



Question 6: The Renewable Energy Promotion Initiative

Executive Summary

Question 6: The Renewable Energy Promotion Initiative is a statewide constitutional ballot initiative that will be placed before Nevada's registered voters at the November 6, 2018, General Election that proposes to double the Renewable Portfolio Standard (RPS) from 25 percent by 2025 to 50 percent by 2030.

A "YES" vote means that the *Nevada Constitution* would be amended to increase the RPS if a majority of voters approve the ballot initiative in 2018, and again in 2020. The Nevada Legislature and the governor would be required to enact statutes that set forth implementation for the amendment's provisions by July 1, 2021.

A "NO" vote means that no further action will be taken on the initiative petition: it would not appear on the ballot at the General Election in 2020, and the *Nevada Constitution* would not be amended. The current RPS (25 percent by 2025) would remain in place.

Our intent, in the pages that follow, is to summarize the primary arguments for and against the measure and to answer questions voters may have. The following are the questions this Voter Guide addresses:

1. What is Question 6: The Renewable Energy Promotion Initiative?
2. Why is it coming before the voters?
3. What happens if it passes?
4. What happens if it fails to pass?
5. What are the primary arguments for The Renewable Energy Promotion Initiative?
6. What are the primary arguments against The Renewable Energy Promotion Initiative?
7. How would electricity bills be affected?
8. What is the expected financial impact to the State if this initiative passes?
9. Have other states implemented Renewable Portfolio Standards?
10. What is the relationship between Question 6: The Renewable Energy Promotion Initiative and Question 3: The Energy Choice Initiative?

The Guinn Center will not take a position on Question 6.

Question 6: The Renewable Energy Promotion Initiative

1. What is Question 6: The Renewable Energy Promotion Initiative?

Nevada currently has a Renewable Portfolio Standard (RPS) which “establishes the percentage of electricity sold by an electric utility to retail customers that must come from renewable sources.”¹ Renewable energy sources include, amongst others, solar, geothermal, and wind. Under *Nevada Revised Statutes* (NRS) 704.7821, the percentage of renewable energy must reach 25 percent by 2025.²

Question 6: The Renewable Energy Promotion Initiative is a statewide constitutional ballot initiative that will be placed before Nevada’s registered voters at the November 6, 2018, General Election that proposes to double the RPS from 25 percent by 2025 to 50 percent by 2030. Specifically, Question 6 seeks to amend the *Nevada Constitution* by adding a new section to Article 4 that would require providers of electric utility service to retail customers to generate or acquire 50 percent of their electricity from renewable sources—such as solar, geothermal, wind, biomass, and waterpower—by 2030.³ Pursuant to the amendment, incremental targets would be established in graduated amounts over time, or compliance periods, as follows:

- i. For calendar years 2022 and 2023, at least 26 percent of the total amount of electricity generated or acquired must be from renewable sources.⁴
- ii. For calendar years 2024 through 2026, at least 34 percent of the total amount of electricity generated or acquired must be from renewable sources.⁵
- iii. For calendar years 2027 through 2029, at least 42 percent of the total amount of electricity generated or acquired must be from renewable sources.⁶
- iv. For calendar year 2030 and “each calendar year thereafter,” at least 50 percent of the total amount of electricity generated or acquired must be from renewable sources.⁷

Question 6 reads:

Shall Article 4 of the *Nevada Constitution* be amended to require, beginning in calendar year 2022, that all providers of electric utility services who sell electricity to retail customers for consumption in Nevada generate or acquire incrementally larger percentages of electricity from renewable energy resources so that by calendar year 2030 not less than 50 percent of the total amount of electricity sold by each provider to its retail customers in Nevada comes from renewable energy resources?⁸

If the ballot measure passes in 2018 and again in 2020 the Nevada Legislature would be required to implement the provisions of the amendment no later than July 1, 2021.⁹

2. Why is it coming before the voters?

In the 79th (2017) Legislative Session, Assembly Bill (AB) 206 proposed to increase the Renewable Portfolio Standard (RPS) to 40 percent by 2030, with graduated targets for the intervening compliance periods.¹⁰ AB 206 was passed by the Nevada Legislature but was vetoed by Governor

Brian Sandoval on June 16, 2017.¹¹ The governor’s Veto Message signaled support of an increased RPS but cited “energy policy evolving in real time” as a complicating factor in his ability to authorize the legislation.¹² Amongst other objections, Governor Sandoval observed that the “uncertainty” surrounding Question 3: The Energy Choice Initiative meant that further consideration of certain related energy policies, such as AB 206, would be necessary before they could be signed into law.¹³

In February 2018, the Nevadans for a Clean Energy Future Political Action Committee (PAC) filed language that notified the Nevada Secretary of State of its intent to place The Renewable Energy Promotion Initiative on the ballot at the November 2018 election.¹⁴ The PAC circulated a petition to voters and obtained the requisite number of signatures to qualify for the November 2018 ballot.^a On July 13, 2018, the Nevada Secretary of State, Barbara Cegavske, announced that The Renewable Energy Promotion Initiative qualified for consideration by voters at the November 6, 2018, General Election, and it was designated as Question 6.¹⁵

Note that the initiative petition differs in form from AB 206: (1) it is a constitutional amendment, rather than a statutory change; and (2) it would mandate a target of 50 percent renewable energy by 2030, rather than the 40 percent by 2030, per the legislation.

3. What happens if it passes?

Question 6: The Renewable Energy Promotion Initiative is an initiative petition for amendment of the *Nevada Constitution*. Initiative petitions that propose to amend the *Nevada Constitution* require passage by the voters “in two successive general elections before [they] can be added to the Nevada Constitution.”¹⁶ If Question 6 passes, it will be placed on the ballot again at the 2020 General Election for voter approval “in the same manner as such question was originally submitted.”¹⁷ If a majority of voters approve the ballot initiative in 2018, and again in 2020, the Legislature and the governor must enact statutes that set forth implementation for the amendment’s provisions by July 1, 2021.

If Question 6 were to pass in 2018 and again in 2020, the *Nevada Constitution* would be amended by adding a new section to Article 4 that would require providers of electric utility service to retail customers to generate or acquire 50 percent of their electricity from renewable sources—such as solar, geothermal, wind, biomass, and waterpower—by 2030.¹⁸

Pursuant to NRS 704.7821, the percentage of renewable energy must reach 25 percent in 2025, with compliance periods specified in NRS 704.7821(1)(a)-(h).¹⁹ The *Nevada Constitution* supersedes any statutory provisions, which means that the Renewable Portfolio Standard (RPS) targets and timelines

^a To qualify for the ballot, signatures of at least 10 percent of voters who voted in the previous General Election—in this case, the 2016 General Election—are required. Ten percent of voters in the preceding General Election means that the qualification requirement was at least 112,544 valid signatures. *Source:* Nevada Secretary of State. “Filing a Constitutional Initiative.” Available: <https://www.nvsos.gov/sos/elections/initiatives-referenda/filing-a-constitutional-initiative>. There were 133,005 valid signatures on The Renewable Energy Promotion Initiative Petition. (*Source:* Provided to the Guinn Center by the Nevada Secretary of State office.)

previously established in Nevada law would be nullified. Table 1 presents a comparison of current law versus the proposed changes in the initiative petition to amend the *Nevada Constitution*.

Table 1. Renewable Portfolio Standard (RPS) Targets and Compliance Periods: Current Law vs. Constitutional Amendment²⁰

Renewable Portfolio Standard (RPS) Targets and Compliance Periods: Current Law vs. Constitutional Amendment		
Calendar Year	Current Law (at least)	Constitutional Amendment (at least)
2022	22 percent	26 percent
2023	22 percent	26 percent
2024	22 percent	34 percent
2025	25 percent	34 percent
2026	25 percent	34 percent
2027	25 percent	42 percent
2028	25 percent	42 percent
2029	25 percent	42 percent
2030 –	25 percent	50 percent

As Table 1 indicates, the timeline to meet incremental targets for the generation or acquisition of electricity from renewable sources would be accelerated for providers of electric utility service to retail customers, if Question 6 were to pass in 2018 and 2020.

