

Power Crunch

Energy supply and demand is a precarious balance

by Howard Geller

ENERGY SUPPLY AND DEMAND ARE NOW VERY closely balanced across the United States, meaning any disruption in supply or spike in demand sends prices through the roof. Natural gas prices hit \$15 per million Btu after hurricane Katrina and then again during a cold spell early in the winter. Gas prices have come back down in recent months due to above-average temperatures and thus somewhat reduced gas demand. According to Paul Koonce, Chairman of the Natural Gas Council and CEO of Dominion Energy, Inc., “We dodged a supply bullet this winter with warmer than normal temperatures, but...no one should be lulled into complacency.”

It's common knowledge that the U.S. imports a majority of its petroleum supplies, which reached 60 percent in 2005, at a cost of \$250 billion. But oil isn't the only problem—we now depend on foreign nations for over 15 percent of our natural gas and this fraction is steadily rising. Americans use about 62 billion cubic feet of natural gas every day, and experts agree that conservation is critical for both relieving market pressure and reducing our dependence on foreign sources of energy.

Where do we stand in Colorado with respect to energy use? First, we consume more petroleum (gasoline, diesel fuel, etc.) than any other form of energy in Colorado. But we also use large quantities of coal and natural gas. Fossil fuels (petroleum, coal, and natural gas) represented 98 percent of our state's energy consumption as recently as 2001; renewable energy sources such as hydropower, wind power, and bioenergy contributed just 2 percent of the total.

Based on total energy consumption, Colorado consumes 287 million Btu per capita compared to the U.S. average of 338 million Btu per capita. Colorado ranks below many other states due mainly to our moderate climate and limited heavy industry. But we use considerably more energy per capita

than other states that have emphasized energy efficiency and conservation, such as California.

Even if we consume less energy than many other states, we still use a lot of it. The typical household in Colorado consumes 8,000 kWh of electricity and 85,000 cubic feet of natural gas per year for heating, cooling, refrigeration, lighting, and other end-uses. The price of natural gas has risen dramatically in recent years and the price of electricity has risen as well. Households are now receiving higher utility bills than ever before, straining the ability of many families to make ends meet.

Besides our import dependence and the cost burden on families, there are other problems associated with our consumption of fuel and electricity as a state and nation. Consider the following:

- ✦ Energy consumption is a major source of sulfur dioxide, nitrous oxides, particulates, and other air pollutants. These pollutants harm public health and the environment.
- ✦ Rising energy consumption is increasing carbon dioxide (CO₂) emissions, the main pollutant contributing to the “greenhouse effect” and global warming.

Increasing energy efficiency and conservation can help us address all of these serious problems. Upfront costs for home improvements are usually paid back many times over during the lifetime of the measure, especially with high and rising energy prices. Increasing energy efficiency and conservation collectively will lower oil and natural gas imports, put downward pressure on energy prices in the marketplace, reduce local and regional air pollution, and reduce our nation's CO₂ emissions thereby slowing global warming. The time to act is now. ●

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