



We Almost Missed the Paddle Boat! SolarReserve® Lake, the World's Largest Man-made Lake at 8,200 Square Miles, Would Permit Designation of a 12 Mile Limit and International Waters!

Since Lake SolarReserve® is so doggone big at 50 miles across, the entire center of the lake -- 12 miles off the shores -- might be regarded as international waters.

You might scratch your head and ask, "Why?" But think about it! International waters belong to no country. The State of Colorado could make no rules for those central SolarReserve® Lake waters.

Immediately paddle-wheel casinos could be plying their trade, hiring dealers and pit bosses and hostesses. It would be kinda like a brand new Monaco right where we used to live!



Gambling Casino Paddle Boat Cruising on Lake SolarReserve®

We Can Imagine Hundreds of Thousands of Brand New, Exciting Jobs! Legalized Gambling! Who Knows What Else Would Be Legal? Maybe Pirate TV Broadcasting to the Western U.S.!



Yeppers! The sky's the limit when it comes to international waters!

Of course, it might take a few years to push the notion through Congress. But that would be even more jobs for lobbyists to grease all the open palms stretched out in Washington, DC, in order to get the enabling legislation passed.

After all, each of the honorable members of Congress would need extra moolah to be able to purchase their own water-front properties on Lake SolarReserve®.

That, in turn, would create all kinds of high-end construction jobs around the former San Luis Valley. Indeed, we think it is highly likely that Aspen would deteriorate into a second-rate destination for elite rich folk, once such a beautiful panoramic vista over miles and miles of open water was available for those who could afford it.

Even better for the elite rich folk would be the natural security afforded by the terrain. Paparazzi would have to climb 14,000 foot peaks from the east side of the Sangre de Cristos or climb the 14,000 foot peaks from the west side of the San Juans just to point a camera at someone important.

Close to shore, thousands of small craft, sailboats and yachts alike could skim the waters with great glee. Yes, we said glee! It would be fun, wouldn't it?

We aren't sure if the size of the open waters would allow tidal forces to play havoc with the shorelines. We are pretty sure that the 70 to 100 mile per hour winds that run west to east across the center of the valley would create some mighty big waves on occasion.

But, hey! That would add an element of uncertainty and danger, making the visits to SolarReserve® Lake even more thrilling.

Some Doubters Think SolarReserve's® Grandiose Computer-Modeled Plans Will Be a Bust... We, On the Other Hand, Think They Will Definitely Be a Boom - a Roaring, Resounding Boom!

For readers who have not followed our earlier editorials, they may not understand how Lake SolarReserve® could be created. Well, let us review just a bit. They plan to create the most attractive terrorist target in the United States, while noisily proclaiming in press release after press release that they are going to bring us a new age of "green energy".

Instead of potatoes, **they plan to plant 182,000 tons of high explosives (with an explosive potential equal to 6 atomic bombs) in lightly guarded tanks in Saguache County in the northern San Luis Valley.** They maintain these high explosives are not high explosives, despite the fact that they are the primary ingredient in gunpowder and fireworks. They do this by stubbornly maintaining that potassium nitrate (saltpeter) and sodium nitrate (Chilean saltpeter), when mixed and stored at 500 °F and, on occasion heated to 1050 °F, miraculously become "benign molten salts" that are "perfectly safe."

If detonated by a determined terrorist, perhaps using an RPG brought across the unprotected border just 250 miles to the south, the resultant explosion would penetrate and rupture the sand and blue clay membrane separating the Upper San Luis Unconfined Aquifer from the San Luis Confined Aquifer, thus creating the new, man-made lake. The latter aquifer is estimated to be from 10,000 to 30,000 feet deep and stretches over the entire valley extending into northern New Mexico, parallel to the Sangre de Cristo fault, the longest earthquake fault in Colorado.

We find it amusing that the current administration wrings its hands about Nebraska's Ogallala Aquifer and the Keystone Pipeline while ignoring a much more susceptible aquifer in Colorado that actually is threatened by more than a mere pipeline running above the surface.