4. What happens if it fails to pass?

If Question 6: The Renewable Energy Promotion Initiative fails to pass, no further action will be taken on the initiative petition.²¹ That is, it will not appear on the ballot at the General Election in 2020, and the *Nevada Constitution* would not be amended. The current RPS, whereby the percentage of renewable energy must reach 25 percent in 2025 would remain in place.²²

5. What are the primary arguments for The Renewable Energy Promotion Initiative?

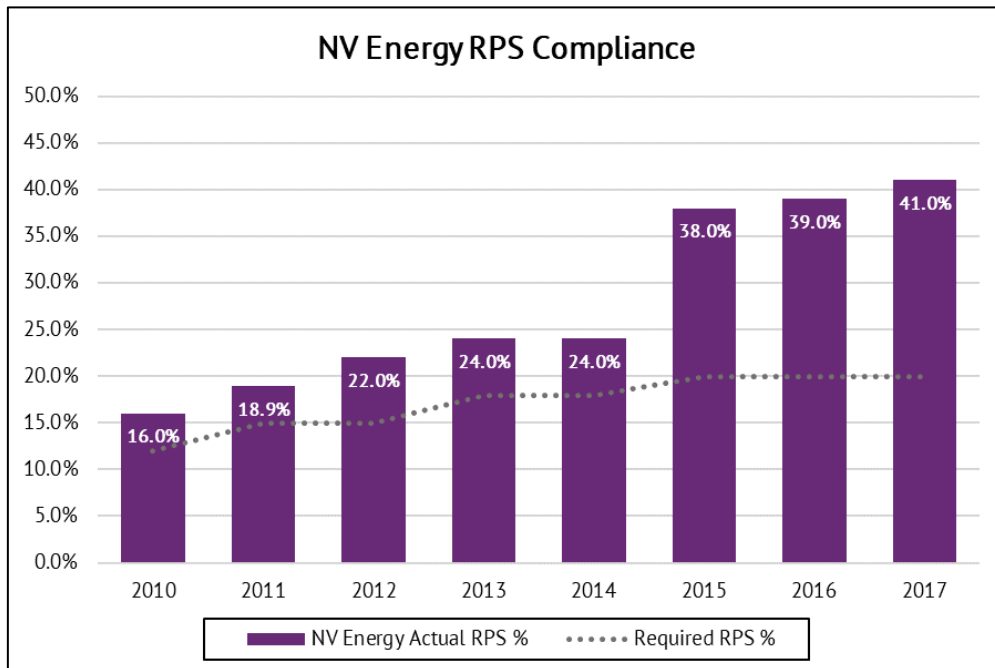
This section addresses two arguments in favor of Question 6: The Renewable Energy Promotion Initiative: (1) increased renewable energy; and (2) positive economic impacts.

Increased Renewable Energy

Proponents of Question 6: The Renewable Energy Promotion Initiative argue that the ballot measure “would advance clean energy policy in Nevada by increasing the amount of renewable energy that the state produces.”²³ As of 2016, Nevada’s utility-scale net electricity generation from geothermal energy ranked second in the nation, and its utility-scale net generation from solar energy ranked fourth in the nation.²⁴ While NV Energy has exceeded the state’s Renewable Portfolio Standard (RPS)

for each year dating back to 2010, as shown in Figure 1, compliance has been achieved through RPS carry-forward credits and energy efficiency/conservation credits.²⁵

Figure 1. NV Energy RPS Compliance²⁶



There is a difference between compliance and an actual renewable energy portfolio. As Figure 1 indicates, in 2017, NV Energy’s compliance rate was 41 percent. Its actual renewable portfolio for that year was 23.8 percent.²⁷ The portfolio “included solar, wind, geothermal and credits from renewable projects.”²⁸ Advocates for Question 6: The Renewable Energy Promotion Initiative note that, “Despite 300 days of sun every year, Nevada gets less than 20% [percent] of its energy from renewable sources.”²⁹

Many industry experts contend that the most significant factor in increasing renewables is the RPS.³⁰ As the RPS, which mandates compliance, increases, the greater the percentage of renewables that must be sold to consumers.³¹ The RPS effectively compels providers of electric utility service to invest in renewable development and/or purchase Renewable Energy Credits (RECs) to meet the standard.^b

^b Defined specifically, “A REC is a tradable right (separate from the electrical energy itself) to the environmental, social, and other generator attributes associated with 1 megawatt-hour (MWh) of renewable electricity generated by a specific facility....A REC is the basis for demonstrating renewable electricity ownership, procurement, use, and compliance.” (Source: U.S. Environmental Protection Agency. 2015. “Energy and Environment Guide to Action: State Policies and Best Practices for Advancing Energy Efficiency, Renewable Energy, and Combined Heat and Power.” Page 5-2. Available: https://www.epa.gov/sites/production/files/2017-06/documents/guide_action_full.pdf.) “REC” also may refer to “Renewable Energy Certificates,” which are functionally similar to “Renewable Energy Credits”; in Arizona and Nevada, the tradable right is associated with one kilowatt hour (kWh) of renewable electricity. (Source: Jan Hamrin. 2014. “REC Definitions and Tracking Mechanisms Used by State RPS Programs.” Prepared for the State-Federal RPS Collaborative. Available: <https://www.cesa.org/assets/2014-Files/RECs-Attribute-Definitions-Hamrin-June-2014.pdf>.)

(RECs are paper transactions that are not necessarily related to actual renewable generation.)^c There are three mechanisms available to demonstrate compliance:

- “Own a renewable energy facility and retain its renewable electricity, including the renewable energy certificates (RECs).
- Purchase electricity and RECs from a renewable facility (sometimes called renewable electricity or bundled renewable electricity).
- Purchase RECs only (sometimes called unbundled RECs).”³²

One discussion highlights data that shows that RPS mandates contributed to about 51.6 percent of RPS demand over a 17-year period: “From 2000 to 2016, the U.S. increased renewable energy generation by 283 TWh. Of that, RPS standards required 146 TWh of the increase.”^{d, 33} Another study finds that, between 2000 and 2014, 62 percent of increased renewable energy generation and 58 percent of new renewable energy capacity can be attributed to RPS demand.³⁴

Meeting RPS requirements nationwide by 2030 would necessitate about a 50 percent increase in renewable energy generation, which translates into approximately 55 gigawatts (GW) of new renewable energy capacity.³⁵ One estimate indicates that additional procurement of renewable energy is necessary to satisfy an additional 10 percent of state electricity sales in Nevada in 2030.³⁶ The U.S. Energy Information Administration (EIA) projects that, nationally, “RPS laws [will] push renewable energy from 10% [percent] of the nation’s retail electricity sales to 13% [percent] by 2030.”³⁷ As such, many energy experts believe that the RPS is a driver of renewable energy growth.

The Guinn Center analyzed data from the EIA to assess whether there is a relationship between renewable energy generation in RPS states versus non-RPS states (for more on RPS policies, by state, see “Have other states implemented Renewable Portfolio Standards?” on page 12). We aggregated fuel types into two categories, “Conventional Energy Sources” and “Renewable Energy Sources” and then obtained the relevant percentages for RPS states and non-RPS states.^e The results are presented in Figure 2A and Figure 2B, below.

^c Compliance in Nevada can be met with purchased power, REC procurement, and incentives/rebate programs, along with actual generation. (*Source*: Jenny Heeter, Galen L Barbose, Lori Bird, Samantha Weaver, Francisco Flores-Espino, Ksenia Kuskova-Burns, and Ryan H. Wiser. 2014. “A Survey of State-Level Cost and Benefit Estimates of Renewable Portfolio Standards.” National Renewable Energy Laboratory and Lawrence Berkeley National Laboratory. Available: <http://eta-publications.lbl.gov/sites/default/files/lbnl-6589e.pdf>.) That is why there is a difference between the compliance rate (41 percent) and actual renewable portfolio (23.8 percent) in 2017.

^d Note that the researcher responsible for these findings, though not cited in the article, cautions that “some of that would have occurred without RPS.” See: Galen Barbose. 2017. “U.S. Renewables Portfolio Standards: 2017 Annual Status Report.” Lawrence Berkeley National Laboratory. Page 12. Available: <https://emp.lbl.gov/sites/default/files/2017-annual-rps-summary-report.pdf>.

^e “Conventional Energy Sources” are coal, natural gas, petroleum liquids, petroleum coke, other gases, and nuclear. “Renewable Energy Sources” are conventional hydroelectric, wind, all utility-scale solar, geothermal, biomass, hydroelectric pumped storage, other renewables, and all other renewables. Note that the EIA classifies conventional hydroelectric as a renewable source, and the Guinn Center aggregated the data in conformity with that classification. However, the EIA notes that it classifies “hydro [conventional hydroelectric]

