WHAT DOES CLIMATE CHANGE MEAN FOR NEW MEXICO?

Climate Change and the Southwest

- The Southwestern United States has warmed in recent decades, experiencing fewer cold snaps and more heat waves.[i]
- Earlier springs and warmer summers are having significant negative impacts on streams and rivers in the Western U.S. by decreasing stream-flow and/or reducing overall availability of water in summer.[ii]
- There has been a significant, increasing trend in the number of dangerous large wildfires and/or total large fire burn area over the Western U.S. since 1984.[iii] One analysis suggests that wildfire seasons in this vulnerable region are now two and a half months longer than they were 40 years ago.[iv]

New Mexico - Observed Climate Change Impacts

- Temperatures in the Upper Rio Grande River basin are increasing at a rate of roughly 0.7° F per decade, contributing to an average warming of 2.5° F since 1971. Mountains have shown a higher rate of temperature rise when compared to lower elevations.[v]
- Wildfire and bark beetles have killed trees in approximately 20 percent of New Mexico forests.[vi]
- Increased temperatures, reduced snowpack, earlier spring thaws, and streamflow changes as a result of climate change have created conditions more conducive to wildfire.[vii]

New Mexico - Projected Climate Change Impacts

- Temperatures in the state may rise another four to six degrees by the end of the 21st Century.[viii]
- Changes in precipitation are expected, particularly if carbon pollution emissions go unabated. Projections show New Mexico may experience significant precipitation declines, especially in spring.[ix]
- Climate change is expected to decrease water availability in the Upper Rio Grande River basin.[x]

What Has New Mexico Started Doing About It?

State Actions Toward Emissions Reductions

- In 2010, New Mexico's Environmental Improvement Board enacted into law a climate plan to reduce carbon emissions by 2020 to 25 percent below 1990 levels.[xi]
- New Mexico is one of 29 states that together with the District of Columbia have a renewable portfolio standard (RPS) mandating that a certain percentage of the state's power come from clean energy.[xii]
- Under the RPS, investor-owned utilities (IOU) in the state are required to obtain 20 percent of their electricity sales from renewable sources by 2020, while rural electric cooperatives must obtain 10 percent by 2020. In addition, IOUs must get a minimum amount of electricity from wind and solar.[xiii]

Renewable Energy in the State

- Over the last ten years, renewable energy has expanded significantly, from providing roughly one percent of New Mexico's electricity to nearly eight percent in 2013.[xiv]
- Nearly all this growth has come from the construction of 11 wind farms throughout the state, although solar energy has also begun to contribute to the state's electricity mix in the past four years.[xv]
- The state has tremendous renewable energy resources. If fully used, wind could provide roughly 39 times the state's annual electricity needs, and solar could meet that demand 900 times over.[xvi]

Wind Power

- At the end of 2013, there were 778 megawatts (MW) of wind capacity installed in New Mexico -- enough to power more than 275,000 average New Mexican homes. Another 318 MW of capacity is also currently under construction.[xvii]

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- Unlike electricity generated from coal or natural gas, wind farms use almost no water to generate electricity and emit almost no carbon dioxide emissions. Over the course of a year, wind farms in New Mexico save more than 470 million gallons of water, and the carbon pollution avoided is equal to taking nearly 230,000 cars off the road.[xviii]

Solar Power

- Solar energy development in the state has made great strides since 2010 (when it was negligible), and now ranks 10th in the United States with 236 MW of installed solar energy capacity.[xix]
- This development has resulted in 1,900 people employed by the solar industry and $131 million invested in solar installations in 2013. Investment in solar is expected to continue to grow.[xx]
- New Mexico ranks 2nd in the United States in terms of solar energy potential, bested only by Texas.[xxi]

Energy Efficiency

- The Efficient Use of Energy Act of 2008 requires the state's investor-owned utilities to reduce electricity sales to five percent below 2005 levels by 2014, and 10 percent below 2005 levels by 2020.[xxii]

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