

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO**

Civil Action No. 11-cv-00859-WJM-BNB

AMERICAN TRADITION INSTITUTE, and
ROD LUECK,

Plaintiffs,

v.

JOSHUA EPEL,
JAMES TARPEY, and
PAMELA PATTON,

Defendants,

ENVIRONMENT COLORADO,
CONSERVATION COLORADO EDUCATION FUND,
SIERRA CLUB,
THE WILDERNESS SOCIETY,
SOLAR ENERGY INDUSTRIES ASSOCIATION, and
INTERWEST ENERGY ALLIANCE,

Defendant-Intervenors.

**SECOND AMENDED COMPLAINT FOR INJUNCTIVE
AND DECLARATORY RELIEF**

INTRODUCTION

On April 4, 2011, the American Tradition Institute and Rod Lueck (collectively, “ATI”) filed a Complaint for Injunctive and Declaratory Relief. (Doc. No. 1.) A day later the Plaintiffs filed an Amended Complaint (hereinafter “the First Amended Complaint”), correcting a single statement. (Doc. No. 7.) Under its Scheduling Order, the Court established a deadline for final amendment of pleadings of July 1, 2013. (Doc. No. 149 at p. 18.) This deadline

reflected the fact that a bill had been presented to the Governor that would significantly reduce the number of claims the Plaintiffs would need to prosecute. The Governor signed that bill into law on June 5, 2013, Senate Bill 13-252. This Second Amended Complaint reflects the changes in the law as a result of that enactment.

Subsequent to the First Amended Complaint, Plaintiffs have also identified an additional facial violation in the statute, one not addressed in SB 13-252, and add a claim to address that unconstitutional enactment.

Further, ATI has reevaluated some of its claims and concluded that if its first claim prevails, some of sections of the statute addressed in latter claims become mere voluntary programs and not worthy of litigation. Thus, in order to narrow the matters placed before the court, Plaintiffs are withdrawing some of its claims.

Finally, the parties have agreed to narrow the list of state defendants and some members of the Public Utility Commission have changed, necessitating changes in the names of some of the named state defendants. These changes are also reflected in this Second Amended Complaint.

NATURE OF THE ACTION

1. The American Tradition Institute (ATI) brings this civil action on behalf of their members, including the named individual Plaintiff, Rod Lueck, (jointly, the “Plaintiffs” or “ATI”), seeking declaratory and injunctive relief pursuant to 28 U.S.C. § 2201, asking the Court to: (1) declare the Colorado renewable energy standard (RES), codified at C.R.S. 40-2-124, unconstitutional under Article I, Section 8 of the United States Constitution; (2) order an award

of costs and fees under 42 U.S.C. § 1988, and (3) order such necessary and proper injunctive relief or other injunctive relief as this Court deems just and proper.

2. The Colorado RES discriminates on its face against legal, safer, less costly, less polluting and more reliable in-state and out-of-state generators of electricity sold in interstate commerce. This discrimination is forbidden by the Commerce Clause.

PARTIES

3. The American Tradition Institute is a 501(c)(3) organization dedicated to the advancement of rational, free-market solutions to America's land, energy, and environmental challenges. It has members throughout the nation, including in Colorado. The named individual co-Plaintiff is a member of ATI. The Colorado RES has caused cognizable harm to members of ATI through higher electricity costs, less reliable electricity service, greater emissions of pollutants regulated under the federal Clean Air Act and higher emissions of greenhouse gases.

4. Rod Lueck is a resident of Morrison, Colorado, is a private citizen and businessman and relies on electricity generated within Colorado and from outside Colorado and transmitted through the interstate electric grid serving Colorado. Mr. Lueck states in a declaration (Doc. No. 2) that he is the owner and President of Techmate (dba C5 Solutions for Broker Dealers) a company located in and operating in Colorado but serving customers in the interstate market. Techmate has served the financial services industry since 1984. Over the years, the company's products have become the most widely used Broker/Dealer back office systems in the industry. The Techmate products require constant on-line service to its clients. Electricity is an essential resource to his business activities. The cost of electricity directly affects the profitability of the business. Mr. Lueck is a member of ATI because its mission reflects his

strong commitment to environmental stewardship and economic liberty. The Colorado RES has caused and continues to cause cognizable harm to Mr. Lueck through higher electricity costs, less reliable electricity service, greater emissions of pollutants regulated under the federal Clean Air Act and higher emissions of greenhouse gases.

5. The State of Colorado, operating through a voters' initiative and later through legislative action, adopted and revised its RES codified at C.R.S. 40-2-124. The statutory mandates in the RES are forbidden by the Commerce Clause of the U.S. Constitution.

6. Joshua Epel is Chairman of the Colorado Public Utilities Commission. He is named as a defendant in his official capacity. The Public Utilities Commission implements the RES. He has publically supported the RES and expansion of its scope and discriminatory effect.

7. James Tarpey is a Commissioner of the Colorado Public Utilities Commission. He is named as a defendant in his official capacity. The Public Utilities Commission implements the RES. He has publically supported the RES and expansion of its scope and discriminatory effect.

8. Pamela J. Patton, is a Commissioner of the Colorado Public Utilities Commission. She is named as a defendant in her official capacity. The Public Utilities Commission implements the RES. She has publically supported the RES and expansion of its scope and discriminatory effect.

JURISDICTION AND VENUE

9. This action arises under the Commerce Clause of the U.S. Constitution and under 42 U.S.C. §1983. This Court has jurisdiction under 28 U.S.C. §1331.

10. Venue is proper in this Court under 28 U.S.C. §§1391(b)(1), (2) and (3).

11. This Court is empowered to provide declaratory relief in this action pursuant to the Declaratory Judgment Act, 28 U.S.C. §2201(a), and Rule 57 of the Federal Rules of Civil Procedure.

12. This Court is empowered to provide injunctive relief in this action pursuant to, inter alia, 28 U.S.C. § 2202 and Rule 65 of the Federal Rules of Civil Procedure; and 42 U.S.C. § 1983 & § 1988.

THE COMMERCE CLAUSE

13. Quoting the U.S. Court of Appeals for the Second Circuit, the U.S. Court of Appeals for the Tenth Circuit recently summarized the governing standards of law under the Commerce Clause of the United States Constitution:

The Commerce Clause provides that ‘Congress shall have Power . . . [t]o regulate Commerce with foreign Nations, and among the several States.’” *United Haulers Ass’n, Inc. v. Oneida-Herkimer Solid Waste Mgmt. Auth.*, 550 U.S. 330, 127 S. Ct. 1786, 1792, 167 L. Ed. 2d 655 (2007) (quoting U.S. Const. art. I, § 8, cl. 3). In addition to that express authority, courts have interpreted the Commerce Clause also to restrain state authority implicitly. *See id.*

A state statute may violate the dormant Commerce Clause in three ways:

First, a statute that clearly discriminates against interstate commerce in favor of intrastate commerce is virtually invalid *per se* and can survive only if the discrimination is demonstrably justified by a valid factor unrelated to economic protectionism. Second, if the statute does not discriminate against interstate commerce, it will nevertheless be invalidated under the *Pike v. Bruce Church Inc.*, 397 U.S. 137, 142, 90 S. Ct. 844, 25 L. Ed. 2d 174 . . . (1970), balancing test if it imposes a burden on interstate commerce incommensurate with the local benefits secured. Third, a statute will be invalid *per se* if it has the practical effect of extraterritorial control of commerce occurring entirely outside the boundaries of the state in question.

Pryor, 425 F.3d at 168 (quotation, alteration omitted); *see also United Haulers*, 127 S. Ct. at 1793; *Am. Trucking Ass’ns, Inc. v. Mich. Pub. Serv. Comm’n*, 545 U.S. 429, 433, 125 S. Ct. 2419, 162 L. Ed. 2d 407 (2005). “In this context, ‘discrimination’ simply

means differential treatment of in-state and out-of-state economic interests that benefits the former and burdens the latter.” *United Haulers*, 127 S. Ct. at 1793 (quotation omitted).

KT&G Corp., et al. v. Attorney General of the State of Oklahoma, et al., 535 F.3d 1114, 1143 (10th Cir. 2008).

14. In this matter, the Colorado RES violates the dormant Commerce Clause in each of the three ways identified by the Tenth Circuit.