Figure 2A. Net Generation: RPS States, 2017³⁸

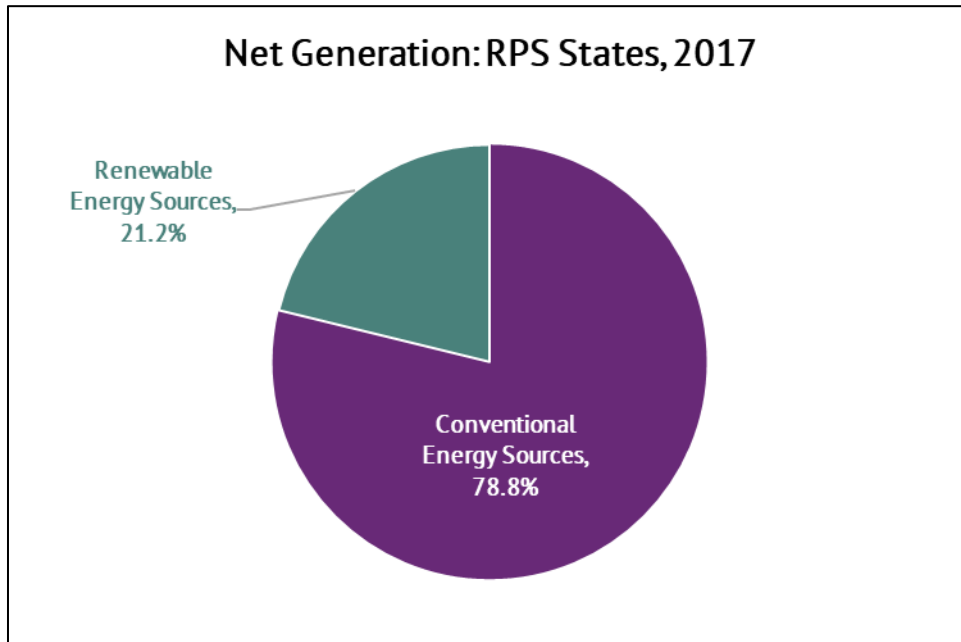
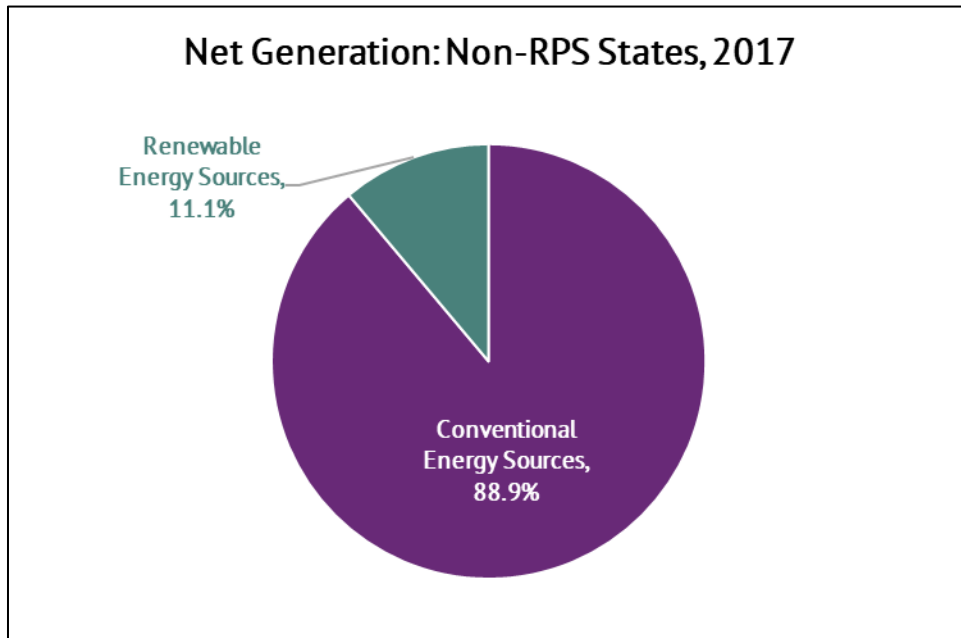


Figure 2B. Net Generation: Non-RPS States, 2017³⁹



as renewables but for RPS compliance, different states can and have different ways of treating it.” As such, the data should be interpreted with caution. (Source: Guinn Center conversation with EIA.)

As of 2017, both RPS states and non-RPS remain heavily invested in conventional energy sources, at 78.8 percent and 88.9 percent, respectively. However, renewable energy generation is considerably higher in RPS states (21.2 percent) versus non-RPS states (11.1 percent). The data suggests that Renewable Portfolio Standards are associated with higher levels of renewable energy generation, lending support to the argument that increases in the RPS may drive growth. That said, causation should not be inferred, as it also may be true that states with greater renewable energy generation potential may be more likely to implement Renewable Portfolio Standards.

Positive Economic Impacts

Proponents of Question 6: The Renewable Energy Promotion Initiative assert that, “Expanding renewable energy will create tens of thousands of good jobs and drive billions of dollars in economic growth that will benefit all Nevadans.”⁴⁰ Evidence exists to support this claim. For example, one study of national outcomes found the following:

Renewable generation used to meet 2013 RPS compliance obligations, along with average annual RPS-related capacity additions in 2013 and 2014, supported nearly 200,000 U.S.-based gross jobs in 2013 and drove over \$20 billion in gross domestic product (GDP), primarily based on NREL’s Jobs and Economic Development Impacts (JEDI) suite of models. More than 30,000 of these gross domestic jobs are related to ongoing operations and maintenance (O&M), while 170,000 gross jobs are related to construction activity. Solar photovoltaic (PV) installations account for the majority of construction jobs, while established wind plants account for the majority of O&M jobs. California had the most significant renewable capacity expansion and generation associated with RPS compliance obligations, and thus had more of the associated onsite RE jobs than any other state.^{f, 41}

Research on California, which has an RPS of 33 percent by 2020, demonstrates that over the period 2003-2014, about 53,000 direct jobs were created via the construction of renewable energy facilities; indirect and induced jobs increases that number to 130,000 total job years, where a job year is defines as one full-time job for one person for one year.⁴² The same study forecasts that increasing California’s RPS to 50 percent between 2015 and 2030 would translate into “about an additional 354,000...to 429,000...direct jobs from the construction of new renewable generation. Including multipliers for indirect and induced jobs, additional renewable energy development in California would create a total of 879,000 to 1,067,000 job years by 2030.”⁴³

Since 2011, development of utility-scale projects in Nevada has been credited with the addition of \$6.6 billion in capital investments and the creation of 4,300 jobs.⁴⁴ A projection from the National Renewable Energy Laboratory (NREL) shows “that aggressive renewable energy targets could generate an additional \$5 billion in wages and more than 92,000 jobs for the state.”⁴⁵

One cost-benefit analysis, in assessing a report on the benefits of RPS, reports “that state renewable portfolio standard (RPS) policies reduced greenhouse gas emissions and air pollution, while also reducing water use, creating renewable energy jobs and suppressing wholesale electricity and natural gas prices. The greenhouse gas and air pollution benefits alone saved the United States

^f There are compliance costs associated with the expansion of renewable energy, which we address in the next question, “What are the primary arguments against The Renewable Energy Promotion Initiative?” (page 8).

society \$7.4 billion in 2013. Although not directly comparable, a previous report by the same lab team found average annual costs of RPS policies of only \$1 billion: in other words, the benefits of these policies have vastly outweighed their costs.”⁴⁶ Another discussion indicates that the benefits to the power system amount to \$31 billion (\$0.024/kWh), with a price of roughly \$31 billion (\$0.01/kWh), suggesting that benefits can offset the costs.⁴⁷

6. What are the primary arguments against The Renewable Energy Promotion Initiative?

This section addresses two primary arguments against Question 6: The Renewable Energy Promotion Initiative: (1) compliance costs and related issues; and (2) regulation through the *Nevada Constitution*.

Compliance Costs and Related Issues

Opponents argue that compliance with a RPS can be costly.⁹ One study has shown that aggregate U.S. RPS compliance costs increased from roughly \$2.4 billion in 2014 to about \$3.0 billion in 2015, for an approximately 25 percent increase.⁴⁸ Another analysis finds that, between 2010 and 2012, there is a range in average RPS compliance costs, in terms of the cost per unit of renewable energy required: -\$4/MWh (i.e., a net savings) to \$44/MWh, as detailed subsequently.⁴⁹

Both studies show that there is state-level variation in compliance costs. The study that estimated \$3.0 billion in compliance costs for 2015 indicates that, “Cross-state variation reflects differences in:

- RPS target levels
- Resource tiers/mix
- REC [Renewable Energy Credit/Renewable Electricity Certificate] prices
- Wholesale electricity prices
- Reliance on pre-existing resources
- State-specific cost calculation methods”⁵⁰

Furthermore, studies have found that compliance costs can vary across restructured states (i.e., retail energy choice states) and non-restructured states (i.e., those with traditionally regulated monopoly utility structures). One analysis shows that, in the former, RPS compliance costs average less than or equal to three percent retail electric rates, though the percentage has been rising; in 2014, compliance costs comprised between 0.1 percent to 5.6 percent of average retail electric rates across

⁹ RPS compliance cost is defined here as: the “Net cost to the load-serving entity (LSE), above and beyond what would have been incurred in the absence of RPS.” (*Source*: Galen Barbose. 2017. “U.S. Renewables Portfolio Standards: 2017 Annual Status Report.” Lawrence Berkeley National Laboratory. Page 33. Available: <https://emp.lbl.gov/sites/default/files/2017-annual-rps-summary-report.pdf>.) These occasionally are referred to as *incremental costs*, or “the cost above and beyond what would have been incurred absent the RPS.” (*Source*: Jenny Heeter, Galen L Barbose, Lori Bird, Samantha Weaver, Francisco Flores-Espino, Ksenia Kuskova-Burns, and Ryan H. Wiser. 2014. “A Survey of State-Level Cost and Benefit Estimates of Renewable Portfolio Standards.” National Renewable Energy Laboratory and Lawrence Berkeley National Laboratory. Page iv. Available: <http://eta-publications.lbl.gov/sites/default/files/lbnl-6589e.pdf>.)

restructured states.⁵¹ In the latter, RPS compliance costs are less than or equal to three percent of retail electric rates, on average, with:

- “Relatively high costs in Arizona, Colorado, and New Mexico due partly to solar/DG [distributed generation] set-aside costs, where costs are front-loaded
- Low costs in states with low RPS targets during analysis period and/or where targets met primarily with preexisting renewables
- Net savings estimated in California, Hawaii, and Oregon”⁵²