John and Erika Keyes
Editors

For more information:
www.FriedCrane.org

Here are links to our earlier editorials: 2011: [Nov 14](#), [Dec 20](#) 2012: [Jan 2](#), [Jan 3](#), [Jan 5](#), [Jan 6](#), [Jan 7](#), [Jan 10](#), [Jan 14](#), [Jan 16](#)
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Not One, Not Two, Not Three, Not Four, Not Five, But **Six** Endangered Imperiled Species Directly Threatened by the SolarReserve® Project!

Click on any image to read more about that critter



Uncompahgre
Fritillary
Butterfly



Black-footed Ferret



Mexican Spotted Owl



Southwestern
Willow
Flycatcher



Canada Lynx



Gray Wolf

The six different critters shown above reside in Saguache County. Some folks who clearly haven't taken the time to collect their data have scoffed and said, "Nah, you dummy! They are extinct in that southern part of Saguache County. The same as the wide open expanses of the valley floor"

Your editors have seen **all of them except the Gray Wolf** with their very own senile eyes on their property just 4 miles from the proposed SolarReserve® Project.

We had the sad task of having to bury one of the Mexican Spotted Owls that hunt the mice and Kangaroo Rats that live on our property -- it flew into a sliding glass door on our home, while we were still building the house.

The Flycatchers and Butterflies were everywhere this last summer. Dunno why. We must confess we only spotted the Black-footed Ferret twice, and the Lynx only once when our dog, Daisy, thought there was a scrumptious rabbit under a tarp covering our lumber pile during construction. When we pulled the tarp back to stop the scratchy whining, the lynx (not quite fully grown) sprang out and -- thank goodness -- ran away.

Other wildlife abounds as well -- for example the "threatened" Golden and Bald Eagles, the Kangaroo Rat, etc.



New Information: In a copyright report dated October 26, 2010, Colorado State University Colorado Natural Heritage Program upon the locations and status of Rare and/or Imperiled Species and Natural Communities known from or likely to occur within the interest for The Solar Reserve Project in Saguache County, Colorado, both the Silky Pocket Mouse and The Bald Eagle with observations in Section 6, Township 40N, Range 010E and Section 041N, Range 009E. By professional biologists -- so besides us old folks.

You might ask, "Why aren't our County Commissioners demanding that Solar Reserve perform an Environmental Study?" **Wow, what a really good question!**

Part II - Appendix B



U.S. Fish & Wildlife Service

Species Profile

Environmental Conservation Online System

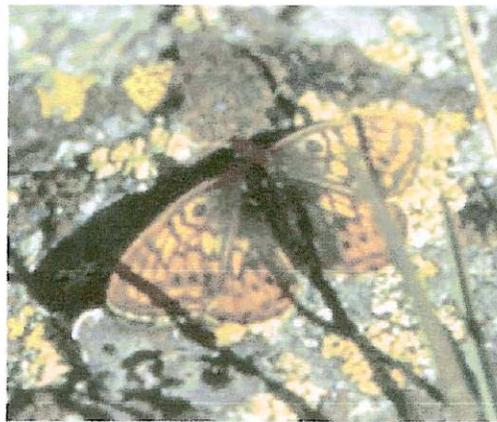
Uncompahgre Fritillary butterfly (*Boloria acrocynema*)

Kingdom: Animalia Class: Insecta Order: Lepidoptera Family: Nymphalidae

Listing Status: **Endangered**

General Information

The Uncompahgre fritillary is a small butterfly with a 2-3 cm (1 inch) wingspan. Males have rusty brown wings cross-crossed with black bars; females' wings are somewhat lighter. Underneath, the forewing is light ochre and the hindwing has a bold, white jagged bar dividing the crimson brown inner half from the purple-grey scaling on the outer wing surface. The body has a rusty brown thorax and a brownish black abdomen. The Uncompahgre fritillary butterfly was discovered on Uncompahgre Peak, Hinsdale County, Colorado, on July 30, 1978. It was subsequently described as a new species.