15. The protection afforded by the Commerce Clause is well-known among energy regulators such as the Defendants.

16. For example, In The Matter of Amendments to the Electric Resource Planning Rules, 4 CCR 723-3, Rules 3600-3615, Docket No. 09I-041E, proponents and opponents to the proposed rule changes discussed at length the applicability of the Commerce Clause to rules affecting interstate electricity generation. All parties recognized that rules affecting price and market conditions in the interstate electricity market are limited by the commerce clause. Indeed, in light of these and other arguments, the Colorado Public Utilities Commission (PUC) held a hearing on July 16, 2009, (transcript page 53) during which it specifically sought input about the limits of the Commerce Clause, based in part on comments in the Docket charging that the PUC’s proposed actions violated the commerce clause. *See*, Initial Comments of Tri-State Generation and Transmission Association, Inc., In The Matter Of Amendments To The Electric Resource Planning Rules, CCR 723-3, Rules 3600-3615. Docket No. 09I-041E 4, page 21. Nor is this the only example.

17. On June 5, 2013, the Colorado Governor admitted to these facial violations and signed SB 13-252 in order to cure some violations of the dormant Commerce clause. *See*, “Gov.

Hickenlooper signs Executive Order, issues signing statement related to SB13-252” (“this Act will eliminate the arguable in-state preference concerning renewable resources currently in state statute.”)

<http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovHickenlooper%2FCBONLayout&cid=1251643166067&pagename=CBONWrapper>, accessed 6/13/2013.

18. The same type of issue that is raised in this Second Amended Complaint was addressed in a publication prepared for the National Association of Regulatory Utility Commissioners, dated February 2001, titled “The Renewables Portfolio Standard: A Practical Guide.” Page A-1 of this publication states as follows (emphasis added):

Some states have limited renewable resource eligibility to production from generation facilities located within the state. Absent a significant change in Supreme Court application of the Commerce Clause of the U.S. Constitution, the restriction to in-state generation will, if challenged, be found unconstitutional. The courts have continually found that facial discrimination by a state against out-of-state resources is ‘virtually per se invalid.’ Philadelphia v. New Jersey, 437 U.S. 617, 624 (invalidating New Jersey’s ban on imports of out-of-state garbage). The exclusion of out-of-state generation is sufficiently similar to court precedents to expect invalidation. . . .

FACTS ON INTERSTATE COMMERCE OF ELECTRICITY

19. The Plaintiffs rely upon, and include by reference in this complaint, the declarations of Thomas Tanton and William Yeatman. *See*, Doc. Nos. 3 & 4.

I. RETAIL ELECTRICITY SALES IN COLORADO ARE INTERSTATE COMMERCE

A. Electricity Basics

20. Interstate electrical service is not like a water or gas pipeline. Instead, it is like the ebb and flow of waves on the beach. Electric generators do not push a river of electrons from

their plants, through transmission lines and into homes and businesses. They push then pull electrons back and forth within the transmission and distribution lines 60 times each second.

21. This subsection explains a few key electric industry terms that are important in understanding the critically important differences between the quality and value of (i) the high cost, intermittent, volatile and unreliable electricity produced by wind turbines and (ii) the lower cost, reliable and more valuable electricity produced by generating units that can be called upon to produce electricity whenever it is needed by electric customers.

22. The number of electrons in motion in a transmission or distribution wire is called the current, and is measured in amps. The force pushing and pulling the electrons is called the voltage and is measured in volts. The power available from an electrical outlet is measured in watts and is a function of the voltage and the available current. Wattage is a measure of the rate of energy conversion. $1 \text{ Watt} = 1 \text{ Volt} \times 1 \text{ Amp}$. A kW is a thousand watts. An MW is a million watts. A kWh is a thousand watts continually delivered over the time period of one hour.

23. Because wind energy constitutes the vast majority of “renewable energy” mandated by Colorado law to be purchased from interstate markets, the unreliability and volatility of wind energy, as compared with conventional fossil fuel (non-renewable) sources, underpins an understanding of how Colorado law violates the Commerce Clause. This requires an understanding of some core terms in the electricity industry.

24. “Generating capacity” is measured in kilowatts (kW) or megawatts (MW). This is a measure of a generating unit’s ability to produce electricity at an instant in time. This term can be confusing because there are different legitimate measures of generating capacity:

25. “Nameplate capacity” is the capacity rating shown on the nameplate attached to the generator by the manufacturer. "Rated capacity" is often used synonymously with "nameplate capacity."

26. For many fossil-fueled units, “summer capacity” and “winter capacity” are often different from nameplate capacity because the unit’s ability to produce is affected by air temperature and humidity.

27. “Capacity value” also measured in kW or MW. This is a critically important measure to generating companies and grid managers. It describes the amount of generating capacity that can be counted on to help meet peak electricity demand. For many reasons it differs from any of the above measures. Generally, this number is determined empirically; i.e., with a specific test of what the unit can produce (again in kW or MW) under specific test conditions.

28. “Wind turbine capacity value," i.e., the true capacity value of a wind turbine, is the kW or MW of generating capacity that is available at the actual time of peak electricity demand on the electric grid serving the area. The true capacity value of a wind turbine, wind farm or wind facility is generally less than 10% of nameplate capacity and often 0% or slightly above -- simply because, at the time of peak electricity demand, the wind is unlikely to be blowing at a speed that will permit the turbine to produce any or much electricity. Claims of wind turbine capacity value have been exaggerated by wind industry officials and lobbyists, by regulatory agencies, ISOs, RTOs, or other grid manager's arbitrary decisions.

29. Capacity value for reliable ("dispatchable") generating units -- i.e., those designed to be available whenever called upon -- may be less than their "nameplate" (or "summer" or "winter") capacity for a variety of reasons. For example, they may have mechanical problems

that prevent them from running at full rated capacity but which problems are not serious enough to take them out of service for repair or overhaul. Grid managers often require that generating unit owners/operators report each day (e.g., around noon) how much capacity can be counted on during the next day from each generating unit.

30. “Availability” means that a unit is physically available and has fuel needed to permit it to generate electricity when needed. Or, put another way, it is NOT out of commission (“off line”) for maintenance, repair or overhaul, or lack of fuel. Wind industry spokespersons often misuse this term by ignoring the critical second criterion; i.e. “has the fuel” (wind) needed to permit it to generate electricity. A wind turbine without wind has no real value to electric customers because it has no capacity to generate electricity.

31. “Generation” is measured in kilowatt-hours (kWh) or megawatt-hours (MWh). This is an after the fact measure of the amount of electricity produced over some period of time (hour, day, week, month, year, etc.).

32. “Capacity factor” is measured as a percentage of nameplate capacity multiplied by hours. It is an after the fact measure with the percentage determined by dividing the actual (metered) output (in kWh or MWh), divided by the nameplate capacity (in kW or MW) times the number of hours in the period for which the calculation is done (e.g., 8760 hours for a year).

33. “Wind turbine capacity factors” are low capacity factors because they are dependent on wind speed. They start producing a small amount of electricity with a wind speed of about six (6) or seven (7) miles per hour (mph), reach “rated” capacity around thirty-one (31) mph and cut out around fifty-six (56) mph. Therefore, their output is inherently intermittent, volatile and unreliable. A 1 MW (1,000 kW) wind turbine that produces 2,190,000 kWh of

electricity during a year has achieved a capacity factor of 25%. That is 2,190,000 kWh divided by 1,000 kW x 8760 hours; or 2,190,000 divided by 8,760,000 = .25).

34. “Dispatchable unit capacity factors” are capacity factors for reliable or “dispatchable” generating units and vary widely depending upon (i) the design and intended purpose of the unit (i.e., for baseload, intermediate or peak load service) and (ii) the plans and choices of the operator who is responsible for keeping the electric grid in balance (electricity supply & demand, voltage and frequency).

35. “Baseload” units (often powered by coal or nuclear energy and that heat water to produce steam that spins the turbine that produces electricity) are designed to run all or most of the time and often have annual capacity factors in the 70% to 90% range. They take longer to start up and bring to full generating capacity and cannot be efficiently “ramped” up and down (i.e., output increased or decreased) to balance changes in demand or supply.

36. “Intermediate load” units are those that can be ramped up and down more quickly than units designed for “baseload” service). Some “intermediate load” units will use steam turbines and some will use gas turbines and some will use both. Often these units will be powered by natural gas and, much less often, oil. Their annual capacity factors vary widely, perhaps from percentages in the teens to percentages in the 50s or 60s. As discussed below, these are usually the units that “shadow” (balance) wind energy, increasing generation when winds drop, and decreasing generation when winds increase. Although their efficiency degrades less when ramping up and down than baseline units, these units remain most efficient when operated in a manner that shadows normal, gradual and usually predictable changes in demand, than when forced to shadow the much more highly variable changes caused by volatility in wind.