Similarly, another report indicates that RPS compliance costs, on average, equal about one percent of retail electric rates, across 24 states for 2010 through 2012.⁵³ For restructured versus non-restructured states, the study finds that:

- “Among restructured markets, estimated incremental compliance costs ranged from 0.1% [percent] to 3.8% [percent] of retail rates. Expressed in terms of the cost per unit of renewable energy required, estimated incremental RPS compliance costs in these states ranged from \$2-\$48/MWh.
- Among traditionally regulated states (excluding California), estimated incremental compliance costs varied from -0.2% (i.e., a net savings) to 3.5% [percent] of average retail rates....The estimated incremental costs of meeting general RPS obligations (i.e., excluding DG or solar set-asides) ranged from -\$4 to \$44/MWh of renewable energy procured.”⁵⁴

Estimated compliance costs, which can be substantial, and electricity bill percentages are higher in restructured states than non-restructured states. Regardless, ratepayers bear at least some of the burden, regardless of market model, in all states. Only eight states (Arizona, Colorado, Delaware, Michigan, North Carolina, New York, Ohio, and Rhode Island) use line-surcharges to recover compliance costs: five states (Arizona, Delaware, Ohio, New York, and Rhode Island) rely on volumetric \$/kWh charges; one state computes a percentage of the total bill (Colorado); and two states (Michigan and North Carolina) impose fixed monthly charges. In 2012, the range of monthly costs for average residential customers was \$0.50/month to \$4.00/month.⁵⁵ Note, however, that the entirety of RPS compliance costs may or may not be passed on to consumers.⁵⁶

In Nevada, compliance costs come from fuel and purchased power.⁵⁷ They are recovered dollar-for-dollar through a multi-part pricing scheme, for which the degree of complexity changes with ratepayer type.⁵⁸ One hundred (100) percent of compliance costs are reflected in customers' bills.⁵⁹ The Public Utilities Commission of Nevada (PUCN) makes a determination of reasonableness with regard to the costs.⁶⁰ An estimate of compliance costs for Nevada's ratepayers in 2013—the most recent year for which data is available—indicates that these costs averaged to approximately eight percent of retail rates.⁶¹

Opponents also contend that direct costs of renewable energy associated with the RPS are too high. One observer has cited “the price tag for purchasing renewable energy[,] and for building new transmission lines to deliver it” as evidence of such costs.⁶² Renewable energy costs have decreased significantly over the years, with one analysis projecting that renewables will be priced competitively

with conventional energy sources by 2020 and then may fall further in subsequent years.⁶³ However, development of renewable energy infrastructure still can be an expensive undertaking.

To meet a standard of 50 percent by 2030, NV Energy has stated that it “would need to add 1,925 new megawatts of renewable energy.”⁶⁴ NV Energy’s “2018 Joint IRP [integrated resource plan],” which has a 20-year planning horizon (i.e., 2019-2038), would add “1,001 megawatts of new, solar generating facilities....The plan contains [six] projects located in Clark, Humboldt and Washoe counties.”^h ⁶⁵ Moreover, the 2018 Joint IRP “proposes approximately \$20 million of investment to bring the output of new solar PV [photovoltaic] facilities to customers. The plan also proposes to expand grid improvement efforts by upgrading 230 kilovolt-transmission facilities at a cost of \$720 thousand.”⁶⁶ The total plan represents a potential investment of approximately \$2.175 billion.⁶⁷

Two key points merit attention here. First, the amount of renewable energy construction proposed in NV Energy’s “2018 Joint IRP”—1,001 MW—is less than what would be necessary to fulfill the proposed mandate of 50 percent by 2030 (1,925 MW), so the expected costs to meet those requirements could be higher than \$2.175 billion. Second, NV Energy has stated its willingness to invest in renewable energy development that nearly would meet the targets set forth in the ballot initiative even in the absence of a compulsory mechanism to do so.

In fact, some opponents have deemed Renewable Portfolio Standards “unimportant.”⁶⁸ They note that many RPS states have met or soon will meet their interim targets.⁶⁹ As discussed in the question, “What are the primary arguments for The Renewable Energy Promotion Initiative?” (page 3), Nevada is one such state. In 2017, NV Energy’s compliance rate was 41 percent, and its actual renewable portfolio for that year was 23.8 percent.⁷⁰ With a current RPS of 25 percent by 2025, this means that NV Energy nearly has reached its target eight years in advance of the terminal compliance period. For opponents, the question is whether increased RPS standards, which enforce compliance, necessitate the associated costs, if providers of electric utility service are acquiring or generating renewable energy at levels that meet or are about to exceed targets?

Regulation Through the *Nevada Constitution*

While two states have instituted Renewable Portfolio Standards through ballot initiatives—specifically, Colorado and Washington—all states have used legislation to establish or increase their RPS.ⁱ ⁷¹ Were Question 6: The Renewable Energy Promotion Initiative to pass in November 2018 by

^h NV Energy’s IRP is a triennial “plan to increase its supply of electricity or decrease its demand,” as required by Nevada Revised Statutes. § 704.741. See: Public Utilities Commission of Nevada. n.d. “Integrated Resource Plan Integrated Resource Plan (‘IRP).” Slide 2 of 14. Available: http://www.sec.nv.gov/docs/puc_presentation_090707.pdf.

ⁱ Colorado’s RPS was established in 2004 by ballot initiative, via an initiated state statute. (Source: Database of State Incentives for Renewables & Efficiency (DSIRE). “Renewable Energy Standard: Colorado.” NC Clean Energy Technology Center. June 14, 2018. Available: <http://programs.dsireusa.org/system/program/detail/133>.) Washington instituted its RPS through the passage of Initiative 937 in 2006. (Source: Database of State Incentives for Renewables & Efficiency (DSIRE). “Renewable Energy Standard: Washington.” NC Clean Energy Technology Center. June 15, 2018. Available: <http://programs.dsireusa.org/system/program/detail/2350>.) Initiative 937 added a new section to the Revised Code of Washington (RCW), which means that the RPS is in

a majority of registered Nevada voters, and again in 2020, Nevada would be the only state to have an RPS in its constitution.^j

Although passage of Question 6 would enshrine the RPS in the *Nevada Constitution*, it does not set forth a new right or amend a preexisting right. Thus, it may be the purview of legal scholars to determine whether the RPS sufficiently meets the standard of elevation above regular statute.

“Nevada’s Renewable Portfolio Standard (‘RPS’)...was first adopted by the Nevada Legislature in 1997 and has been modified nearly every legislative session since then.”⁷² The Public Utilities Commission of Nevada (PUCN) “determines if the provider has met the requirements and, for a utility or provider of a new electric resource that fails to meet the RPS, the PUCN may impose a fine, provide an exemption or take other administrative action.”⁷³ What this suggests is that, historically, the RPS has been understood as a policy and/or regulatory matter in Nevada, not a constitutional one.

If legislators find that graduated increases to the RPS with a target of 50 percent by 2030 would be infeasible, the constitutional imperative would take precedence—that is, it would supersede the delegated authority with which legislators are entrusted. Some have raised this concern in Arizona, as well, noting that, “The requirement is not enshrined in the Constitution [of Arizona], allowing regulators discretion in how they enforce the rules.”⁷⁴ Using the *Nevada Constitution* as a regulatory tool forces the Nevada Legislature to implement increases to the RPS, even if legislators find that their constituents would not benefit.

7. How would electricity bills be affected?

Proponents of Question 6: The Renewable Energy Promotion Initiative argue that, “More renewable energy will save Nevadans money....And when you consider that the sun is free, while fossil fuel prices are volatile, it’s clear consumers will save even more.”⁷⁵ Opponents believe that the ballot initiative would result in “higher energy costs.”⁷⁶

However, the direction or magnitude of the effect on electricity bills is unknown at this time. Were Question 6 to pass in November 2018 by a majority of Nevada voters, and again in 2020, the Nevada Legislature would be required to implement its provisions by July 1, 2021. No implementation plan has been proposed, and it would be difficult to estimate the effects in the absence of such a plan.

statute in the Evergreen State. (Source: State of Washington. 2006. “Initiative 937.” Available: <https://www.sos.wa.gov/elections/initiatives/text/i937.pdf>.)

^j Proposition 127 in Arizona proposes to increase that state’s RPS to 50 percent by 2030 through a constitutional amendment, as well; it will appear before voters at the November 6, 2018, General Election. (Source: Ryan Randazzo. “Arizona Supreme Court: Voters Will Decide Renewable-Energy Rules in November.” *Arizona Republic*. August 30, 2018. Available: <https://www.azcentral.com/story/money/business/energy/2018/08/30/arizona-election-renewable-energy-ballot-measure-go-voters/1145226002/>.) Unlike in Nevada, constitutional amendments via initiative petition in Arizona become part of the *Constitution of Arizona* upon passage in a single election. (Source: Ariz. Const. art. 21, § 1. Available <https://www.azleg.gov/viewDocument/?docName=http://www.azleg.gov/const/21/1.htm>.)

Moreover, Question 3: The Energy Choice Initiative has yet to be decided, and the indeterminate implications of that outcome lends additional uncertainty to any cost projections.

