cooperative RPS to continue beyond 2020.

D. Conclusion: The REA Likely Requires Continuing Compliance Beyond 2020

The specific provisions of the REA that create the IOU RPS targets admit some ambiguity about whether the targets apply after 2020. Reading the language together with the other provisions of the statute, however, clarifies that the statute as a whole requires continuing compliance with the renewable portfolio standard on an annual basis. Each RPS milestone target therefore establishes a standard that continues to apply until the next milestone target takes effect. Importantly, the reporting and planning provisions expressly contemplate that utilities will continue to report on and plan for compliance through at least 2022, and even further if the PRC requires. The 2007 amendment to the REA did eliminate explicit language that made clear that the compliance requirement continues past the last milestone, but this change is consistent with a change to the structure of the RPS milestones, and there is no other evidence that the Legislature intended to introduce a sunset provision. Finally, the PRC also has interpreted the statute to require compliance indefinitely, although a court may not defer to the agency. In sum, there is a strong probability that a court would conclude that the statute requires continuing compliance with the IOU RPS beyond 2020.

In the same 2007 Act that amended the IOU RPS, the legislature expanded the RPS to cooperatives, using a very similar, if simpler scheme. Although there is no express indication in the cooperative RPS provisions that the legislature intended the RPS to apply beyond 2020, there is also no indication that the legislature intended the cooperative RPS to sunset in 2020 and therefore to divert from the structure of the RPS scheme used for the IOU RPS. A court would also likely find that the cooperative RPS applies beyond 2020.

V. Conclusion

The first part of this analysis examines nine policy design elements and contrasts them with RPS designs in other states. The analysis finds that other states are amending their RPS laws to enact significantly higher targets than currently enacted in New Mexico, and that analyses project that these policies will provide higher benefits than costs. Some key policy differences that emerge when contrasting the REA with other state RPSs are as follows: the IOU RPS has relatively restrictive cost containment mechanisms that significantly reduce overall renewable procurement obligations, and that also significantly restrict cost impacts to large customers; the RPS has very specific diversity requirements that are frequently unmet; that there is a strong preference for in-state renewables; and that there is no penalty mechanism. In addition, New Mexico has lesser targets for rural electricity cooperatives and no targets for municipal utilities; some other states cover all entities equally. The second part of this analysis concludes that a court would very likely find that utilities and rural electricity cooperatives are required to continue to comply with the RPS after 2020. This conclusion is based on other provisions of the statute that demonstrate the Legislature intended to continue requiring compliance with the RPS after 2020.

Appendix A: Summary Table of RPS Policy Design Considerations

Design Element	Current REA	Contrast to Other States	Considerations
Final Year Target	**IOUs:** 20% by 2020 **Coops:** 10% by 2020	[Main or IOU target only] HI: 100% by 2045 CA: 60% by 2030* VT: 75% by 2032 NY: 50% by 2030 NJ: 50% by 2030 OR: 50% by 2040 DC: 50% by 2032 CT: 40% by 2030 RI: 38.5% by 2035 CO: 30% by 2020 MD: 25% by 2020 *CA also 100% zero carbon by 2045 NV voters advanced ballot measure to require 50% by 2030 (2nd vote required)	• Benefits of expanding RPSs policies have been found to exceed costs, and include improved health outcomes, reduced water use, and job growth • Addressing climate change will require a "near-complete decarbonization of electricity," including a dramatic shift to renewable energy. New Mexico's current target is not sufficient to put the state on that trajectory. • RPSs have driven have driven more than 50 percent of renewable growth in the U.S., and continue to be a key policy driver. • Setting higher targets may lead to higher cost impacts (analyses are mixed), however this is dependent on both market developments and the type of cost-containment measures included in the policy (see Section III.D.) • Setting higher targets will lead to new challenges in grid management given the variability of wind and solar resources; changes to grid management, infrastructure, and operations would help integration • Setting higher RPS targets can better prepare New Mexico for likely future federal GHG or clean energy regulation • Setting higher targets can better prepare New Mexico to take advantage of expected regionalization in the Western electricity market and increase clean energy exports

Design Element	Current REA	Contrast to Other States	Considerations
Scope: What Load Serving Entities Must Comply?	**RPS covers:** IOUs (PNM, El Paso Electric, Soutwestern Public Service) Rural electricity cooperatives (but have less strict target) **Not covered:** Municipal utilities	CO, NC also have lesser standards for rural coops, though CO increased its standard to 20% by 2020 in 2013 Many states exempt municipal utilities; some exempt coops	• Different types of entities are subject to different levels of state regulatory oversight; municipal utilities are typically overseen by municipal boards or councils • The State Federal RPS Collaborative urges that an RPS—and it costs—should apply to all ratepayers as benefits will accrue to all
Qualifying Renewable Resources	**Eligible resources:** • solar • wind • geothermal • new hydropower • fuel cells • biomass	NM has relatively broad eligibility Some other states do not allow geothermal, biomass Some states do allow municipal solid waste power, energy efficiency	• New Mexico's broad resource eligibility provides compliance flexibility to utilities, subject to the diversity constraint • New Mexico has a stand-alone energy efficiency resource standard; some other states combine this with their RPS. Energy efficiency is a very important complement to renewable energy, but there is no clear benefit to having a combined RPS/EERS over two stand alone programs