37. “Peak load” units are those intended for use primarily when electricity demand is at high levels. Generally these units will use combustion turbine technology or internal combustion engines, powered by natural gas or oil. They can be started up and shut down quickly. Their annual capacity factors will often be in the range of 3% to 7% because they are intended for use, and used, only when electricity demand is high or other emergency. These units are rarely used to shadow wind energy.

38. Hydropower units (falling water turns the turbines) may be used for baseload, intermediate or peak load service – depending on the availability of water in the area. For example, hydropower units provide baseload power in the Pacific Northwest but are used only for peaking service in areas with fewer water resources. Hydropower units are used for “load following” (i.e., keeping electricity supply equal to demand) because their output can be controlled instantaneously. In like measure, they can be used to shadow wind energy, however, the highly variable ramping needed to shadow wind consumes considerably more water resources, and places more stress on equipment, than the small, instantaneous ramping needed to respond to changes in demand. Thus, hydropower units may be limited to only a few hours per day for wind energy shadowing purposes.

39. Units powered by biomass (wood, etc.) or geothermal energy are also “renewable” resources, but unlike wind energy, they are considered “dispatchable” and may also be used in baseload or intermediate service in areas where these energy sources are available. They contribute less than twenty percent (20%) of renewable energy and only tiny fraction of total electricity generation. As indicated above, wind turbines are “intermittent” and neither reliable nor dispatchable because they are dependent on wind speed. Solar photovoltaic panels

are also renewable intermittent sources of electricity because they are dependent on sunlight, and for that reason cannot be dispatched.

40. A kilowatt-hour (kWh) of electricity from a wind turbine has less value than a kWh of electricity from a reliable (“dispatchable”) generating unit; i.e., from a unit that can be called upon to produce electricity whenever the electricity is needed by electric customers.

41. Wind turbines have little or no “capacity value”; i.e., they are unlikely to be producing electricity at the time of peak electricity demand. Therefore, wind turbines are not a substitute for reliable generating capacity needed to provide reliable electric service for electric customers.

42. Because wind energy has little or no capacity value, reliable and flexible capacity must be available to shadow the wind energy and, with the exception of hydropower, that flexible capacity uses carbon-based fuels.

B. Retail Electricity Is Delivered Through An Interstate “Grid”

43. The wires and associated apparatus between the generators and the electrical service line to end users are known as the electrical “grid”.

44. Power (wattage) moves at near the speed of light through the grid as an electromagnetic wave.

45. Because of the many interconnections of the grid, the power created by any specific generating facility connected to the grid can supply the power demand from any point on the grid. The exception to this is that wind energy is highly variable and thus, while it can supply energy from any location on the grid, it cannot do so reliably, unlike fossil fueled sources.

46. The physical electricity generated by renewable sources and supplied to the grid is indistinguishable from electricity generated by non-renewable sources and supplied to the grid, although its reliability and capacity value are vastly different.

47. Power drawn from any particular point on the grid cannot be attributed to any specific power source on the grid.

48. The price of retail electricity includes the cost of electricity transmission through the grid, and other grid wide costs.

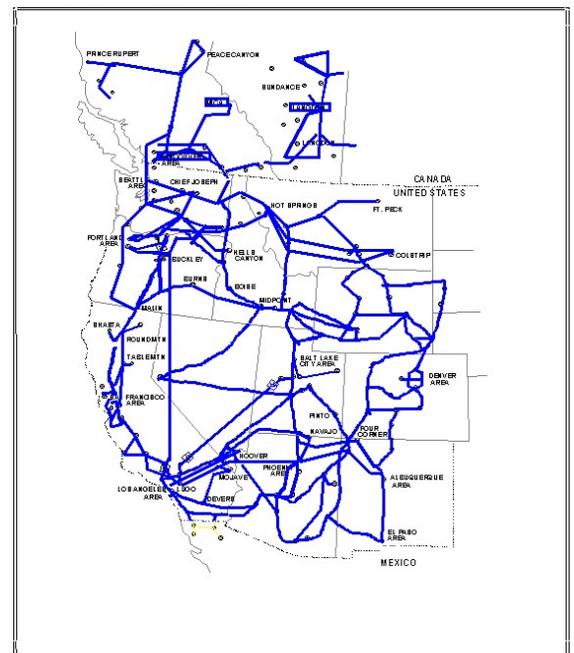
49. Companies that sell retail electricity drawn from an interstate grid participate in interstate commerce.

C. Colorado Retail Electricity Is Delivered Through An Interstate “Grid”

50. The electricity grid in Colorado is a portion of the Western Interconnection (which is managed by multiple entities). This electricity grid is generally depicted by the accompanying map. The Western Electricity Coordinating Council (WECC) helps manage the Western Interconnection and is a Regional forum for promoting regional electric service reliability in Western Canada and the Western United States.

51. Within WECC’s southwest electrical region, the Rocky Mountain Power Area is managed by two balancing authorities, the Public Service Company

Western Interconnection ISO (map is illustrative and does not show all transmission lines)



of Colorado (PSCo) and the Western Area Power Administration - Colorado-Missouri WAPA.

52. The Public Service Company of Colorado (PSCo) is a registered Transmission Provider (TP) and Balancing Authority (BA) within the Western Interconnection and the Western Electricity Coordination Council (WECC). As PSCo is a vertically integrated electric utility, it is also a Generation Owner (GO) and Load Serving Entity (LSE). The PSCo transmission network is located primarily along the Front Range of Colorado with extensions west to Grand Junction, Colorado and south to Alamosa, Colorado. The main transmission voltages are 230 kV and 115 kV. The BAs adjacent to PSCo are Western Area Power Administration - Loveland, Area Power Administration - Phoenix, and Public Service Company of New Mexico (PNM). PSCo coordinates its ATC calculations with these neighboring transmission providers. PSCo is also connected asynchronously to the Southwest Public Service (SPS) BA in the Southwest Power Pool (SPP) region through an AC/DC/AC converter station at Lamar, Colorado. SPS and PSCo are both operating company subsidiaries of Xcel Energy Inc. and coordinate ATC postings for tie line capacity.

53. Every municipal, private or cooperative electric company in Colorado that sells electricity to the retail market is connected to the grid.

54. As a balancing authority PSCo is the entity responsible for integrating resource plans ahead of time, maintaining load-interchange-generation balance within most of Colorado, and supports interconnection frequency in real time.

55. PSCo not only owns transmission lines within the grid, but also buys and sells power to wholesale customers and sells to retail customers.

56. Colorado retail electricity utilities connected to the PSCo-managed grid draw power from a grid that crosses state boundaries, is an interstate source of electricity and, thus, the Colorado retail electricity utilities subject to Colorado statutes participate in interstate commerce.

II. THE STATUTORY MANDATE TO MEET RENEWABLE ENERGY STANDARDS FACIALLY VIOLATES THE INTERSTATE COMMERCE CLAUSE, OR IMPERMISSIBLY IMPOSES A BURDEN ON INTERSTATE COMMERCE INCOMMENSURATE WITH THE LOCAL BENEFITS SECURED.

A. State Mandates That Require A Certain Proportion Of Retail Electricity Sales To Be Generated By Renewable Sources Blocks The Flow Of, And Creates An Impermissible Burden On Interstate Commerce.

57. All Colorado retail electrical service is connected to the interstate grid.

58. The purchase of wholesale electricity is nothing more than a transfer of money and does not, and cannot, mean that the power purchased by the retail utility was produced by the specific source receiving the retail utility's money. This is akin to a corn processor purchasing the produce from a farmer, but taking delivery from the farm coop grain silo. The processor obtains the amount of corn purchased, but has no guarantee that it came from the land owned by the farmer he paid.

59. A mandate that requires a percentage of the retail electrical sales be generated by renewable sources effectively bars a power source connected to the interstate grid from producing non-renewable power equivalent to the percentage of renewable energy required to meet the Colorado law. For this reason, the mandate is discriminatory to interstate commerce.

