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Testimony before the House Select Committee on

Energy Independence and Global Warming

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Chairman Markey and esteemed members, it is my pleasure to appear before you today as you continue your important work in crafting a 21st Century approach to energy in the United States.

While I am here to represent the great state of Colorado, your work is critical to future generations in every state in the union, and indeed to the world at large.

Thank you to Congressman Udall for his kind introduction. In fact, we can look to Congressman Udall's tenure in our State Legislature for the seeds of what I have termed the "New Energy Economy" in Colorado.

While climate change presents our leadership with a tremendous challenge, that challenge is matched by the opportunity of our nation to respond to an evolving energy landscape.

In Colorado, we are embracing that opportunity through incentives and goals that are designed to promote the widespread deployment of renewable energy resources combined with the most cost-effective resource: energy efficiency.

It has been our experience that this opportunity creates new jobs, spurs economic development and increases the tax base all while saving consumers and businesses money and protecting our environment. In 2004, following three years of failed legislative efforts, the people of Colorado placed the nation's first citizen-initiated renewable portfolio standard (RPS), Amendment 37, on the ballot. While the effort was opposed by virtually all Colorado utilities, including the state's largest utility – Xcel Energy – the effort passed by a wide margin. The Colorado RPS established a goal of 10 percent renewable resources by 2015 for Xcel Energy (along with the other Colorado Public Utilities Commission regulated utility, Aquila).

In 2004, 10 percent was an ambitious goal; a little over 1 percent of Xcel's electricity was generated from renewable sources at that time. Today, it is the country's leading provider of wind energy. Xcel will meet the 10 percent by 2015 goal at the end of 2007 – nearly eight years ahead of schedule.

Xcel has done what all successful businesses do – it adapted. While Xcel originally viewed the RPS as a burden, it soon recognized it as an opportunity, and the utility is now a great example of the successes that will come from our New Energy Economy.

In the 2007 legislative session, Xcel joined with my administration to double the RPS established in Amendment 37. Colorado's new standard, signed in March of this year, sets a goal of 20 percent renewable energy by 2020. Furthermore, the new RPS also brings in municipal utilities and our state's rural cooperative utilities to meet a 10 percent goal by 2020. I am proud to say that these coops and municipal utilities supported the legislation passed this year. It is truly a new era for energy in Colorado.

It is imperative to recognize this would not have happened without the leadership of the citizens of Colorado. I believe Colorado's support for the New Energy Economy is driven by a number of factors.

It is partially our historical connection with the land and the environment. In the West, farmers and ranchers understand sustainability and responsibility for the resources they will pass to the next generation.

It is partially a protection of our economic interests. Our agricultural industry and our tourism industry are inextricably linked to climate and weather patterns.

But, it is also our Western spirit of independence and innovation. We believe reliance upon unstable regions of the world for our energy undermines our economic freedom. We believe in our ability to innovate and develop solutions to complex problems. And we have demonstrated our capability to meet those expectations throughout our pioneering history.

In Colorado, we've established policies to increase production of renewable energy resources by both creating incentives and reducing barriers. We exempted our renewable power producers from a sales tax on their capital equipment. This helps the economics of these very capital-intensive industries and maintains cost control on the price of power for the consumer.

Certainly, the most beneficial incentives have come from the federal government – the Production Tax Credit and Investment Tax Credit are key components to attracting large scale investment in renewable technologies. Extending the PTC helps to bring stability to the investment market. But we can also benefit from additional incentives to access low-cost capital, such as tax exempt financing for landowners, and to develop the transmission infrastructure that is necessary to increase the deployment of renewable power across the west.

Furthermore, a renewable energy industry requires an educated workforce. Colorado has been at the center of renewable energy research since the Carter Administration, when the National Renewable Energy Laboratory (NREL) was established in Golden, Colo. NREL has led the world in its groundbreaking research on solar, wind, biofuels and fuel cells.

Recently, NREL joined in partnership with Colorado State University, the University of Colorado and the Colorado School of Mines to form the "Collaboratory," increasing the effectiveness of their individual research efforts while attracting private investment combined with important federal resources.

In 2007, Colorado will have 1,100 megawatts (MW) of wind power on-line. Last week, I cut the ribbon on a new 75MW wind far in rural southeast Colorado. Later this fall, I will be cutting the ribbon on another 300MW plant in Weld County.