In short, no comprehensive study on state-level costs versus benefits could be located. However, as discussed in the question, “What are the primary arguments against The Renewable Energy Promotion Initiative?” (page 8), compliance costs associated with the RPS typically are assessed on electric utility bills, but no estimates for Nevada’s ratepayers have been provided nor have the benefits been forecasted. Thus, we cannot say how electricity bills may be affected.

8. What is the expected financial impact to the State if this initiative passes?

The Fiscal Analysis Division of the Nevada Legislative Counsel Bureau prepared a financial impact statement for Question 6: The Renewable Energy Promotion Initiative, which it released on April 11, 2018.⁷⁷ According to the Fiscal Analysis Division, the financial impact cannot be determined.⁷⁸ The statement reads, in part:

The Fiscal Analysis Division cannot determine how the constitutional provisions of the Initiative will be implemented by the Legislature or which state agencies will be tasked with implementing and administering any laws relating to increasing electricity from renewable energy sources. Thus, the Fiscal Analysis Division cannot determine the impact upon state government with any reasonable degree of certainty.

Additionally, the passage of the Initiative may have an effect upon the cost of electricity sold in Nevada, including the electricity that is purchased and consumed by state and local government entities. The Fiscal Analysis Division is unable to predict the effect that these provisions may have on the cost of electricity in Nevada beginning in calendar year 2022 or the amount of electricity that may be consumed by these government entities beginning in that calendar year; thus, the financial effect upon state and local governments with respect to potential changes in electricity costs cannot be determined with any reasonable degree of certainty.⁷⁹

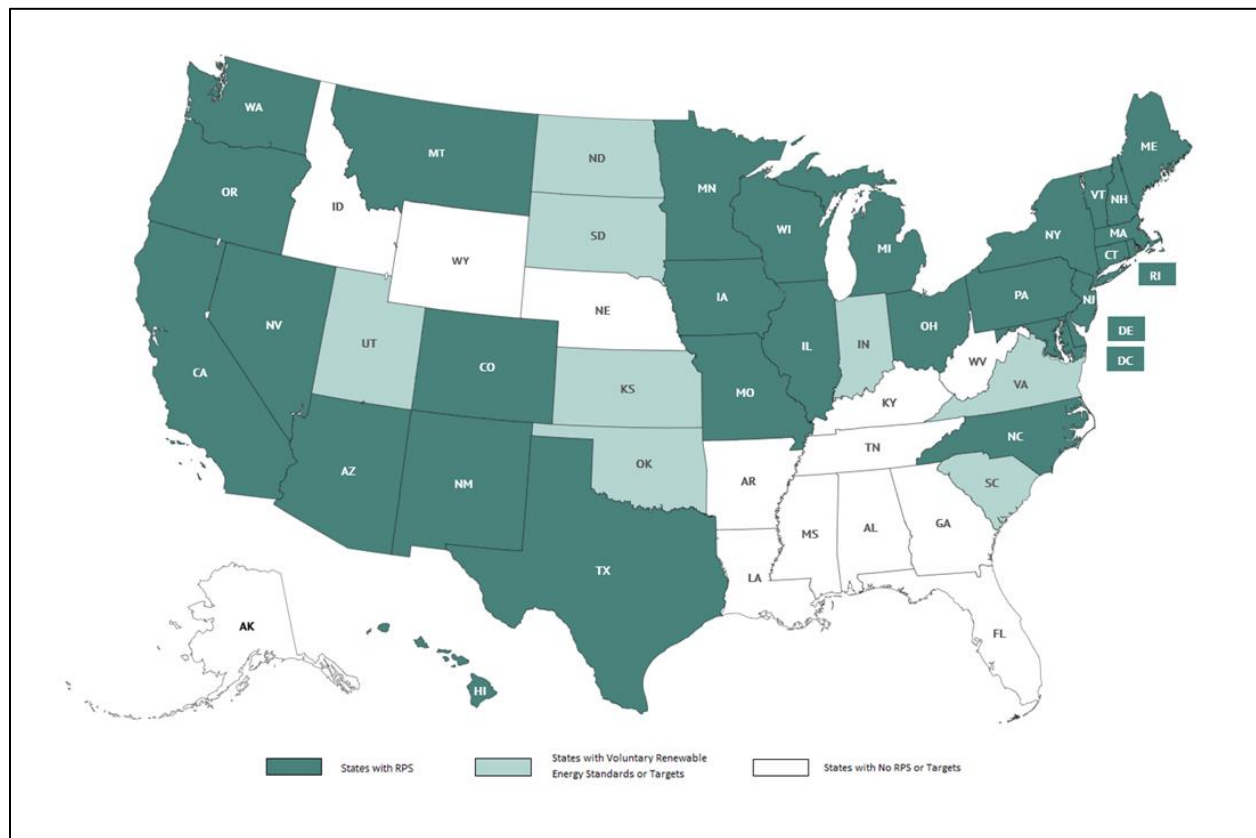
9. Have other states implemented Renewable Portfolio Standards?

There is no federal Renewable Portfolio Standard (RPS).⁸⁰ However, twenty-nine (29) states—including Nevada—and the District of Columbia have Renewable Portfolio Standards, as depicted in the map in Figure 3 (see page 13).^{k, 81} An additional eight states (Indiana, Kansas, North Dakota, Oklahoma, South Carolina, South Dakota, Utah, and Virginia) have voluntary renewable energy standards/targets, which may be understood as goals, rather than mandates.⁸²

^k Ohio instituted a two-year freeze on its RPS in 2014 that was not extended in 2016, and, in 2015, West Virginia became the only state to have repealed its RPS outright. (*Source*: National Conference of State Legislatures. “State Renewable Portfolio Standards and Goals.” July 20, 2018. Available: <http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx>.)

Were Question 6 to pass in November 2018 by a majority of Nevada voters, and again in 2020, the Silver State would have one of the most ambitious RPS nationwide, joining California, the District of Columbia, Hawaii, New Jersey, Oregon, and Vermont as states/jurisdictions with RPSs of at least 50 percent (by a given year). Table 2 presents Renewable Portfolio Standards requirements and voluntary targets, by state (see page 14).

Figure 3. States with Renewable Portfolio Standards (RPS) or Voluntary Renewable Standards/Targets⁸³



10. What is the relationship between Question 6: The Renewable Energy Promotion Initiative and Question 3: The Energy Choice Initiative?

Nevadans can vote on Question 6 and Question 3 independently of one another without any impact on the outcome or implementation of the other ballot measure. In other words, the measures do not conflict with each other; nor is the implementation of one measure dependent on the implementation of the other measure. Question 3: The Energy Choice Initiative concerns the restructuring of Nevada’s electricity market, that is, a change from a predominantly monopoly electricity utility structure to a competitive retail electric energy market-based model with a new regulatory framework.⁸⁴



Table 2. Renewable Portfolio Standards (RPS) and Voluntary Targets⁸⁵

Renewable Portfolio Standards (RPS) and Voluntary Targets		
State	Calendar Year	Requirement
RENEWABLE PORTFOLIO STANDARD (RPS)		
Arizona	2025	15 percent
California	2030	50 percent
Colorado	2020	30 percent
Connecticut	2020	28 percent
Delaware	2025-2026	25 percent
District of Columbia	2032	50 percent
Hawaii	2045	100 percent
Illinois	2025-2026	25 percent
Iowa	N/A	105 MW of generating capacity for IOUs
Maine	2017	40 percent
Maryland	2020	25 percent
Massachusetts	2019	6.19 (Class II)
	2020	15 percent (Class I)
Michigan	2021	15 percent
Minnesota	2025	26.5 percent (IOUs)
	2025	25 percent (other utilities)
Missouri	2021	15 percent
Montana	2015	15 percent
Nevada	2025	25 percent
New Hampshire	2025	25.2 percent
New Jersey	2030	50 percent
New Mexico	2020	20 percent (IOUs)
	2020	10 percent (co-ops)
New York	2030	50 percent
North Carolina	2018	10 percent (munis and co-ops)
	2021	12.5 percent (IOUs)
Ohio	2026	12.5 percent
Oregon	2040	50 percent (max, with variation based on load)
Pennsylvania	2020-2021	18 percent
Rhode Island	2035	38.5 percent
Texas	2025	10,000 MW (goal; achieved)
Vermont	2032	75 percent
Washington	2020	15 percent
Wisconsin	2015	10 percent
VOLUNTARY TARGETS		
Indiana	2025	10 percent
Kansas	2020	20 percent
North Dakota	2015	10 percent
Oklahoma	2015	15 percent
South Carolina	2021	2 percent
South Dakota	2015	10 percent
Utah	2025	20 percent
Virginia	2025	15 percent
<i>Note:</i> “IOUs” refer to investor-owned utilities; “munis” refer to municipally-owned electric utilities; and “co-ops” refer to electric cooperatives		

**Board of Directors****Dana Lee***Chair***Tom Gallagher***Vice Chair***Stephanie Tyler***Vice Chair***Deane Albright, CPA***Secretary/Treasurer***Kathleen Conaboy****Dr. Michael Daubs****Jill Derby, Ph.D.****Dan Hamilton, Ph.D.****Carol Harter, Ph.D.****Doreen Spears Hartwell****Pat Hickey****Mick Hitchcock, Ph.D.****Nicole Lamboley****Ken Ladd****Erin McMullen****Chris Roman****Douglas Seastrand****Donald D. Snyder****David B. Walker****Renée Yackira****Missy Young****About the Guinn Center**

The Kenny C. Guinn Center for Policy Priorities is a 501(c)(3) nonprofit, bipartisan, independent policy institute focused on providing fact-based, relevant, and well-reasoned analysis of critical policy issues facing Nevada and the Intermountain West. The Guinn Center engages policy-makers, experts, and the public with innovative, data-driven research and analysis to advance policy solutions, inform the public debate, and expand public engagement.