B. Three Purposes of Colorado's Renewable Energy Standard Are Designed To Discriminate or Otherwise Impermissibly Burden Interstate Commerce

60. In 2004, Colorado voters passed an initiative to enact a renewable energy standard, codified at Colorado Revised Statutes (C.R.S.) 40-2-124. The initiated measure, Amendment 37, included a declaration of intent, to wit:

SECTION 1. Legislative declaration of intent:

Energy is critically important to Colorado's welfare and development, and its use has a profound impact on the economy and environment. Growth of the state's population and economic base will continue to create a need for new energy resources, and Colorado's renewable energy resources are currently underutilized.

Therefore, in order to save consumers and businesses money, attract new businesses and jobs, promote development of rural economies, minimize water use for electricity generation, diversify Colorado's energy resources, reduce the impact of volatile fuel prices, and improve the natural environment of the state, it is in the best interests of the citizens of Colorado to develop and utilize renewable energy resources to the maximum practicable extent.

61. The purpose of requiring Colorado retail utilities to generate, or cause to be generated, electricity from renewable sources within their service area is facially discriminatory to electricity generators operating outside of Colorado.

62. The purpose of requiring Colorado retail utilities to generate, or cause to be generated, electricity from renewable sources within their service area in order to attract to Colorado new businesses and jobs associated with renewable energy generation is facially discriminatory to lower cost, more reliable non-renewable energy generation supplying power to the interstate grid from outside of Colorado.

63. The purpose of requiring retail utilities to generate, or cause to be generated, electricity from renewable sources within their service area in order to promote development of rural economies engaged in interstate commerce from within Colorado is facially discriminatory to rural economies engaged in the same interstate commerce from outside of Colorado.

64. The purpose of requiring retail utilities to generate, or cause to be generated, electricity from renewable sources in order to diversify Colorado's energy resources imposes a burden on interstate commerce incommensurate with the local benefits secured as it closes off the marketplace to lower cost and more reliable non-renewable energy resources engaged in interstate commerce available from generators inside and outside Colorado, while simultaneously increasing air pollution.

C. The Electric Resource Standards Program and the Municipally Owned Electric Utility Program Are Facially Discriminatory to, or Otherwise Impermissibly Burden Interstate Commerce.

65. C.R.S. 40-2-124(1)(c)(I),(V) & (V.5) and C.R.S. 40-2-124(3)&(4) require each qualifying retail utility to generate, or cause to be generated, electricity from recycled energy, renewable energy resources and distributed generation in specified minimum amounts. Lower cost, cleaner and more reliable nonrenewable interstate electricity generating sources may not compete for the renewable set-aside portion of the interstate retail electricity market in Colorado due to this mandate. The practical, and intended, effect of these mandates is to reduce the market for hydrocarbon-based electricity generation, and consequently the market for hydrocarbon fuels used in that generation, specifically including the interstate market for coal. The mandate impermissibly burdens interstate commerce.

66. The RES mandates use of “distributed generation” in place of any other form of generation, including coal-fired generation from facilities located outside of Colorado. This in-state preference is a facial violation of the dormant commerce clause, restricting both the direct interstate market for electricity and the interstate market for coal to fuel electric generation.. Specifically, C.R.S. 40-2-124(1)(c)(I)(C) – (I)(E) and C.R.S. 40-2-124(1)(c)(V)(D), require a

percentage of retail electricity sales be derived from “distributed generation”. C.R.S. 40-2-124(1)(a)(III), conflates “distributed renewable electric generation” with “distributed generation” and defines this as consisting of “retail distributed generation” and “wholesale distributed generation.” C.R.S. 40-2-124(1)(a)(VIII) defines “retail distributed generation” as “a renewable energy resource that is located on the site of a customer’s facility and is interconnected on the customer’s side of the utility meter.” (*Emphasis added.*) This generation may be of a size that would produce electricity twenty percent greater than needed by the customer. In that event, the electricity would flow back into the grid for use by other customers. C.R.S. 40-2-124(1)(c)(II)(A) requires that no less than one-half of all mandated “distributed generation” must derive from “retail distributed generation.” Because C.R.S. 40-2-124(1)(c)(I)(C) – (I)(E) and C.R.S. 40-2-124(1)(c)(V)(D) apply only to “retail electricity sales” in Colorado, as measured by utility meters connected to Colorado consumers, the mandate for “retail distributed generation” is unavoidably a preference for in-state generation over any other source of electricity generation, including extraterritorial generation from neighboring states. Nothing in the statute limits this retail distributed generation to be exclusively a replacement for in-state non-distributed generation and thus the mandate for retail distributed generation reduces the size of the interstate market for non-distributed electricity generation.

67. The RES creates a preference for in-state generation of electricity from renewable energy resources in Colorado by counting one kilowatt hour of electricity as two kilowatt hours where that renewable energy generation has a point of interconnection with cooperative electric associations and municipally owned utilities. C.R.S. 40-2-124(1) establishes the scope of the RES statute, applying it only to electric utilities in the State of Colorado. C.R.S. 40-2-

124(1)(c)(IX) states the legislative purpose of stimulating rural economic development, and the original enactment of the statute includes a declaration of legislative intent that focuses the purpose of the law on Colorado's welfare and development, and in particular development of rural economics, impliedly within Colorado. The obvious reading of these elements of the statute are to preferentially promote instate renewable energy generation at the expense of such generation outside Colorado, as well as reducing the market for generation by facilities outside Colorado. Specifically, C.R.S. 40-2-124(1)(c)(IX) mandates inflation of the regulatory compliance value of certain renewable sources if they are located in Colorado and interconnect to electric transmission or distribution facilities owned by a cooperative electric association or municipally owned utility, thereby establishing a market-bias against otherwise qualifying renewable sources located outside of Colorado. For that reason, the mandate is facially discriminatory to interstate commerce.

III. COLORADO RENEWABLE ENERGY STANDARDS IMPOSE BURDENS ON INTERSTATE COMMERCE CLEARLY EXCESSIVE IN RELATION TO THE LOCAL BENEFITS OF THE MANDATES

A. Electricity Generation Must Be Reliable

68. Electricity generation onto an interstate electrical grid must equal the electricity demand from the grid on a second-by-second basis. When the demand exceeds the supply (including back-up spinning reserve), the voltage and frequency drop, increasing loss-of-load-probability (LOLP). Even small changes in frequency or voltage (either positive or negative) can significantly increase the LOLP. Loss of load implies blackouts and or brownout. In some cases, to prevent such contingencies from cascading and becoming wider spread and unmanageable outages the balancing authorities will impose crisis and demand-side management protocols such as disconnecting customers from a localized distribution network.

69. Blackouts and brownouts most disrupt industrial and commercial operations. Brownouts reduce the available voltage, causing instability and/or failure of electronic equipment, for example, and can cause protective devices to “trip”, shutting down industrial and commercial equipment. So-called “high tech” commercial and industrial facilities are especially prone to economic harm from voltage or frequency disruptions of even sub-cycle (less than 1/60 of a second) disruption. Blackouts and brownouts can have severe consequences to homeowners as well. For instance, refrigerator compressors can fail with either.

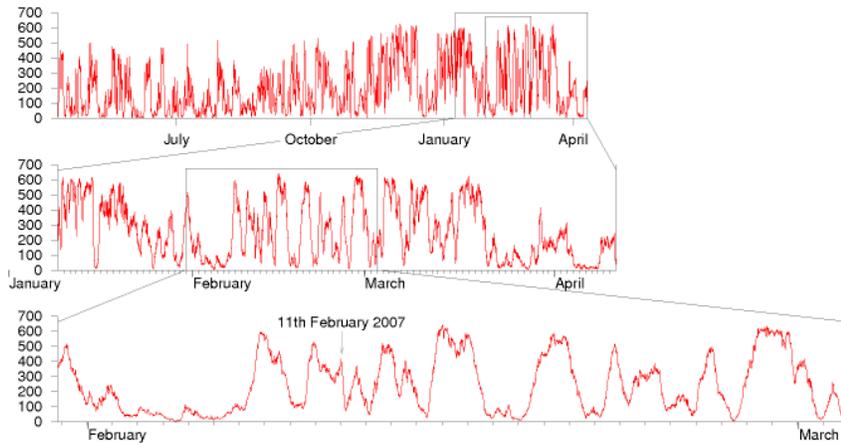
70. The Colorado Energy Forum, *Colorado’s Electricity Future*, 2006, reports that 355,120 commercial and industrial Colorado customers (28% or all such customers) suffered economic losses of \$1.8 Billion due to blackouts in a single year. Untold additional costs arise from brownouts.