Wind power offers affordable, clean energy opportunities that address two significant agricultural concerns in the West: water and weather. Large scale wind energy production in Colorado occurs in regions of our state that rely on the vagaries of the agricultural economy. These communities operate on the economic margins.

When a wind development company comes into the area and develops 400 MW of wind power, as occurred this year in Logan County, that county benefits from the direct jobs, the indirect economic impact on local businesses and service providers, as well as the more than $2.5 million of annual property tax revenue to the county. Additionally, the revenue to the agricultural operator providing the land can temper the ups and downs of an industry that is profoundly vulnerable to changes in weather conditions.

Mark Twain said, "Everyone complains about the weather, but no one does anything about it." We're not satisfied with that approach. Our agricultural communities need a backstop to ease the impact of drought on our wheat crops and snow on our cattle ranchers. Renewable energy can provide that backstop.

Furthermore, as we are now seeing around the world, if this Congress presents strong policies on global warming for the country, such as the national RPS, you could actually change the weather.

In the Southwest, where anticipated climactic impacts include drought, heat and decreased snowpack, we'd appreciate that.

Renewable energy development of the future is not limited to wind. In Colorado, we are fortunate to have a broad mix of renewable resources, including wind on our Eastern Plains, solar in the San Luis Valley and southwest part of the state, and geothermal all along our Western Slope.

In the San Luis Valley, we had a groundbreaking this year for one of the nation's largest solar photovoltaic plants. In Colorado, our RPS has a unique component – a "solar carve-out" that requires 4 percent of renewable resources to come from distributed and industrial-scale solar facilities.

This requirement has spurred a growth in the solar industry, from solar installers to the manufacturing of solar panels to technological advances that will transform the face of solar energy in the future. It also provides rebates that have driven more than 5 MW of solar to be installed on homes and businesses throughout Colorado in just under three years.

Under our recently passed legislation, more than 80 MW of solar power will be installed by 2020. Increased rebates for distributed solar at the federal level will further enhance citizen investment in this renewable technology. Solar is not only clean power, but it provides energy at times when we experience peak load demand without requiring additional investment in transmission infrastructure.

In solar energy, as with much of the New Energy Economy, so much of our future prosperity is being developed in the laboratory. In Colorado, AVA Solar just announced it will develop a large scale production facility for its cutting-edge, thin-film solar technology. AVA is scheduled to have available in 2009 solar panels that produce electricity at $1/watt – one quarter the cost of currently available technology.

Primestar Solar, another Colorado-based company, is developing thin-film technology and just received $76 million from the U.S. Department of Energy to advance its efforts. Ascent Solar, also from Colorado, has developed a laser-based, thin-film production method. This will allow the company to greatly expand the potential of a variety of next generation applications, from integration in building materials, to vehicles, to personal applications.

Another exciting development on the horizon is concentrated solar power (CSP). The capacity to develop industrial scale solar energy that can be stored and dispatched to the grid is an opportunity for this nation to embrace. In Colorado, our San Luis Valley offers some of the highest solar potential for the deployment of concentrated solar production. In addition to the energy development, the economic opportunity associated with these facilities is of great interest to Colorado.

Any discussion of electrical production needs to include more efficient use of our resources. Buildings in the United States account for 76 percent of electrical energy usage. Simply increasing the efficiency of these buildings lowers our overall energy burden and saves the consumer money.

In Colorado, we have employed a strategy called “performance contracting” on our state buildings. Performance contracting uses the financial benefits of a lower energy demand to finance upfront capital investments in efficiency. Just recently, we installed a 10kw solar PV system on the Governor’s Residence. The entire system was financed using the savings we gained by making our state Capitol more efficient. As a bonus, we received a $38,000 check from the utility as a rebate on our investment in solar technology.

When addressing our reliance on foreign oil, we are looking primarily to transportation fuel and heating alternatives. This year, my administration will quadruple the number of bio-fuel stations in Colorado. That is just the beginning. We are working with communities, producers and private industry to increase the feedstocks and use of bio-fuels.

We need the federal government to invest in a focused effort to expand our alternatives. We need additional research investment and production incentives for solar thermal and geothermal systems to offset reliance on fossil based heating sources. Biomass development of fuels from waste streams in the agricultural and municipal sectors and feedstocks for the widespread development of bio-diesel and alternatives to traditional corn based ethanol are also areas in which the federal government can reduce our reliance on foreign oil.

