

Climate Action Plan

For the Uncompahgre Valley

SUMMARY



Partnerships Creating Projects to Reduce Greenhouse Gases

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Overview

Climate change is happening in our valley:

- Annual temperatures are increasing
- Forests are dying and the trees won't be able to survive where they do now
- Winters are warmer

Climate change is an existential threat to our way of life:

- It threatens our water supply
- It threatens our healthful environment
- It threatens our economy

We can do something about Climate change by reducing GHG emissions through:

- Utilizing renewable energies to power our grid
- Weatherizing and electrifying building
- Transitioning our transportation sector from gas cars to hybrid to electric cars

Reducing GHG emissions will be most effective by partnering with others who:

- Recognize there is climate change
- Recognize climate change is a problem
- Believe we can do something about climate change

Our efforts to reduce climate change do not have to alter our lives, but if we don't address it, our lives will be altered.

Summary

This Climate Action Plan (CAP) lays out some of the threats climate change poses to the Uncompahgre Valley from Colona to Delta. It describes the most effective steps that can be taken in the valley to reduce our greenhouse gas (GHG) emissions. These steps have been developed based on recommendations identified in CAPs from neighboring counties, and refined to address specific circumstances here. It is also recognized that this CAP will be done as a transition from the current Carbon based energy use to a hybrid and ultimately to a renewable energy use. The plan also describes a process for implementing the steps that is based on the Climate Action Group working in partnership with other entities in the valley.

Climate change is happening in the Uncompahgre Valley and poses an existential threat to our way of life: our health, our water, our food production, and our economy.

Precipitation we sorely need for our forests and agriculture falls in unpredictable ways.

Historical records collected by the National Weather Service in Montrose show the average temperature has been increasing steadily over the last 100 years. Aspen forests are dying at lower elevations, there are fewer days per year with snow on the ground, and droughts are more persistent. A view into the future predicts Aspen and

Ponderosa Pine Forests may only survive on 5% of the area where they have historically grown (GMUG NF). Climate Change is real and will change our lives unless we do our part to address it in the Uncompahgre Valley.

We think that we can do something about climate change in the Valley by reducing the emissions of greenhouse gases that trap heat in our atmosphere. The biggest sectors of GHG emissions include transportation, building heating and cooling, energy production and use. The State of Colorado has implemented goals and regulations for reduction of GHG across the state and reports GHG emissions by 2020 have fallen 12.2% below 2005 levels, with electric power generation exhibiting the largest reduction of 28.7% below 2005 levels. However, modeling has suggested that the State will fall short of reduction goals in GHG by 2050 and may actually only achieve a 70% reduction. The biggest shortfall is likely to be in the transportation sector, while the biggest reduction is predicted to be in electric power generation.

All is not lost though as the predictions for the future are based on current efforts around the State. It is envisioned that new projects, policies and regulations will be developed that will help start to fill in the predicted shortfall over the next 25 years. The biggest hurdle will be building out of the transportation infrastructure and the public's adoption of electric cars. An interim solution may be to embrace hybrid cars as a transition, but that may also slow GHG reductions.

The best way for humanity to slow and even reverse climate change will be through actions we take to reduce GHG emissions. How do we do that? Our local efforts must first be concentrated on projects that can have immediate and long lasting effects. Energy production has been one of the biggest emitters of GHG emissions historically with coal-fired plants emitting GHG across the State. Actions already taken by the State have led to closing coal fired plants. The last such plant in Colorado will be closed by 2031. This action does not come without consequences, now the electrical industry has to find new ways to generate reliable electricity.

DMEA, the Uncompahgre Valleys electrical co-op is working with its new electricity provider to build the Garnet Mesa agri-voltaic solar field that will provide enough energy for 18,000 homes. By 2030, the combined renewable energy from Guzman and DMEA used in the valley will be greater than 50% and at times will be greater than 75%. Additional opportunities exist for DMEA to increase renewable energy, such as encouraging rooftop solar and adopting virtual power plants as a reliable distributed system of electric generation, and making opportunities available for all its customers to access renewable energy. These are areas we will concentrate on to reduce GHG emissions in power generation.

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Buildings can be built or be retrofitted to be energy efficient with proper design and weatherization. Smart electric systems built into buildings can reduce energy use and save co-op members money through lower electric bills. The State of Colorado has new building codes that will accelerate building energy efficiencies and opportunities. But we need to retrofit existing buildings by replacing old appliances with heat pumps, smart meters, heat-pump water heaters, induction stoves, and weatherizing as many buildings as possible. It is recognized that a number of large new large buildings in the valley have been built without these energy efficiency measures. We know there will be a gradual transition to an electric building economy, but we need to get started now or we will never get there.

Transportation has been identified as the sector that will lag behind and will be harder to transition. The car charging infrastructure and the price of electric cars are the biggest hurdles. Our efforts will be to encourage local governments and private entities to improve car-charging infrastructure with new ideas like a charging lot with solar roofs that produce energy to charge cars while also shielding them from the hot sun, rain, and snow. We will also encourage a transition to hybrid cars as an intermediate step to the fully electric future. Electric car prices are starting to come down and be more affordable to people. With the State and Federal subsidies of \$12,500 and a potential trade in rebate of \$4000 a person can buy a new electric vehicle and pay \$16,500 less than the sticker price.

Many more projects remain to be identified, developed and implemented for us to achieve a future where our daily activities do not increase GHG emissions. The ultimate goal is to decrease those emissions to the point that the Valley's average temperature stabilizes instead of continuing to increase.

Our CAP will include partners with a range of perspectives on climate change in the Valley. They will include partners that recognize that climate change is happening here, and others determined to do something about it, even some that are engaged in work that achieves CAP goals but that may not be motivated by climate change. Examples of good work already taking place in the Valley include: the City of Delta re-building the old Armory building with a completely electric energy source and no natural gas or carbon fuels, the City of Montrose' new 164 kw solar roof over its police parking lot, and Delta County's approval of the Garnet Mesa solar field. There are already over 10 car charging stations in the valley, and 2000 homes with rooftop solar.

This CAP has a list of objectives and projects identified as a start to the Uncompahgre Valley's GHG gas reduction effort. We will encourage partners to pursue projects that directly and indirectly reduce GHGs. Our list is not complete, work remains to envision opportunities to attain carbon neutrality and an environment where people live and enjoy the splendors of the Valley's surrounding snow-capped mountains, crops green in the field and rivers flowing with cool clear water.