

Clean Renewables and Efficiency, not Coal, are the Key

by Ken Wicker and Karl R. Rábago

Recently in this space, Colorado State Representative Carl Miller (D-Leadville) proposed the greater use of coal to generate electricity. With abundant, affordable and truly clean resources of renewable energy (especially from the sun, wind, and energy crops) and energy efficiency, increased use of coal is not the answer.

Mr. Miller can take some comfort that abandoning coal, which now produces over 80% of Colorado's electricity, is not a short-term option. Putting all our eggs in one sooty basket with even more coal plants is not smart, not good for our health, and definitely not a meaningful solution to the rapidly growing demand for energy services in Colorado's booming economy. Rather than building extremely expensive power plants based on design thinking from more than 100 years ago, we should be diversifying our mix, expanding our use of clean right-sized energy resources, and exploring the energy options of the future.

In these days of rising gas prices, it is tempting to reach into the past for solutions, but coal plants come with a hefty price tag. Even the cleanest coal technology pollutes a lot. Coal plants take many years to site, build and put into operation—meaning they are a planning nightmare and wholly ineffective in responding to today's price spikes. On the other hand, we can institute efficiency measures immediately for all customers, including low-income families and elderly people. With better insulation and more energy saving appliances, we would be able to spend our paychecks on something other than high electricity bills. Gas price spikes don't affect renewables that get their fuel from the sun; efficiency saves you even more when gas prices go up.

By starting with aggressive energy efficiency programs and measures, we open up even greater opportunities. Studies show that up to 70% of today's electricity use can be saved with energy efficiency devices, appliances and programs—at a cost less than what we pay for electricity today. With those savings, we will find that much smaller (and easier to afford) electricity generating options become wildly attractive. New microturbine technologies and fuel cells use clean-burning natural gas; landfills generate free natural gas from the decomposition of trash; the sun shines intensely on much of Colorado; and wind farms and bio-fuels offer new crop opportunities for Colorado's economically distressed ranching and agricultural regions. Tomorrow's energy technologies will make further use of these technologies by running on hydrogen—the cleanest of fuels—which when used in fuel cells produce nothing but electricity, heat and water. Through our use of clean energy we can all take a personal role in keeping the air clean, instead of sending our problems up the smokestack for someone else to breath.

Many of these exciting new technologies are available today at prices that out-compete the expensive option of remote coal plants, high tension power lines and blight on our beautiful Colorado scenery. In fact, Rocky Mountain Institute has identified over 50 distinct advantages of right-sized distributed energy resources (efficiency, energy management and distributed generation) over the old, inefficient central station power plant ideology. Cumulatively, these benefits exceed costs by a factor of ten or more.

Big central station plants also increase risk to our economy. By tying up more precious investment capital in a few giant plants, they expose us to the kinds of problems faced in California and New England, where the giant nuclear plant investments are holding back the opportunity for increasing competition and free market innovation. Renewable and distributed energy resources and technologies have in recent years undergone a revolution in technological innovation, cost improvements, and understanding and analysis of appropriate applications. From a reliability viewpoint, our high-tech economy will be much better served by distributed energy resources of many kinds. After all, our high-speed Internet economy could never have developed with just a few giant mainframe computers.

One great renewable resource—wind energy—is already making excellent progress in Colorado, satisfying customers, generating electricity and saving a piece of Colorado's beautiful environment for future generations. Vast areas of Colorado have winds strong enough to profitably generate electricity. Most modern wind turbines can produce electricity for prices that meet or beat coal and in quantities sufficient to serve hundreds of Colorado families from a single modern machine. Holy Cross Energy has the highest percentage of customers buying wind power in the country. Public Service Company's WindSource program distributes wind energy reliably to over fourteen thousand customers in the Front Range. Moreover, the wind energy market is driven by customer demand in a true, free-market approach to serving customers. As Colorado's utilities are already learning, wind energy is a product they can be sure will sell far into the future—providing earnings security they simply can't get with lumpy investments in giant coal plants.

We all have a role to play in shaping Colorado's energy future. Just as we would build a retirement portfolio, we should build an energy portfolio for a safe, secure and prosperous future. A sound energy future will continue to make use of historical investments in coal plants, while increasing our reliance on cleaner natural gas, and clean renewables and efficiency. Colorado is worth it.

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Ken Wicker and Karl Rábago work in the Natural Capitalism Practice
at the Rocky Mountain Institute and specialize in electricity issues.

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1739 Snowmass Creek Road
Snowmass, Colorado 81654-9199
970/927-3851
Fax: 970/927-3420