Map of Species occurrence





Black-Footed ferret (Mustela nigripes)

Kingdom: Animalia Class: Mammalia Order: Carnivora Family: Mustelidae

Listing Status: **Endangered** **Endangered** and **Experimental Population, Non-Essential** **Experimental Population, Non-Essential**

General Information

The black-footed ferret is 18 to 24 inches long, including a 5 to 6 inch tail. It weighs only one and a half to two and a half pounds, with males slightly larger than females. The black-footed ferret is well adapted to its prairie environment. Its color and markings blend so well with grassland soils and plants, that it is hard to detect until it moves. It is a slender, wiry animal with a black face mask, black feet, and a black-tipped tail. The rest of its short, sleek fur is a yellow-buff color, lighter on the belly and nearly white on the forehead, muzzle, and throat. It has short legs with large front paws and claws developed for digging. The ferret's large ears and eyes suggest it has acute hearing and sight, but smell is probably its most important sense for hunting prey underground in the dark.



Map of Species occurrence



Part II - Appendix B



U.S. Fish & Wildlife Service

Species Profile

Environmental Conservation Online System

Mexican Spotted owl (*Strix occidentalis lucida*)

Kingdom: Animalia Class: Aves Order: Strigiformes Family: Strigidae

Listing Status: **Threatened Threatened**

General Information

Unlike most owls, Mexican spotted owls have dark eyes. They are an ashy-chestnut brown color with white and brown spots on their abdomen, back and head. Their brown tails are marked with thin white bands. Young owls less than 5 months old have a downy appearance. Females are larger than males.



Photograph by John DeFink, photographed at the Rio Grande Center, El Paso, New Mexico

Map of Species occurrence





Southwestern Willow flycatcher (*Empidonax traillii* extimus)

Kingdom: Animalia Class: Aves Order: Passeriformes Family: Tyrannidae

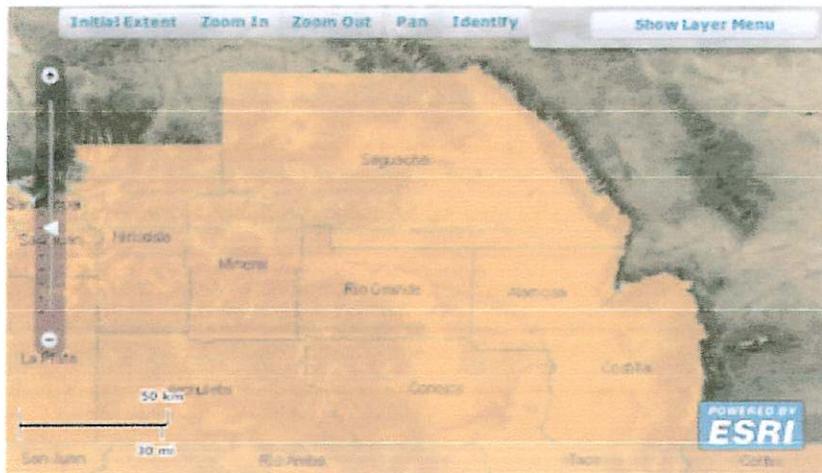
Listing Status: **Endangered** Endangered

General Information

Small, usually a little less than 6 inches in length, including tail. Conspicuous light-colored wingbars. Lacks the conspicuous pale eye-ring of many similar *Empidonax* species. Overall, body brownish-olive to gray-green above. Throat whitish, breast pale olive, and belly yellowish. Bill relatively large, lower mandible completely pale. Best identified by vocalizations. Call a liquid, sharply whistled whif or a dry sprit; song a sneezy witch-bew or fitz-bew. While perched, characteristically flicks tail slightly upward.



Map of Species occurrence



Canada Lynx (*Lynx canadensis*)

Kingdom: Animalia Class: Mammalia Order: Carnivora Family: Felidae

Listing Status: **Threatened Threatened**

General Information

The lynx is a medium-sized cat with long legs, large, well-furred paws, long tufts on the ears, and a short, black-tipped tail. The winter pelage of the lynx is dense and has a grizzled appearance with grayish-brown mixed with buff or pale brown fur on the back, and grayish-white or buff-white fur on the belly, legs, and feet. Summer pelage of the lynx is more reddish to gray-brown. Adult males average 10 kilograms (22 pounds) in weight and 85 centimeters (33.5 inches) in length (head to tail), and females average 8.5 kilograms (19 pounds) and 82 centimeters (32 inches). The lynx's long legs and large feet make it highly adapted for hunting in deep snow. The distribution of lynx in North America is closely associated with the distribution of North American boreal forest. In Canada and Alaska, lynx inhabit the classic boreal forest ecosystem known as the taiga. The range of lynx populations extends south from the classic boreal forest zone into the subalpine forest of the western United States, and the boreal hardwood forest ecotone in the eastern United States. Forests with boreal features extend south into the contiguous United States along the North Cascade and Rocky Mountain Ranges in the west, the western Great Lakes Region, and northern Maine. Within these general forest types, lynx are most likely to persist in areas that receive deep snow and have high-density populations of snowshoe hares, the principal prey of lynx.