© 2018 Kenny C. Guinn Center for Policy Priorities. All rights reserved.

Contact information:

Kenny Guinn Center for Policy Priorities

3281 S. Highland Drive, Suite 810

Las Vegas, Nevada 89109

Phone: (702) 916-0746

Email: info@guinncenter.org

Website: www.guinncenter.org

Nancy E. Brune, Ph.D., Executive Director

Email: nbrune@guinncenter.org

Suzanne Bierman, J.D., M.P.H., Director of Health Policy

Email: sbierman@guinncenter.org

Meredith A. Levine, M.A., M.Phil., Director of Economic Policy

Email: mlevine@guinncenter.org

Tony S. Foresta, M.A., Research Fellow

Email: tforesta@guinncenter.org

Jules Schoolmeester, Director of Outreach & Public Engagement

Email: jschoolmeester@guinncenter.org

Lorena Rodriguez, Chief Organizer & Bilingual Policy Analyst

Email: lrodriguez@guinncenter.org

REFERENCES

- ¹ Public Utilities Commission of Nevada. “Renewable Portfolio Standard.” Available: http://puc.nv.gov/Renewable_Energy/Portfolio_Standard/.
- ² Nevada Revised Statutes. § 704.7821(1)(h). Available: <https://www.leg.state.nv.us/nrs/NRS-704.html#NRS704Sec7821>.
- ³ Nevada Secretary of State. 2018. “Initiative Petition - Constitutional Amendment: THE RENEWABLE ENERGY PROMOTION INITIATIVE.” Available: <https://www.nvsos.gov/sos/home/showdocument?id=5330>.
- ⁴ Nevada Secretary of State. 2018. “Initiative Petition - Constitutional Amendment: THE RENEWABLE ENERGY PROMOTION INITIATIVE.” Available: <https://www.nvsos.gov/sos/home/showdocument?id=5330>.
- ⁵ Nevada Secretary of State. 2018. “Initiative Petition - Constitutional Amendment: THE RENEWABLE ENERGY PROMOTION INITIATIVE.” Available: <https://www.nvsos.gov/sos/home/showdocument?id=5330>.
- ⁶ Nevada Secretary of State. 2018. “Initiative Petition - Constitutional Amendment: THE RENEWABLE ENERGY PROMOTION INITIATIVE.” Available: <https://www.nvsos.gov/sos/home/showdocument?id=5330>.
- ⁷ Nevada Secretary of State. 2018. “Initiative Petition - Constitutional Amendment: THE RENEWABLE ENERGY PROMOTION INITIATIVE.” Page 1. Available: <https://www.nvsos.gov/sos/home/showdocument?id=5330>.
- ⁸ Provided to the Guinn Center by the Nevada Secretary of State office.
- ⁹ Nevada Secretary of State. 2018. “Initiative Petition - Constitutional Amendment: THE RENEWABLE ENERGY PROMOTION INITIATIVE.” Available: <https://www.nvsos.gov/sos/home/showdocument?id=5330>.
- ¹⁰ Nevada State Legislature. 79th (2017) Session. “Assembly Bill 206, as Enrolled.” Available: https://www.leg.state.nv.us/Session/79th2017/Bills/AB/AB206_EN.pdf.
- ¹¹ Nevada State Legislature. 79th (2017) Session. “AB206: Bill History.” Available: <https://www.leg.state.nv.us/Session/79th2017/Reports/history.cfm?DocumentType=1&BillNo=206>.
- ¹² State of Nevada, Governor Brian Sandoval. “RE: Assembly Bill 206 of the 79th Legislative Session.” June 16, 2017. n.p. Available: https://www.leg.state.nv.us/Session/79th2017/Reports/VetoMessages/AB206_79th_Veto_Message.pdf.
- ¹³ State of Nevada, Governor Brian Sandoval. “RE: Assembly Bill 206 of the 79th Legislative Session.” June 16, 2017. n.p. Available: https://www.leg.state.nv.us/Session/79th2017/Reports/VetoMessages/AB206_79th_Veto_Message.pdf.
- ¹⁴ Nevada Secretary of State. 2018. “Initiative Petition - Constitutional Amendment: THE RENEWABLE ENERGY PROMOTION INITIATIVE.” Available: <https://www.nvsos.gov/sos/home/showdocument?id=5330>.
- ¹⁵ Associated Press. “Renewable Energy Ballot Measure Qualifies for Nevada Ballot.” *Reno Gazette Journal*. July 13, 2018. Available: <https://www.rgj.com/story/news/politics/2018/07/13/renewable-energy-ballot-measure-qualifies-nevada-ballot/783390002/>.
- ¹⁶ Nevada Secretary of State. “Filing a Constitutional Initiative.” Available: <https://www.nvsos.gov/sos/elections/initiatives-referenda/filing-a-constitutional-initiative>.
- ¹⁷ The portion enclosed in quotes is obtained directly from the *Nevada Constitution*. See: Nev. Const. art. 19, § 2(4). Available: <https://www.leg.state.nv.us/const/nvconst.html#Art19>.
- ¹⁸ Nevada Secretary of State. 2018. “Initiative Petition - Constitutional Amendment: THE RENEWABLE ENERGY PROMOTION INITIATIVE.” Available: <https://www.nvsos.gov/sos/home/showdocument?id=5330>.
- ¹⁹ Nevada Revised Statutes. § 704.7821(1)(h). Available: <https://www.leg.state.nv.us/nrs/NRS-704.html#NRS704Sec7821>.
- ²⁰ Table 1 compiled by the Guinn Center. Current Law: Nevada Revised Statutes. § 704.7821(1)(g)-(h). Available: <https://www.leg.state.nv.us/nrs/NRS-704.html#NRS704Sec7821>. | Constitutional Amendment: Nevada Secretary of State. 2018. “Initiative Petition - Constitutional Amendment: THE RENEWABLE ENERGY PROMOTION INITIATIVE.” Page 1. Available: <https://www.nvsos.gov/sos/home/showdocument?id=5330>.
- ²¹ Nev. Const. art. 19, § 2(3). Available: <https://www.leg.state.nv.us/const/nvconst.html#Art19>.