Design Element	Current REA	Contrast to Other States	Considerations
Cost Containment Mechanism	**IOUs:** Large customer cap (LCC): lower of (A) $99K + inflation or (B) 2% of bills Reasonable Cost Threshold (RCT) limiting renewable procurement. PRC rule set RCT to 3% of utility's retail revenue **Coops:** 1% Reasonable Cost Threshold 1% limit on RPS and EE charges to bills of all customers, and $75K total cost cap on RPS and EE charges for any customer	NM is one of the few states with a LCC, and the only state where a LCC has such a substantial impact in reducing overall renewable procurement under the RPS Most traditionally regulated states have a cost threshold; states in wholesale markets typically use alternative compliance payments NM's RCT level is relatively restrictive. Many states have 5% or higher caps; several states also have more restrictive caps of 1-2% NM compliance costs as a % of bills are in the middle to high-middle among states, between 2.5 and 3.5%	• A more restrictive cost-containment mechanism means that the RPS is less likely to create substantial rate impacts; it also makes it more likely that the full RPS will not be met • New Mexico's LCC aims to prevent utility "exit" by large industrial and commercial consumers; such exits could result in higher rates for all • The LCC also significantly reduces the actual RPS compliance obligation; for the two IOUs with many large customers, the real-world RPS obligations in 2020 will be 13 and 16 percent, not the nominal 20 percent. • The RCT acts as a soft cap, meaning utilities need not procure *additional* renewable resources once the cap is triggered • All three IOUs are projected to be over the RCT in 2020, but only one utility is expected to fall short of the "net" RPS goal (after accounting for the LCC) • The LCC provides more cost protection to large customers than the RCT does to "other" customers; "other" customers shoulder a greater proportion of RPS costs • New Mexico RPS compliance costs as compared to bills are in the high middle compared to other states; electricity rates are below average • There is significant uncertainty and inconsistency over how to calculate both the LCC and RCT.

Design Element	Current REA	Contrast to Other States	Considerations
Resource Diversity and Preference Mechanisms	**IOUs:** Diversity requirement in statute. PRC regs require: 30% wind 20% solar 5% other 3% distributed generation Utilities need not meet diversity if procurement exceeds RCT or is technically constrained **Coops:** Diversity requirement in statute, but no levels specified. Pre-2012 coop solar gets 3X multiplier	22 states have carve outs for solar or distributed generation 9 states have credit multipliers NM diversity targets are ambitious; solar target 5th among 16 states	• Resource diversity can help balance the grid (e.g., mix of solar and wind), promote still-maturing technologies, and potentially promote in-state generation and associated economic development • Resource-specific requirements reduce utilities' flexibility in how they comply with an overall RPS goal, and therefore usually raise the overall cost of compliance • In the past, distributed generation requirements have driven higher compliance costs in New Mexico and other states (but are subject to cost containment) • Full diversity requirements are not currently being met by NM utilities due to the RCT, although they are still driving substantial resource diversification; utilities particularly have trouble with meeting "other resource" target • NM diversity requirement is flexible in that percentages can be adjusted by PRC regulation

Design Element	Current REA	Contrast to Other States	Considerations
Acceptance of Out-of-State RECs	Statute requires electricity to be delivered in NM unless PRC determines there is a national or regional REC market. PRC determined there is a market with any state that accepts NM RECs. PRC preference is for electricity delivered in-state PRC disfavors unbundled "paper-only" RECs but has approved their use for PNM to meet shortfalls	Most states allow for unbundled RECs in at least some circumstances; Arizona and Nevada are two notable exceptions	• Although PRC regulations technically allow for use of out-of-state RECs, in practice the PRC has a strong preference for having utilities acquire both RECs and the underlying electricity • This means that much, if not all, of renewable electricity used to comply with the RPS is developed in-state, providing additional benefits (jobs and more likely benefits from displaced fossil fuel generation: reduced pollution and water use) • Compliance costs may be higher than if utilities could comply with unbundled RECs from a broader pool of states • In-state preference could increase legal risk under dormant Commerce Clause
Compliance Flexibilities	Allows REC banking for up to 4 years Does not allow borrowing	26 states allow banking, most between 2-4 years; 5 states allow unlimited banking Fewer states allow borrowing	• Banking provides increased flexibility to utilities in planning how to meet RPS requirements, because it reduces risk related to shortfalls or overcompliance • May reduce program costs by providing an alternative to REC market in undercompliance situations • Provides more incentive to develop renewable projects earlier • May mean that RPS target can be met in a given year without actually procuring all of the required renewable energy in that year

Design Element	Current REA	Contrast to Other States	Considerations
Planning and reporting requirements	**IOUs:** REA requires a plan detailing how the utility expects to meet RPS requirements in next 2 years REA requires annual reporting on compliance and costs **Coops:** REA requires annual reporting on compliance and costs		• Planning requirements have been identified as a significant factor in promoting in-state generation; New Mexico's RPS requires planning • There is no statewide reporting required or conducted, making it difficult to assess overall RPS compliance • Plans and reports can be inconsistent in the information they include and how certain calculations are performed • Long-term planning with regards to grid infrastructure and management has also been identified as important; New Mexico's IRP may fill this role
Penalty Mechanism	None	26 states have a fine or alternative compliance payment assessed when utilities are not able to meet RPS obligations	• New Mexico is one of the few states without a penalty mechanism that impacts a utility's bottom line if they are not able to fully comply with the RPS