Map of Species occurrence



Part II - Appendix B



U.S. Fish & Wildlife Service

Species Profile

Environmental Conservation Online System

Gray wolf (*Canis lupus*)

Kingdom: Animalia Class: Mammalia Order: Carnivora Family: Canidae

Listing Status: **Endangered** **Endangered** (and others listed below)

General Information

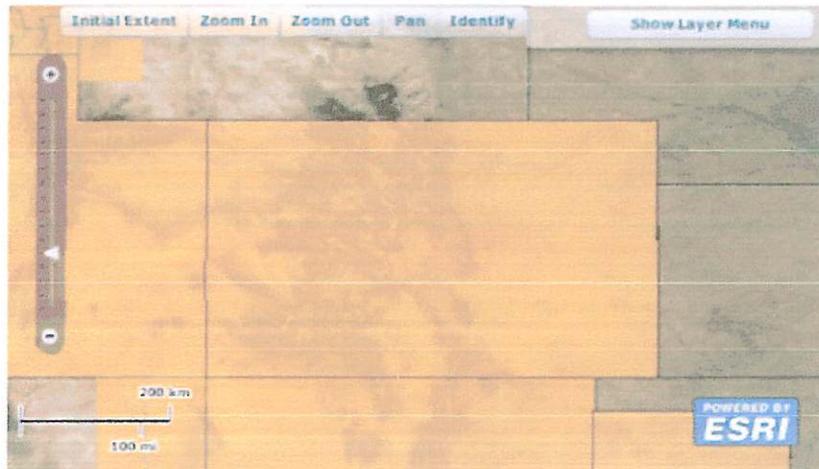
The Gray Wolf, being a keystone predator, is an integral component of the ecosystems to which it typically belongs. The wide range of habitats in which wolves can thrive reflects their adaptability as a species, and includes temperate forests, mountains, tundra, taiga, and grasslands.

Population detail

The FWS is currently monitoring the following populations of the Gray wolf:



Map of Species occurrence



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Just Imagine This:

35 Thousand Sails, Each a Giant 24' by 28', Each Supported by a Scrawny Single Mast Pole...

Fully 672 square feet of surface area, more than enough to power a sail boat to hair-ruffling speeds across open expanses of water with just minor breezes.

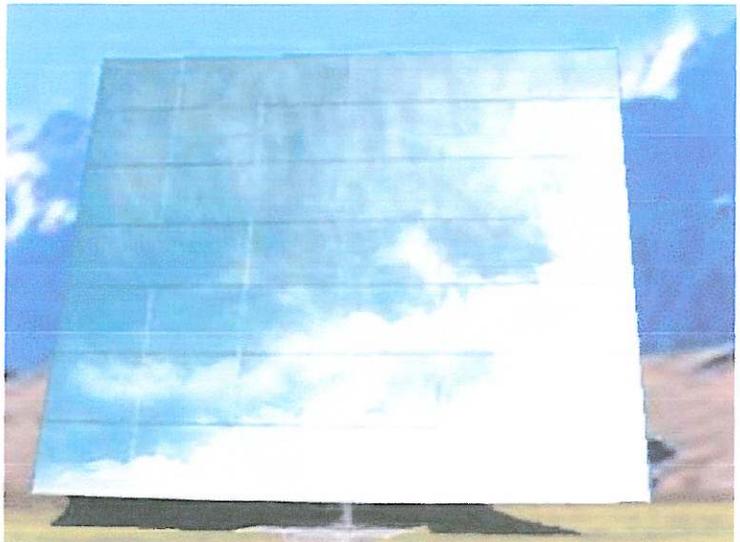
Imagine what our 71 mph "breezes" might do to all 35,000 of these sails standing so proudly on the ten square miles of the SolarReserve® Project.