- ²² Nevada Revised Statutes. § 704.7821(1)(h). Available: <https://www.leg.state.nv.us/nrs/NRS-704.html#NRS704Sec7821>.
- ²³ Nevadans for a Clean Energy Future. “Yes on 6: About Question 6.” Available: <https://cleanfuturenv.com/about/>.
- ²⁴ U.S. Department of Energy, U.S. Energy Information Administration. “State Profile and Energy Estimates: Nevada.” Available: <https://www.eia.gov/state/?sid=NV>.
- ²⁵ State of Nevada, Nevada Governor’s Office of Energy. “2017 Status of Energy Report.” Available: [http://energy.nv.gov/uploadedFiles/energynvgov/content/About/2017_SOE_v10.4_\(High_Res\).pdf](http://energy.nv.gov/uploadedFiles/energynvgov/content/About/2017_SOE_v10.4_(High_Res).pdf).
- ²⁶ Figure 1 is a replication of a graph contained in the *2017 Status of Energy Report*. See: State of Nevada, Nevada Governor’s Office of Energy. “2017 Status of Energy Report.” Page 5. Available: [http://energy.nv.gov/uploadedFiles/energynvgov/content/About/2017_SOE_v10.4_\(High_Res\).pdf](http://energy.nv.gov/uploadedFiles/energynvgov/content/About/2017_SOE_v10.4_(High_Res).pdf). Actual RPS requirements for calendar years 2010 through 2017 obtained from the Nevada Revised Statutes. See: Nevada Revised Statutes. § 704.7821(1)(c)-(f). Available: <https://www.leg.state.nv.us/nrs/NRS-704.html#NRS704Sec7821>.
- ²⁷ NV Energy. “Press Release: NV Energy Exceeds Nevada’s Renewable Requirement for Eighth Straight Year.” April 2, 2018. Available: <https://www.prnewswire.com/news-releases/nv-energy-exceeds-nevadas-renewable-requirement-for-eighth-straight-year-300622867.html>.
- ²⁸ Daniel Rothberg. “NV Energy Exceeds Renewable Standards as Clean Energy Groups Push for More.” April 5, 2018. Available: <https://thenevadaindependent.com/article/nv-energy-exceeds-renewable-standards-as-clean-energy-groups-push-for-more>.
- ²⁹ Nevadans for a Clean Energy Future. “Yes on 6: FAQ: How much energy does Nevada currently get from renewable sources?” Available: <https://cleanfuturenv.com/resources/>.
- ³⁰ Guinn Center conversations with industry experts.
- ³¹ Guinn Center conversation with industry expert.
- ³² U.S. Environmental Protection Agency. 2015. “Energy and Environment Guide to Action: State Policies and Best Practices for Advancing Energy Efficiency, Renewable Energy, and Combined Heat and Power.” Page 5-2. Available: https://www.epa.gov/sites/production/files/2017-06/documents/guide_action_full.pdf.
- ³³ Herman K. Trabish. “Why Mandates Still Matter in the Age of Cheap Renewables.” *Utility Dive*. January 3, 2018. Available: <https://www.utilitydive.com/news/why-mandates-still-matter-in-the-age-of-cheap-renewables/513797/>.
- ³⁴ Galen Barbose. “U.S. Renewables Portfolio Standards: Overview of Status and Key Trends.” Lawrence Berkeley National Laboratory. 2015 National Summit on RPS, Washington, DC, November 5, 2015. Available: <https://www.cesa.org/assets/2015-Files/RPS-Summit/Galen-Barbose-11.5.15.pdf>.
- ³⁵ Galen Barbose. 2017. “U.S. Renewables Portfolio Standards: 2017 Annual Status Report.” Lawrence Berkeley National Laboratory. Available: <https://emp.lbl.gov/sites/default/files/2017-annual-rps-summary-report.pdf>.
- ³⁶ Amanda Levin, Natural Resources Defense Council (NRDC). “Renewable Standards: Clean Energy Development & Other Impacts.” Exhibit Prepared for the Governor’s Committee on Energy Choice, August 9, 2017. Slide 14 of 31. Available: http://energy.nv.gov/uploadedFiles/energynvgov/content/Programs/-TaskForces/2017/8_9_2017_AgendaItem5_NRDC_CEC_PPT.pdf.
- ³⁷ Herman K. Trabish. “Why Mandates Still Matter in the Age of Cheap Renewables.” *Utility Dive*. January 3, 2018. Available: <https://www.utilitydive.com/news/why-mandates-still-matter-in-the-age-of-cheap-renewables/513797/>.
- ³⁸ Figure 2A constructed by the Guinn Center using data from two sources. Net generation obtained from: U.S. Department of Energy, U.S. Energy Information Administration. “Net Generation [from Energy Source] by State by Sector.” “Annual” button selected on the EIA site to retrieve net generation for 2017. Available: <https://www.eia.gov/electricity/data/browser/>. RPS and non-RPS states information retrieved from: National Conference of State Legislatures. “State Renewable Portfolio Standards and Goals.” July 20, 2018. Available: <http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx>. States with voluntary standards or targets—which may be understood as goals or encouragements, rather than mandates—are categorized as non-RPS states by the Guinn Center.

- ³⁹ Figure 2B constructed by the Guinn Center using data from two sources. Net generation obtained from: U.S. Department of Energy, U.S. Energy Information Administration. “Net Generation [from Energy Source] by State by Sector.” “Annual” button selected on the EIA site to retrieve net generation for 2017. Available: <https://www.eia.gov/electricity/data/browser/>. RPS and non-RPS states information retrieved from: National Conference of State Legislatures. “State Renewable Portfolio Standards and Goals.” July 20, 2018. Available: <http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx>.
- ⁴⁰ Nevadans for a Clean Energy Future. “Yes on 6: FAQ: Does Question 6 create more jobs?” Available: <https://cleanfuturenv.com/resources/>.
- ⁴¹ Ryan Wisser, Galen Barbose, Jenny Heeter, Trieu Mai, Lori Bird, Mark Bolinger, Alberta Carpenter, Garvin Heath, David Keyser, Jordan Macknick, Andrew Mills, and Dev Millstein. 2016. “A Retrospective Analysis of the Benefits and Impacts of U.S. Renewable Portfolio Standards.” Lawrence Berkeley National Laboratory and National Renewable Energy Laboratory. Page viii. Available: <http://eta-publications.lbl.gov/sites/default/files/lbnl-1003961.pdf>.
- ⁴² Betony Jones, Peter Philips, and Carol Zabin. “Policy Brief: Job Impacts of California’s Existing and Proposed Renewables Portfolio Standard.” University of California, Berkeley: Donald Vial Center on Employment in the Green Economy. August 28, 2015. Available: <http://laborcenter.berkeley.edu/pdf/2015/job-impacts-ca-rps.pdf>.
- ⁴³ Betony Jones, Peter Philips, and Carol Zabin. 2015, pages 3-4.
- ⁴⁴ Robert G. Johnston, Western Resource Advocates, Senior Staff Attorney. “A.B. 206 – INCREASING NEVADA’S RENEWABLE PORTFOLIO STANDARD.” Exhibit Prepared for the Nevada State Assembly Committee on Commerce and Labor, Subcommittee on Energy, March 8, 2017. Available: <https://www.leg.state.nv.us/Session/79th2017/Exhibits/Assembly/CL/ACL403E.pdf>.
- ⁴⁵ Robert G. Johnston, Western Resource Advocates, Senior Staff Attorney. 2017.
- ⁴⁶ For citation, see: U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy. “New Study: Renewable Energy for State Renewable Portfolio Standards Yield Sizable Benefits.” January 7, 2016. Available: <https://www.energy.gov/eere/articles/new-study-renewable-energy-state-renewable-portfolio-standards-yield-sizable-benefits>. On \$7.4 billion in benefits, see: Ryan Wisser, Galen Barbose, Jenny Heeter, Trieu Mai, Lori Bird, Mark Bolinger, Alberta Carpenter, Garvin Heath, David Keyser, Jordan Macknick, Andrew Mills, and Dev Millstein. 2016. “A Retrospective Analysis of the Benefits and Impacts of U.S. Renewable Portfolio Standards.” Lawrence Berkeley National Laboratory and National Renewable Energy Laboratory. Page viii. Available: <http://eta-publications.lbl.gov/sites/default/files/lbnl-1003961.pdf>. On \$1 billion in costs, see: Jenny Heeter, Galen L Barbose, Lori Bird, Samantha Weaver, Francisco Flores-Espino, Ksenia Kuskova-Burns, and Ryan H. Wisser. 2014. “A Survey of State-Level Cost and Benefit Estimates of Renewable Portfolio Standards.” National Renewable Energy Laboratory and Lawrence Berkeley National Laboratory. Available: <http://eta-publications.lbl.gov/sites/default/files/lbnl-6589e.pdf>.
- ⁴⁷ Herman K. Trabish. “Why Mandates Still Matter in the Age of Cheap Renewables.” *Utility Dive*. January 3, 2018. Available: <https://www.utilitydive.com/news/why-mandates-still-matter-in-the-age-of-cheap-renewables/513797/>.
- ⁴⁸ Galen Barbose. 2017. “U.S. Renewables Portfolio Standards: 2017 Annual Status Report.” Lawrence Berkeley National Laboratory. Available: <https://emp.lbl.gov/sites/default/files/2017-annual-rps-summary-report.pdf>.
- ⁴⁹ Jenny Heeter, Galen L Barbose, Lori Bird, Samantha Weaver, Francisco Flores-Espino, Ksenia Kuskova-Burns, and Ryan H. Wisser. 2014. “A Survey of State-Level Cost and Benefit Estimates of Renewable Portfolio Standards.” National Renewable Energy Laboratory and Lawrence Berkeley National Laboratory. Available: <http://eta-publications.lbl.gov/sites/default/files/lbnl-6589e.pdf>.
- ⁵⁰ Galen Barbose. 2017.
- ⁵¹ Galen Barbose. “U.S. Renewables Portfolio Standards: Overview of Status and Key Trends.” Lawrence Berkeley National Laboratory. 2015 National Summit on RPS, Washington, DC, November 5, 2015. Available: <https://www.cesa.org/assets/2015-Files/RPS-Summit/Galen-Barbose-11.5.15.pdf>.