71. Outage costs tend to be driven by the number rather than the duration of reliability events. Momentary power interruptions and quality degradations, which are more frequent, have a stronger impact on the total cost of interruptions than sustained interruptions.

B. The Mandated Renewable Energy Is Unreliable

72. Renewable energy in Colorado is generated by hydropower from river flow (28%) and wind facilities (72%). Hydropower from pumped storage (26% of all renewable energy) can only be used for four hours at a time. Thus, the vast majority of Colorado's renewable energy comes from wind facilities that directly supply the grid.

73. Wind facilities can only produce electricity when the wind blows within a very specific range of wind speeds. Winds are unpredictable and often gusty. Winds are more frequently gusty when blowing at speed. Even with widely distributed wind facilities connected together in order to produce the greatest possible reliability, they remain undependable. The graphic below shows how the output from the 60 wind facilities (over 1,000 turbines) built throughout all Ireland dropped to nearly zero in an unpredictable manner and from hours to weeks at a time. Similar data is available from Australia, PJM Interconnection (PJM; originally named after Pennsylvania, New Jersey and Maryland has since expanded yet retained its original acronym based name) and California Independent System Operator (CaISO). In California, peak day output of wind turbines seldom exceeds 5% of wind turbine nameplate capacity.



74. The Colorado balancing independent system operators (ISOs) also known as “balancing authorities” claim that their wind capacity is no more than 12.5 percent of nameplate capacity, but also admits: “[Colorado wind] capacity is only available when wind conditions are sufficiently high enough to support the noted generation values above. Therefore, the on-demand net maximum capacity is zero.”

75. This unreliability in wind energy caused known brownouts in Texas. The lack of transparency in Colorado wind generation recordkeeping precludes determination of the number of similar Colorado brownouts due to wind energy irregularities.

76. Modeling of blackouts and brownouts indicates that the higher percentage of wind power on the grid, the greater the unreliability of the grid and the greater the likelihood of blackouts and brownouts. This risk increases exponentially, not linearly, with increasing levels of wind generation.

77. To ensure electricity generation (supply) equals demand on a second-by-second basis, ISOs increase and reduce generation as needed, often using automated generation control (AGC).

C. Unreliable Sources Must Be Mated With Reliable Sources

78. When demand increases or other supplies become unavailable, the ISO directs a generating facility operator to “ramp up” their generation. When demand drops, the ISO directs a “ramp down” in generation. Prior to the advent of wind generation, these ramp ups and ramp downs reflected daily life and followed a predictable schedule that prevented the need for saw-tooth ramping to balance the second-by-second variation in wind generation connected to the grid. The graphic above shows how reliable generation sources, in this example gas fired, must be ramped up and down to account for the variation in wind energy.

79. When wind speed increases (but remains below the maximum speed allowed by the turbines), generation companies curtail generation from their intermediate load units sufficient to accommodate the wind power. Intermediate load units are usually natural gas powered generators, but, as discussed below, must on occasion be slow-to-respond coal-fired units. When the wind subsequently slows, generation from the intermediate load units is increased or otherwise brought back online as needed. The process by which generation is ramped up and down at a plant due to wind or any other factor is called cycling. Integrating erratic and unpredictable wind resources with established coal and natural gas generation resources requires the electricity generators to cycle their intermediate load coal and natural gas-fired units. This wind-energy-caused cycling results in significantly less efficient performance of fossil fuel facilities. The net result is increased emissions and fuel use.

80. Most utilities operate their wind generation as a “must-take” resource because of the RES mandates. In other words, electricity generation companies will operate their intermediate load units (coal and gas-fired plants) in a manner that allows it to take as much generation from wind as possible without allowing generation from their fossil fuel facilities to fall below their design minimum generation levels.

81. Wind resources tend to be strongest and most predictable at night. During that time period, generation from coal comprises approximately 62% of the generation mix and gas-fired generation falls to 20% within the PSCo system, for example. If there is not enough gas-fired generation to safely cycle gas plants, coal plants must be cycled instead. Later in the night, coal-fired generation is the only resource available to absorb wind power and thus PSCo has cycled its coal facilities.

82. How frequently wind affects coal or natural gas-fired generation is difficult to determine. PSCo, like most wind operators, does not publish hourly wind generation data. Nevertheless, PSCo acknowledges that wind impacts coal as well as gas generation.

83. While Texas has more coal plants and wind farms than Colorado and the wind undoubtedly exhibits somewhat different behavior in Texas, an unimpeached, objective and quantitative analysis concludes that the effect of wind in Colorado and Texas are similar enough for a valid comparison. Even in Texas, which has one of the nation’s largest gas-fired generation bases, coal plants are frequently cycled. Several independent studies have shown the cycling and net-increase-in-emissions from reliance on wind generation in places other than Colorado. It stands to reason that the same happens in Colorado.

D. Renewable Sources Do Not Save Consumers and Businesses Money

84. The price of mandatory wind power is generally higher, and in many cases significantly higher, than current prices for market based alternatives. Wind generation also imposes unique other costs on the grid that are paid for by customers.

85. A quantitative analysis by an authoritative body comparing the cost of coal, natural gas and wind electricity generation in a mature mixture of all three sources with significant reliance on wind energy documents natural gas to be 27% more expensive than coal, coastal wind to be 62% more expensive than coal and inland wind to be 89% more expensive than coal. These general trends are confirmed by the U.S. Department of Energy, Energy Information Administration (EIA). According to the EIA December 2009 projection of future electricity costs, in 2016 wind power will be nearly 80 percent more expensive than natural gas. Thermal solar generation is projected to be 200 percent more expensive than gas. In January 2013, the EIA updated its projections. According to the new projections, in 2018, wind power will be over 30 percent more expensive than gas. Thermal solar is projected to be more than 500 percent costlier than gas. EIA acknowledges that neither comparison accounts for the difference in capacity value and balancing requirements. Differences in capacity value and balancing requirements would increase the cost differentials.

86. States that adopted an RES program subsequently experienced a 0.35% larger annual increase in average retail prices than those that did not adopt renewable energy portfolio standards (RPS). The analysis includes the years from 1990 through 2005, controlling for natural gas prices, coal prices, and the generation mix for each state thereby filtering out these other price effects, allowing discovery of the specific effect strictly due to RES.

87. The additional 0.35% increase will have a cumulative effect over time. A state can expect that, after ten years, rates will be about 3.5% higher with RES than they otherwise would have been without RPS. Further, these increases do not include other costs such as the added cost of extra interstate transmission lines needed by wind facilities.

88. The U.S. Department of Energy, Energy Information Administration tracks electricity prices by state over time. Currently Colorado has the nation's 21st highest electricity rate, degrading from 31st in 1990.

89. One reason retail prices in Colorado and other RES mandate states have grown reflects the need to use more natural gas generation, compared to coal generation, because natural gas generation is better able to respond to the cycling required due to intermittent and erratic wind generation. Since the cost per megawatt-hour (MWh) of natural gas is higher than coal, prices have risen in the RES mandate states.

90. In addition to the shift from coal to natural gas, the effect of cycling itself causes generation inefficiencies that increase wholesale, and thus retail prices. Coal-fired and combined cycle natural gas electricity generating facilities are not designed to rapidly cycle up and down. Analysis of the operational effects of wind-caused cycling of coal plants has shown that it took more fuel to generate a MWh. One or more studies of plant operations over periods as short as two days have found that coal consumption at one Colorado plant was actually 22 tons greater than if the plant had not been cycled and generation had remained stable. The same is true for combined-cycle natural gas-fired electricity generation facilities (CCNG).

91. Because coal-fired facilities were not designed for cycling, cycling coal plants causes damage to the plant itself. The financial cost of this damage is seen in an immediate

increase in plant maintenance and reduction of useful plant life – a cost that can be very high.

This too adds to the wholesale and retail price of electricity.

92. While much of a typical coal-fired plant is designed to be able to cycle, the change in generation has direct impact on the plant water systems, pulverizers, boilers, scrubbers, heat exchangers, and generators. Catastrophic failures as a result of many unit cycles are most commonly in the form of fatigue, corrosion, and cycling-related creep. These failures eventually cause plant shutdowns, and high capital cost often in the tens of millions of dollars due to necessary replacement of the damaged equipment. Typically such failures cause multiple unplanned outages that, in turn, force ISOs to direct other facilities to ramp up in an inefficient manner. To date, most of the wind integration studies (including those of PSCo), have ignored these costs.