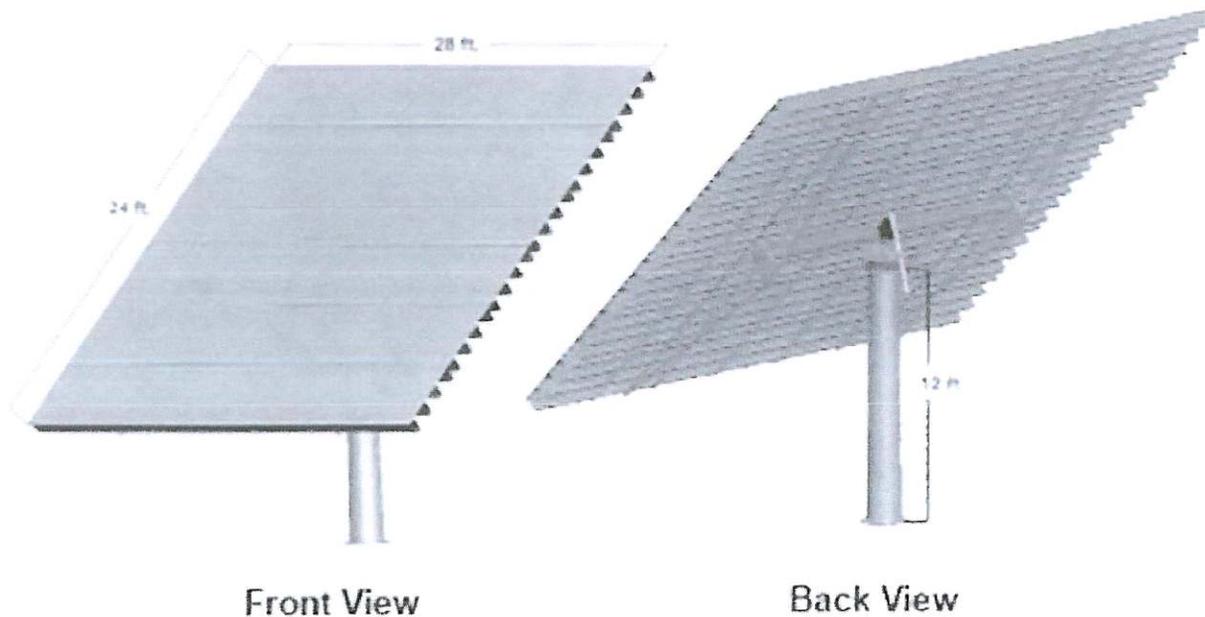
Each sail be be supported by a single 12 foot tall pole, which SolarReserve® evidently believes will be sufficient to keep the mirrors on each and

every one of the 35,000 heliostats **precisely aimed** at the receivers at the tops of the two really ugly gray 82 st concrete towers flashing incessantly, day and night, over the valley.

Of course, should any of the giant mirrored panels shift in the wind -- possibly even to topple -- to **precisely aim els** in the valley, could the focused energy perhaps set the surrounding grasslands or neighboring residences on fire sure it could, booby! Wouldn't matter if it did, however. We have volunteer fire departments nearby, ready to res| such emergencies, right?