- ⁵² Galen Barbose. “U.S. Renewables Portfolio Standards: Overview of Status and Key Trends.” Lawrence Berkeley National Laboratory. 2015 National Summit on RPS, Washington, DC, November 5, 2015. Page 20. Available: <https://www.cesa.org/assets/2015-Files/RPS-Summit/Galen-Barbose-11.5.15.pdf>.
- ⁵³ Jenny Heeter, Galen L Barbose, Lori Bird, Samantha Weaver, Francisco Flores-Espino, Ksenia Kuskova-Burns, and Ryan H. Wiser. 2014. “A Survey of State-Level Cost and Benefit Estimates of Renewable Portfolio Standards.” National Renewable Energy Laboratory and Lawrence Berkeley National Laboratory. Available: <http://eta-publications.lbl.gov/sites/default/files/lbnl-6589e.pdf>.
- ⁵⁴ Jenny Heeter, Galen L Barbose, Lori Bird, Samantha Weaver, Francisco Flores-Espino, Ksenia Kuskova-Burns, and Ryan H. Wiser. 2014. “A Survey of State-Level Cost and Benefit Estimates of Renewable Portfolio Standards.” National Renewable Energy Laboratory and Lawrence Berkeley National Laboratory. Pages v-vi. Available: <http://eta-publications.lbl.gov/sites/default/files/lbnl-6589e.pdf>.
- ⁵⁵ Jenny Heeter, Galen L Barbose, Lori Bird, Samantha Weaver, Francisco Flores-Espino, Ksenia Kuskova-Burns, and Ryan H. Wiser. 2014. “A Survey of State-Level Cost and Benefit Estimates of Renewable Portfolio Standards.” National Renewable Energy Laboratory and Lawrence Berkeley National Laboratory. Available: <http://eta-publications.lbl.gov/sites/default/files/lbnl-6589e.pdf>.
- ⁵⁶ Jenny Heeter, Galen L Barbose, Lori Bird, Samantha Weaver, Francisco Flores-Espino, Ksenia Kuskova-Burns, and Ryan H. Wiser. 2014. “A Survey of State-Level Cost and Benefit Estimates of Renewable Portfolio Standards.” National Renewable Energy Laboratory and Lawrence Berkeley National Laboratory. Available: <http://eta-publications.lbl.gov/sites/default/files/lbnl-6589e.pdf>.
- ⁵⁷ Guinn Center conversation with a representative of NV Energy.
- ⁵⁸ Guinn Center conversation with a representative of NV Energy.
- ⁵⁹ Guinn Center conversation with a representative of NV Energy.
- ⁶⁰ Guinn Center conversation with a representative of NV Energy.
- ⁶¹ Jenny Heeter, Galen L Barbose, Lori Bird, Samantha Weaver, Francisco Flores-Espino, Ksenia Kuskova-Burns, and Ryan H. Wiser. 2014. “A Survey of State-Level Cost and Benefit Estimates of Renewable Portfolio Standards.” National Renewable Energy Laboratory and Lawrence Berkeley National Laboratory. Available: <http://eta-publications.lbl.gov/sites/default/files/lbnl-6589e.pdf>.
- ⁶² Robert Bryce. 2012. “The High Cost of Renewable Electricity Mandates.” Center for Energy Policy and the Environment at the Manhattan Institute. n.p. Available: https://www.manhattan-institute.org/pdf/eper_10.pdf.
- ⁶³ Dominic Dudley. “Renewable Energy Will Be Consistently Cheaper Than Fossil Fuels By 2020, Report Claims.” *Forbes*. January 13, 2018. Available: <https://www.forbes.com/sites/dominicdudley/2018/01/13/renewable-energy-cost-effective-fossil-fuels-2020/#651886744ff2>.
- ⁶⁴ Riley Snyder. “Update: Committee Passes 50% Renewable Production Bill, NV Energy Suggests Tweaks.” *The Nevada Independent*. May 17th, 2017. Available: <https://thenevadaindependent.com/article/lawmaker-plans-to-push-bill-raising-renewable-energy-production-standards-with-new-storage-geothermal-focus>.
- ⁶⁵ NV Energy. “Joint 2019-2038 Integrated Resource Plan, for the Three Year Action Plan Period 2019-2021, and the Energy Supply Plan Period 2019-2021.” Volume 4 of 18: Summary. Filed with the Public Utilities Commission of Nevada. June 1, 2018. Page 1. Available: http://pucweb1.state.nv.us/PDF/AxImages/DOCKETS_2015_THRU_PRESENT/2018-6/30445.pdf.
- ⁶⁶ NV Energy. “Joint 2019-2038 Integrated Resource Plan, for the Three Year Action Plan Period 2019-2021, and the Energy Supply Plan Period 2019-2021.” Volume 4 of 18: Summary. Filed with the Public Utilities Commission of Nevada. June 1, 2018. Page 6. Available: http://pucweb1.state.nv.us/PDF/AxImages/DOCKETS_2015_THRU_PRESENT/2018-6/30445.pdf.
- ⁶⁷ NV Energy. “Joint 2019-2038 Integrated Resource Plan, for the Three Year Action Plan Period 2019-2021, and the Energy Supply Plan Period 2019-2021.” Volume 4 of 18: Summary. Filed with the Public Utilities Commission of Nevada. June 1, 2018. Available: http://pucweb1.state.nv.us/PDF/AxImages/DOCKETS_2015_THRU_PRESENT/2018-6/30445.pdf.
- ⁶⁸ Daniel Watson. “Renewable Portfolio Standards Face Stiff Opposition Across the Country.” Sol Systems. May 2, 2013. Available: <https://www.solsystems.com/blog/2013/05/02/renewable-portfolio-standards-face-stiff-opposition-across-the-country/>.

- ⁶⁹ Matt Kasper and Tom Kenworthy. “States Continue to Realize the Benefits of Renewable Energy Standards.” Center for American Progress. January 18, 2013. Available: <https://www.americanprogress.org/issues/green/news/2013/01/18/50022/states-continue-to-realize-the-benefits-of-renewable-energy-standards/>.
- ⁷⁰ On NV Energy’s compliance rate, see: State of Nevada, Nevada Governor’s Office of Energy. “2017 Status of Energy Report.” Page 5. Available: [http://energy.nv.gov/uploadedFiles/energygov/content/About/2017_SOE_v10.4_\(High_Res\).pdf](http://energy.nv.gov/uploadedFiles/energygov/content/About/2017_SOE_v10.4_(High_Res).pdf). On NV Energy’s actual renewable portfolio, see: NV Energy. “Press Release: NV Energy Exceeds Nevada’s Renewable Requirement for Eighth Straight Year.” April 2, 2018. Available: <https://www.prnewswire.com/news-releases/nv-energy-exceeds-nevadas-renewable-requirement-for-eighth-straight-year-300622867.html>.
- ⁷¹ Dan Smith. “Circumventing Policymakers: Voters in Three States to Consider RPS Ballot Initiatives.” Sol Systems. April 25, 2018. Available: <https://www.energycentral.com/c/ec/circumventing-policymakers-voters-three-states-consider-rps-ballot-initiatives>; and National Conference of State Legislatures. “State Renewable Portfolio Standards and Goals.” July 20, 2018. Available: <http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx>.
- ⁷² Public Utilities Commission of Nevada. “Renewable Portfolio Standard.” Available: http://puc.nv.gov/Renewable_Energy/Portfolio_Standard/.
- ⁷³ Public Utilities Commission of Nevada. “Renewable Portfolio Standard.” Available: http://puc.nv.gov/Renewable_Energy/Portfolio_Standard/.
- ⁷⁴ Ryan Randazzo. “Arizona Supreme Court: Voters Will Decide Renewable-Energy Rules in November.” *Arizona Republic*. August 30, 2018. Available: <https://www.azcentral.com/story/money/business/energy/2018/08/30/arizona-election-renewable-energy-ballot-measure-go-voters/1145226002/>.
- ⁷⁵ Nevadans for a Clean Energy Future. “Yes on 6: FAQ: How will this affect my bills?” Available: <https://cleanfuturenv.com/resources/>.
- ⁷⁶ Coalition of Energy Users. “No on 6: Get the Facts.” Available: <http://noquestion6.com/get-the-facts/>.
- ⁷⁷ Nevada Secretary of State. “FINANCIAL IMPACT OF THE RENEWABLE ENERGY PROMOTION INITIATIVE.” April 11, 2018. Available: <https://www.nvsos.gov/sos/home/showdocument?id=5468>.
- ⁷⁸ Nevada Secretary of State. “FINANCIAL IMPACT OF THE RENEWABLE ENERGY PROMOTION INITIATIVE.” April 11, 2018. Available: <https://www.nvsos.gov/sos/home/showdocument?id=5468>.
- ⁷⁹ Nevada Secretary of State. “FINANCIAL IMPACT OF THE RENEWABLE ENERGY PROMOTION INITIATIVE.” April 11, 2018. n.p. Available: <https://www.nvsos.gov/sos/home/showdocument?id=5468>.
- ⁸⁰ Kelsi Bracmort. “Biopower: Background and Federal Support.” Congressional Research Service. August 14, 2015. Available: <https://fas.org/sgp/crs/misc/R41440.pdf>.
- ⁸¹ National Conference of State Legislatures. “State Renewable Portfolio Standards and Goals.” July 20, 2018. Available: <http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx>.
- ⁸² National Conference of State Legislatures. “State Renewable Portfolio Standards and Goals.” July 20, 2018. Available: <http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx>.
- ⁸³ Figure 3 is a Guinn Center replication of a map accessed from the National Conference of State Legislatures website. See: National Conference of State Legislatures. “State Renewable Portfolio Standards and Goals.” July 20, 2018. Available: <http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx>.
- ⁸⁴ For a detailed discussion of Question 3: The Energy Choice Initiative, see: Guinn Center. 2018. “Restructuring the Electricity Market in Nevada? Possibilities, Prospects, and Pitfalls.” Available: <https://guinncenter.org/wp-content/uploads/2018/07/Guinn-Center-Q3-2018.pdf>.
- ⁸⁵ Table 2 compiled by the Guinn Center using data obtained from the National Conference of State Legislatures website. See: National Conference of State Legislatures. “State Renewable Portfolio Standards and Goals.” July 20, 2018. Available: <http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx>.