E. Renewable mandates do not materially affect water use for electricity generation

93. Because of low generation costs, hydropower is used to the greatest extent possible, as it always has been. Implementation of the Colorado RES has not significantly altered use of hydropower and thus has not minimized water use for this form of electricity generation.

94. Because water allocation in the west is controlled through enforceable agreements and because water quality is already protected under law, a change in use of water by a reduction in coal-fired power plant use does not materially affect either in-stream quantity or quality.

F. Renewable sources do not reduce the impact of volatile fuel prices

95. The volatility of fuel prices is unrelated to the availability of renewable sources and instead reflects the international supply and demand for fuel. Coal prices have increased due

to increased demand in Asia. Natural gas prices have varied due to the expanding sources of natural gas in the United States, as well as the increased demand from an expanding natural gas electricity generation market. Because wind power requires an equal amount of fossil fuel backup, an RES places greater significance on the availability of natural gas and as a result increase the impacts and volatility of fuel prices.

G. Renewable sources cause more pollution and do not improve the natural environment of the state

96. The erratic and highly variable nature of wind power has been found to increase rather than decrease emissions of pollutants regulated under the Clean Air Act. This occurs because the cycling of coal and natural gas plants results in inefficient operation of both the combustion processes and the pollution control processes, as well as from the increases of fuel used to product a MWh of electricity.

97. Examination of the effects of wind variability on the cycling of fossil fuel plants needed to balance grid voltage and frequency demonstrates use of wind causes more pollution emissions than it prevents. Operation of the Cherokee coal plant during a two day period illustrates the emission impacts of cycling coal units. The Cherokee Plant was chosen by the analyst due to its proximity to Denver and because it appears to be frequently cycled.

98. The two most significant pollutants regulated under the federal Clean Air Act and emitted by fossil fuel electricity generation units are sulfur dioxide (SO₂) which causes acid rain and nitrogen oxides (NO_x) which causes smog. Another pollutant now being controlled under the Clean Air Act is the greenhouse gas carbon dioxide (CO₂).

99. By netting out the emissions associated with the coal-fired generation that are avoided by using wind, the result is that due to wind generation, SO₂ and NO_x emissions are

significantly higher (approximately 23% and approximately 27%, respectively) than they would have been if the coal plants had not been cycled to compensate for wind generation. In addition, more tons of CO₂ (approximately 2%) were emitted than if the erratic variability of wind had not caused the plants to be cycled.

100. In a second two-day analysis of the effects of wind variability and subsequent cycling of fossil fuel plants, use of wind power resulted in an increase of approximately 18% in SO₂ pollution emissions and an increase of approximately 10% in NO_x pollution emissions more than would have been emitted had coal not been cycled.

101. In addition to emissions increases in Clean Air Act pollutants and emissions of greenhouse gases due to the variability in wind power generation, renewable energy mandates cause other environmental problems. With competition for limited biomass and open land resources (to grow biomass) with ethanol feedstocks (required to meet existing renewable fuel standards), food crops and forest industry products, higher RES requirements will materially increase the risk of forest land shortages and higher prices for food and feedstocks.

102. Wind energy is a threat to wildlife and endangered species. Wind resource areas often are coincident with critical habitat and/or migratory flyways. Many of these conflicts are for protected, threatened and endangered species. Wind energy development has long had significant issues with avian and bat mortality, even given the relatively few wind turbines installed to date. More wind turbines will pose greater threats. For example, in California's Altamont Pass area, one of the nation's oldest wind power development areas, forty to 120 Golden Eagles are slaughtered each year. Research by raptor experts for the California Energy Commission indicates that the facility's turbines kill more than 1,000 birds of prey from 40

different species each year, violating federal and state wildlife protection laws such as the Bald Eagle and Golden Eagle Protection Act, the Migratory Bird Treaty Act, and several California Fish and Game Code provisions. Further, the additional transmission lines necessary to serve wind development areas pose special threats to birds as well.

103. Colorado is an important part of both the Pacific Flyway and Central Flyway for migratory birds, with thousands of migratory birds transiting to and through the State. Both protected and endangered species are included within this mass migration each year.

104. The threat of significant avian mortality has caused partial shutdowns and required equipment replacement in the Altamont Wind Resource Area in California due to a lawsuit brought by the Center for Biological Diversity.

105. The potential deaths of California Condors from wind turbine development is one of several reasons given by the Administrative Law Judge (ALJ) in denying a permit to Pacific Gas and Electric Co. for a Certificate of Public Convenience and Necessity for a large turbine installation in California. The ALJ found the Manzana Wind Project to not be cost-competitive and to pose unacceptable risks to ratepayers. It will subject the ratepayers to unacceptable risks due to potential cost increases resulting from project under-performance, less than forecasted project life, and any delays which might occur concerning transmission upgrades and commercial online date. Ratepayers would be at risk if the project underperforms. In particular, if the Manzana Wind Project fails to achieve production as expected for any reason such as construction delays or curtailments as a result of a collision with a California condor, shareholders face no risks while customers could incur increased costs. Under different ownership and financing schemes (e.g. power purchase agreement with a third party owned wind

project) ratepayers are only partially, if at all, protected from lack of production. In the event a project fails to produce, ratepayers will be exposed to higher prices for makeup power and/or physical shortages of power.

106. Living too close to wind turbines imposes health and safety risks to the public. The tip speed of modern wind turbines approaches 200 MPH when operating. Ice and blade throw, from the top of a 300 foot tower, while infrequent, poses serious safety risks to the public within about three-quarters to a mile. Further, the noise from wind turbines can cause health effects, as documented by Dr. Nina Pierpont and others. Industrial wind turbines produce significant amounts of audible and low-frequency noise. Dr. Oguz A. Soysal, Professor and Chairman of the Dept. of Physics and Engineering at Frostburg State University in Maryland, measured sound levels over half a mile away from the Meyersdale, PA, 20-turbine wind farm. Typical audible (A-weighted) dB (decibel) levels were in the 50-60 range, and audible plus low-frequency (C-weighted) dB were in the 65-70 range. 65-70 dB is the loudness of a washing machine, vacuum cleaner, or hair dryer. A difference of 10 dB between A and C weighting represents a significant amount of low-frequency sound by World Health Organization standards. The noise produced by wind turbines has a thumping, pulsing character, especially at night, when it is more audible. The noise is louder at night because of the contrast between the still, cool air at ground level and the steady stream of wind at the level of the turbine hubs. This nighttime noise travels a long distance. It has been documented to be disturbing to residents 1.2 miles away from wind turbines in regular rolling terrain, and 1.5 miles away in Appalachian valleys. At night, the World Health Organization (WHO) recommends, the level of continuous noise at the outside a dwelling should be 45 dB or less, and inside, 30 dB or less. These

thresholds should be even lower if there is a significant low-frequency component to the sound, – as there is for wind turbines. Higher levels of noise disturb sleep and produce a host of effects on health, well-being, and productivity. Effects of noise-induced sleep disturbance include fatigue, depressed mood or well-being, decreased performance, and increased use of sedatives or sleeping pills. Measured physiologic effects of noise during sleep are increased blood pressure and heart rate, changes in breathing pattern, and cardiac arrhythmias.

107. The decibel is logarithmic. Increasing the dB level by 10 multiplies the sound pressure level by a factor of 10. Increasing the dB level by 20 multiplies the sound pressure level by 100 (and 30 dB multiplies by 1000, etc.). Thus the 65 dB measured day and night half a mile from the Meyersdale wind farm, for example, has a measured intensity 100 times greater than the loudest continuous outdoor nighttime noise (45 dB) recommended by the World Health Organization (WHO.)

H. Renewable Mandates Do Not Create New Jobs or Grow the Economy

108. Quantitative economic analysis of electricity generation indicates that renewable energy generation causes a net reduction in the economy. In addition to this finding, the use of more land for capturing renewable energy flows has a similar negative effect on long run economic growth.

109. The effect of a mandate for wind energy, which is the practical effect of the Colorado RES, results in the condition that above-market wind energy costs have the deleterious effects of reshuffling consumer spending and increasing the cost of production for businesses. Increased costs for households and employers reduce the otherwise positive employment impacts

of renewable energy capital investment and the ongoing operational repair and maintenance activities.