Colorado is the home of Range Fuels, which is developing the nation's first cellulosic ethanol plant in Georgia. We need more opportunities for these kinds of cutting edge technological developments to free us from the chains of foreign oil. The federal government can play a pivotal role as we embrace these opportunities.

The transportation fuels of the future may be provided partially from our electrical grid. My administration owns a plug-in hybrid that averages nearly 100 mpg. We have a company in Boulder, Colorado, which retrofits hybrid cars to make them plug-in hybrids, doubling their efficiency. But that's not market transformation. The technology is here today, it's just not accessible to most people under the current market conditions. The citizens are looking to the federal government to advance these important opportunities.

Our traditional sources of electrical generation in Colorado – primarily coal – are major contributors to climate change. But we can't simply abandon that economic sector. We need to develop technologies like IGCC and carbon capture and sequestration so we can produce power from our existing natural resources without the accompanying carbon emissions. The federal government plays a key role in helping us achieve that goal through research and implementation assistance.

I applaud the members of this select committee as well as members such as Congressman Udall for the recently passed energy bill that recognizes these imperatives of the New Energy Economy. The National RPS that was included in the energy bill in the House represents a unified front for the nation and a statement that we are all a part of this solution.

The committee has asked how a national Renewable Electricity Standard will impact technologies in Colorado. Developments in wind technology have led the industry to be cost competitive with fossil fuel generation, but we need similar developments in both solar electric as well as concentrated solar technology. With the appropriate leadership from the federal government, these resources have the opportunity to join wind as a primary source of renewable power.

We have a largely untapped baseload energy resource below the surface of our region: Idaho Springs, Steamboat Springs, Glenwood Springs, Pagosa Springs … these Colorado towns got their name for a reason. Geothermal energy can provide constant and reliable energy for the nation – but the technology has to become cost competitive for widespread deployment. Again, this is an important role for the federal government to take.

A national electricity standard will provide the impetus for broad scale transmission development. We have evidence that the larger the renewable network, the more reliable the power. If you look at the wind production data, the wind power in the southeast Wyoming complements wind production in southeast Colorado – producing power at different times of the day. To create a large network of renewable resources, we need a large network of integrated transmission capable of managing these resources. We need a "Smart Grid."

In Colorado, we created the Clean Energy Development Authority to help finance renewable transmission projects. We're joining with the Wyoming Infrastructure Authority and the New Mexico Renewable Energy Transmission Authority to examine ways to further the building of regional transmission systems for renewable energy.

The federal government can provide access to tax exempt bonds and other incentives for the widespread build-out of renewable transmission to assist states in contributing to a national renewable electricity goal.

Colorado recently joined a consortium of other Western states and a few Canadian provinces to examine a cap and trade system, to let market forces guide the deployment of carbon reducing technologies. We are currently participating as official observers in this process. Frankly, this is a role for the federal government. Rather than a patchwork of disjointed trading schemes, the country should have one unified trading market that can participate on the world stage. In so many areas, we have seen the United States isolate itself from international cooperative efforts – a cap and trade system for the carbon market would allow our country's innovative efforts compete in international markets while reducing global levels of greenhouse gases.

As we saw with the RPS in Colorado – we encouraged the market through the RPS, and the market has responded. Investment, research and development are following the establishment of the RPS. A federal RPS provides more markets for renewable energy, prosperity for Americans in the heartland and a more responsible energy future for our nation.

Recently, the world's leading supplier of wind turbines – Vestas – chose Colorado for its first North American manufacturing facility. When I met with the principals of Vestas in February, they were looking at many advantages of locating in Colorado, but of great interest was the legislation to double the RPS and my administration's commitment to renewable energy. Their confidence in that commitment brought nearly 500 manufacturing jobs to Windsor, Colorado and, we believe, the bell-cow of a renewable energy manufacturing industry.

The federal government stands at a similar point on the world's stage. The opportunities of the New Energy Economy are open not only to Coloradans, but to the Western spirit that lives inside all Americans.

In Colorado and throughout the West, we don't blindly accept conventional wisdom; we challenge assumptions and we work hard. While our citizens are uniquely cut from the Western cloth, I believe they also represent what is best about America.

Your leadership is appreciated at this critical juncture in our nation's history.