110. As a result, the claim that wind power creates significant numbers of new jobs is substantially false. The net gain in employment is far less than conventionally thought with long term winners and losers by economic sector. Moreover, there exist the potentially detrimental impacts of diverting capital investment away from more productive opportunities.

111. Many of wind turbine installations continue to use wind turbines imported from foreign sources, further reducing job creation for Coloradans and Americans.

112. Wind energy has other adverse impacts on the economy. There is no penalty for wind developers to submit a bid for a certain amount of future power (e.g. 10 MWH for tomorrow afternoon) and then not supply it (due to winds not being as forecasted). Conventional power sources are penalized if they can't supply what they bid. This is *defacto* favoritism of a generation source, to the disadvantage of the other sources, including interstate sources; and is reflected in the larger bills consumers must pay when a last minute substitution for wind energy has to be made. The lack of a penalty for wind energy's inability to supply what it committed to, it results in higher prices to all customers than if wind were available or if wind were not on the grid and the ISO did not need to add otherwise unnecessary intermittent generation.

I. The objectives of the renewable energy standards could be promoted as well with a lesser impact on interstate activities

113. The statement of purpose for the Colorado RES establishes six objectives for the RES that could be promoted as well with a lesser impact on interstate activities: (i) to fully use Colorado's renewable energy resources that are currently underutilized; (ii) to save consumers and businesses money; (iii) to attract new businesses and jobs; (iv) to promote development of

rural economies; (v) to minimize water use for electricity generation; (vi) to reduce the impact of volatile fuel prices; and (vii) to improve the natural environment of the state.

114. In each case, asserted hereinabove, the use of coal and natural gas fuels to generate electricity would better serve to accomplish the six objectives of the Colorado RES and would reduce prices in the interstate wholesale electricity market, while also significantly increasing the reliability and operational stability of the interstate grid.

HARM TO THE PLAINTIFFS AND TO THE PUBLIC

115. The members of the American Tradition Institute, including Rod Lueck and Alpha Natural Resources, are being harmed and will continue to be harmed by the RES through higher rates, less service reliability, lower environmental quality and lost potential market.

116. The public is also being harmed and will continue to be harmed by the RES through higher rates, less service reliability and lower environmental quality.

THE RES INCREASES COSTS AND INHIBITS INTERSTATE MARKETS

117. The cost of retail electricity purchased from of the Public Service Company (PSCo, but better known as Xcel Energy), Colorado's largest utility, demonstrates the true costs of the RES.

118. The statute provides for an incremental increase in the retail rate of 2 percent above the cost of non-renewable electricity and PSCo has charged at this level. The incremental costs are listed on consumers' bills as the Renewable Energy Standard Adjustment (RESA). Since January 2009, the RESA charge has been set at 2 percent, the rate impact limit. For a consumer with a \$150 PSCO bill, a 2% RESA charge would be \$3 monthly, \$36 annually.

119. PSCo defines the RESA on the monthly statements as representing “2% of an electric bill and funds the renewable energy program as required by Colorado law that asks utilities to generate increasing portions of their electricity from sun, wind and biomass.” PSCo employs two accounting mechanisms in order to circumvent the 2 percent retail rate impact limit. These budgeting techniques artificially increase conventional energy costs or artificially decrease renewable energy costs. Either way, it suppresses the incremental cost, which allows PSCo to charge rates higher than the retail rate impact limit in the law.

120. The first artificial adjustment is a \$20 per ton “carbon adder,” which was introduced in PSCo’s 2010 RES Compliance Plan application. This fee is meant to incorporate the cost of greenhouse gas regulations into the model used to calculate the incremental cost. Yet no such regulations exist. As a result, the only function of the carbon adder is to suppress the incremental costs by artificially increasing the price of conventional energy.

121. PSCo concedes that it would violate the 2 percent retail rate impact limit without the carbon adder. According to its Statement of Position on its proposed 2010 RES compliance plan, “Retroactively changing the modeling assumptions to assume no carbon regulation prior to 2014 would significantly increase the incremental costs of the resources” Because the RESA, which collects the incremental costs, is already set at the 2 percent maximum retail rate impact limit, “significantly” increasing incremental costs would necessarily violate the retail rate impact.

122. By 2012, this accounting would shield almost \$50 million from the RESA retail rate impact. That is almost double the projected RESA fee for that year.

123. The other mechanism to circumvent the retail rate impact is a \$4 per kilowatt-hour monthly “surplus capacity credit” for renewable energy, starting in 2012. This credit gives renewable energy value where none exists.

124. Renewable energy is intermittent. For example, because the wind does not blow consistently, PSCO’s own forecasting methods rely on only 12.5 percent of wind power’s nameplate capacity. Therefore, when the utility contracts for 150 megawatts of wind, it expects only 18.75 megawatts of electricity generation.

125. The \$4 per kilowatt-hour monthly “surplus capacity credit” gives intermittent resources value for their nameplate capacity, when no such value exists. The credit is subtracted from the cost of the renewable resource. According to the PUC Trial Staff, “This decreases the cost of the RES plan,” which also decreases the incremental costs subject to the retail rate limit. Xcel concedes that incremental costs would exceed the 2 percent retail rate impact without this capacity credit.

126. Even with these accounting manipulations, PSCo has been unable to stay under the RESA cap. In 2009, it exceeded the cap by almost \$20 million, and the year before by almost \$10 million. In 2010, Xcel added another \$11 million to the RESA deficit. This year, Xcel acknowledges that it will overshoot the 2 percent rate cap by at least \$47 million, which will bring the deficit to almost \$93 million. This burgeoning deficit is placed into a deferred account, on which PSCo earns 4.225 percent annual interest. That rate increased to 7.88 percent in August, 2011.

127. The Public Utilities Commission also has permitted PSCo to exclude significant renewable energy costs from retail rate impact calculations. In a 2007 decision, the Public

Utilities Commission granted PSCo a waiver allowing the utility to treat as “sunk” the costs of 775 megawatts of new wind energy resources. “Sunk” costs are not considered when determining the incremental costs (and therefore the retail rate impact). However, the electricity generated by the 775 megawatts counted towards RES compliance.

128. These “off the books” wind energy costs amounted to \$144 million in 2008, \$147 million in 2009, and \$155 million in 2010, but do not show up as RES costs on the ratepayer’s bills, but instead are hidden in another account and still paid by the retail customers.

129. These “non-incremental costs,” which are the total renewable energy costs minus the incremental costs, are recovered through a different monthly fee, the Electric Commodity Adjustment (ECA).

130. According to PSCO’s 2010 RES Compliance Plan, the ECA is projected to be \$6.3 million this year, before it balloons to \$141 million in 2012. It then increases exponentially to \$738 million in 2020, or almost 23 percent of total retail electricity sales—none of which would count against the 2 percent retail rate impact.

131. Assuming 1.5 million ratepayers in Colorado (current figure is 1.3 million) in 2020, and the mandated 20 percent renewable standard, the ECA cost alone will average nearly \$500 per year per ratepayer.

132. All tolled, over the next decade, Colorado working families and businesses will have to pay nearly \$3.8 billion in additional electricity costs that will not be subject to any rate cap in order to meet the RES and will be collected from ratepayers via the ECA. They will also assume the costs, roughly \$2 billion, of a new solar power plant with storage project. Like the

ECA charges, these costs will not be subject to any rate cap, while the energy produced will count towards meeting the RES.

133. There is no evidence that, absent the Colorado RES mandates, PSCo would have built and operated these highly inefficient, high cost renewable generation facilities. There is, however, some evidence that the Public Utility Commission and/or the Federal Energy Regulatory Commission would have rejected requests to build these wind facilities had there been no RES, based alone on the high costs to the retail consumers.

134. Plaintiff Rod Lueck and other members of ATI live in Colorado and purchase electricity obtained through the interstate grid, including from PSCo. Both Colorado and out-of-state companies generating electricity from non-renewable sources are prohibited from participating in that portion of the interstate electricity market set aside by Colorado exclusively for distributed generation sources and under C.R.S. 40-2-124(1)(c)(IX). Were it not for discrimination against both Colorado and out-of-state producers of electricity generated from non-renewable sources, the Plaintiffs would have received and could receive significantly lower cost, cleaner and more reliable electricity, and not suffer the increase in cost, reduction in environmental quality and interruption of service associated with mandated renewable resource development.

135. In like measure, the Programs harm, and will continue to harm, the public living and investing in both Colorado and other states. The Programs distort the path of commerce, inflate the price of electricity and divert monies the public pays for electricity to inefficient renewable energy generators, both within and outside of Colorado. The Programs also increase air pollution and otherwise harm environmental quality in both Colorado and other states. And

the Programs redirect investment from lower cost electricity generation to higher cost generation, thus artificially mandating a reduction in interstate market for both electricity and the hydrocarbon fuels used to generate electricity.

SUMMARY

136. When Colorado imposes rules whose practical effect is more expensive, dirtier and less reliable electricity generation, consumers and businesses in Colorado and throughout the Rocky Mountain and Southwestern states suffer the consequences. These mandates do not accomplish the stated purposes of the Colorado statute, but they do impose impermissible burdens on interstate commerce that result in harm to the Plaintiffs and the public at large.

CLAIMS FOR RELIEF

First Claim for Relief

Colorado Electric Resource [Renewable Energy] Standards Program – Declaratory Judgment

137. The Plaintiffs incorporate by reference paragraphs 1 – 136 above.

138. C.R.S. 40-2-124(1)(c)(I),(V) & (V.5) and C.R.S. 40-2-124(3)&(4) require each qualifying retail utility to generate, or cause to be generated, electricity from recycled energy, renewable energy resources and distributed generation in specified minimum amounts. Lower cost, cleaner and more reliable nonrenewable interstate electricity generating sources may not compete for the renewable set-aside portion of the interstate retail electricity market in Colorado due to this mandate. The practical, and intended, effect of these mandates is to reduce the interstate market for hydrocarbon-based electricity generation, and consequently the market for hydrocarbon fuels used in that generation, specifically including the interstate market for coal. The mandate “trips over an insurmountable constitutional objection,” impermissibly burdens

interstate commerce and thereby is a facial violation of the dormant Commerce Clause *See, Illinois Commerce Commission, et al., v. Federal Energy Regulatory Commission*, No. 11-3421 at p. 15 (7th Cir. June 7, 2013).

139. The Court should enter a judgment declaring that C.R.S. 40-2-124(1)(c)(I),(V) & (V.5) and C.R.S. 40-2-124(3)&(4), and their implementing regulations codified at 4 C.C.R 723-3 et seq., are unconstitutional, invalid and unenforceable under the dormant Commerce Clause because they facially intend to and do reduce the interstate market for hydrocarbon-based electricity generation, and consequently the market for hydrocarbon fuels used in that generation, specifically including the interstate market for coal.

Second Claim for Relief
**Colorado Electric Resource [Renewable Energy] Standards Program –
Injunctive Relief**

140. The Plaintiffs incorporate by reference paragraphs 1 – 139 above.

141. The Court should enter a preliminary injunction and a permanent injunction ordering the Defendants to not enforce the provisions of C.R.S. 40-2-124(1)(c)(I),(V) & (V.5) and C.R.S. 40-2-124(3)&(4), and their implementing regulations codified at 4 C.C.R 723-3 et seq. because they are unconstitutional, invalid and unenforceable under the dormant Commerce Clause.

Third Claim For Relief
**The Distributed Generation Mandate –
Declaratory Judgment**

142. The Plaintiffs incorporate by reference paragraphs 1 – 141 above.

143. C.R.S. 40-2-124(1)(c)(I)(C) – (I)(E) and C.R.S. 40-2-124(1)(c)(V)(D), require a percentage of retail electricity sales be derived from “distributed generation”. C.R.S. 40-2-

124(1)(a)(III), conflates “distributed renewable electric generation” with “distributed generation” and defines this as consisting of “retail distributed generation” and “wholesale distributed generation.” C.R.S. 40-2-124(1)(a)(VIII) defines “retail distributed generation” as “a renewable energy resource that is located on the site of a customer’s facility and is interconnected on the customer’s side of the utility meter.” (*Emphasis added.*) C.R.S. 40-2-124(1)(c)(II)(A) requires that no less than one-half of all mandated “distributed generation” must derive from “retail distributed generation.” Because C.R.S. 40-2-124(1)(c)(I)(C) – (I)(E) and C.R.S. 40-2-124(1)(c)(V)(D) apply only to “retail electricity sales” in Colorado, as measured by utility meters connected to Colorado consumers, the mandate for “retail distributed generation” is unavoidably a preference for instate generation over any other source of electricity generation, including extraterritorial generation from neighboring states. Nothing in the statute limits this retail distributed generation to be exclusively a replacement for instate non-distributed generation and thus the mandate for retail distributed generation reduces the size of the interstate market for non-distributed electricity generation.

144. The Court should enter a judgment declaring the distributed generation mandate incorporated within C.R.S. 40-2-124(1)(c)(I)(C) – (I)(E), C.R.S. 40-2-124(1)(c)(V)(D) and C.R.S. 40-2-124(1)(c)(II)(A) and their implementing regulations are unconstitutional, invalid and unenforceable under the dormant Commerce Clause because they establish an instate preference for Colorado-based distributed generation, thereby reducing the interstate market for hydrocarbon-based electricity generation, and consequently the market for hydrocarbon fuels used in that generation, specifically including the interstate market for coal. As in the First Claim for Relief, the mandate “trips over an insurmountable constitutional objection,”

impermissibly burdens interstate commerce and thereby is a facial violation of the dormant Commerce Clause *See, Illinois Commerce Commission, et al., v. Federal Energy Regulatory Commission*, No. 11-3421 at p. 15 (7th Cir. June 7, 2013).

Fourth Claim for Relief
**The Distributed Generation Mandate –
Injunctive Relief**

145. The Plaintiffs incorporate by reference paragraphs 1 – 144 above.

146. The Court should enter a preliminary injunction and a permanent injunction ordering the Defendants to not enforce the distributed generation mandate incorporated within C.R.S. 40-2-124(1)(c)(I)(C) – (I)(E), C.R.S. 40-2-124(1)(c)(V)(D) and C.R.S. 40-2-124(1)(c)(II)(A) and their implementing regulations because they are unconstitutional, invalid and unenforceable under the dormant Commerce Clause.

Fifth Claim for Relief
**Renewable Energy Generation Instate Preference –
Declaratory Judgment**

147. The Plaintiffs incorporate by reference paragraphs 1 – 146 above.

148. C.R.S. 40-2-124(1)(c)(IX) mandates inflation of the regulatory compliance value of certain renewable sources if they are located in Colorado and interconnect to electric transmission or distribution facilities owned by a cooperative electric association or municipally owned utility, and thus establishes an instate preference for Colorado-based renewable energy generation, thereby reducing the interstate market for hydrocarbon-based electricity generation, and consequently the market for hydrocarbon fuels used in that generation, specifically including the interstate market for coal.

149. The Court should enter a judgment declaring the instate renewable energy generation preference incorporated within C.R.S. 40-2-124(1)(c)(IX) and its implementing regulations are unconstitutional, invalid and unenforceable under the dormant Commerce Clause because it establishes an instate preference for Colorado-based renewable energy generation, thereby reducing the interstate market for hydrocarbon-based electricity generation, and consequently the market for hydrocarbon fuels used in that generation, specifically including the interstate market for coal. As in the preceding claims for relief, this mandate “trips over an insurmountable constitutional objection,” impermissibly burdens interstate commerce and thereby is a facial violation of the dormant Commerce Clause *See, Illinois Commerce Commission, et al., v. Federal Energy Regulatory Commission*, No. 11-3421 at p. 15 (7th Cir. June 7, 2013).

Sixth Claim for Relief
**Renewable Energy Generation Instate Preference –
Injunctive Relief**

150. The Plaintiffs incorporate by reference paragraphs 1 – 149 above.

151. The Court should enter a preliminary injunction and a permanent injunction ordering the Defendants to not enforce the renewable energy generation mandate incorporated within C.R.S. 40-2-124(1)(c)(IX) and its implementing regulations because they are unconstitutional, invalid and unenforceable under the dormant Commerce Clause.

Seventh Claim for Relief
Costs and Fees

152. The Plaintiffs incorporate by reference paragraphs 1 – 151 above.

153. In accordance with 42 U.S.C. § 1988, Plaintiffs are entitled to an award for their attorney fees and costs in such amount as shall be approved by the Court.

WHEREFORE, Plaintiffs request the declaratory and injunctive relief herein sought, together with an award of costs and fees as shall be as shall be approved by the Court and such other and further relief as the Court shall deem proper.

Respectfully submitted this 24th day of June, 2013.

/s/ David W. Schnare
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