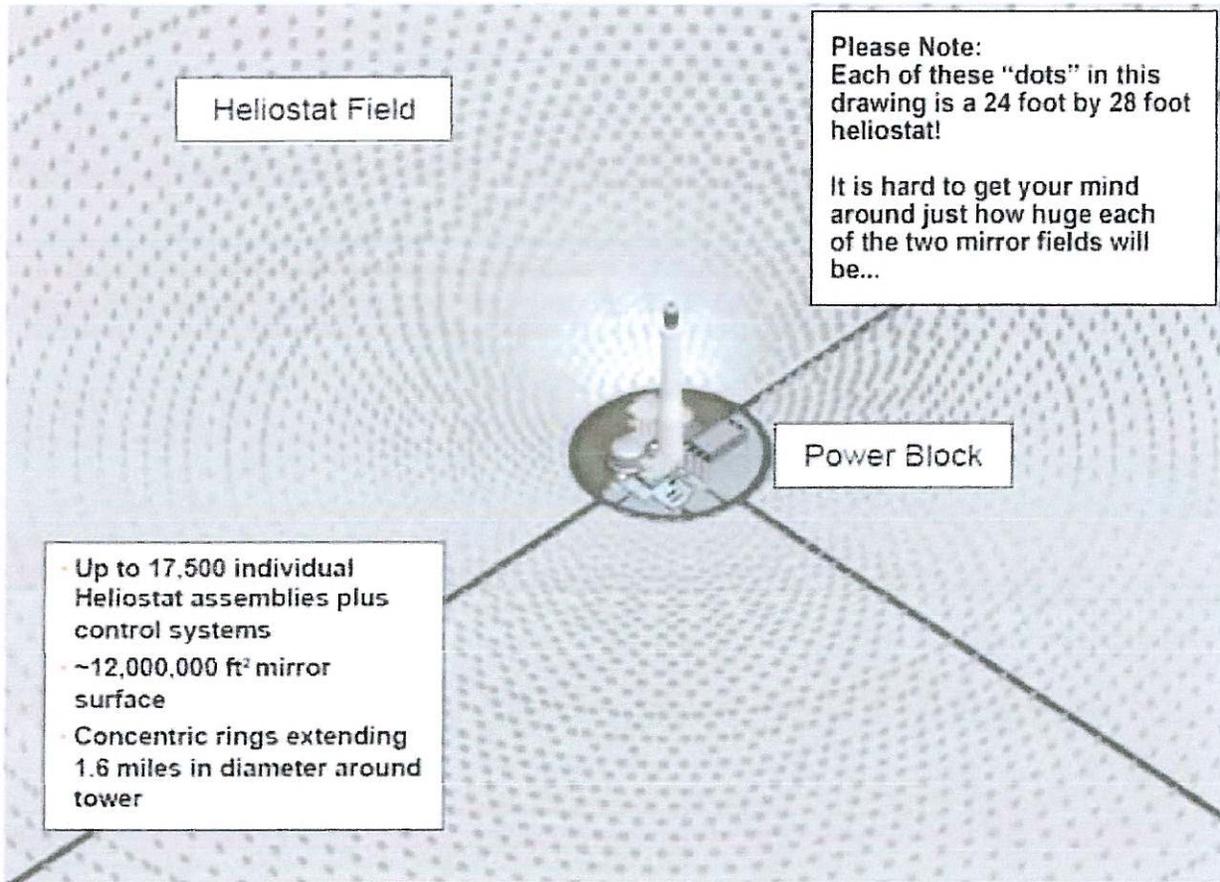
We really aren't making this up! As you can see in the diagrams below, the SolarReserve documents, themselves, their interesting notions of withstanding the wind gusts in our valley!





The single steel poles, if large and sturdy enough, with sufficient and much heavier bracing across the backs heliostat panels might be designed to withstands the vagaries of the winds that built and continue to build the Gre Dunes. But that raises the next issue: what sort of foundations would be required for each heliostat? Tain't simple, is

Now, we keep getting questions like, "Is it really that big?" Yeppers. It is really, truly monstrous! Look at their vision they will build for the very first time. (We've added a note to their drawing) Look at the 82 story ugly gray concrete in the middle to grasp the scale. Then remember that this is only **one** of the two towers and fields:



SOLARRESERVE

Figure 4A - Conceptual Heliostat Arrangement

You may ask, "Why aren't the Saguache County Commissioners insisting that SolarReserve® – well, Tetra Tech EC then -- go back to the drawing board to design safe heliostat stands and foundations?" **Wow, what a great question!**

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Saguache County Needs a Fully-staffed Professional Building Department Perform Exacting Building Inspection:



Saguache County Land Use Department enjoys a reputation with the residents of the County. It respects contractors and citizens engaged in building and trusts t

Issued building permits require the applicant to agree to with the Uniform Building Code, but do not provide inspections whatsoever by the County during const aside from a septic system siting and sizing inspection.

Due to the limited population and limited const combined with a grown up and responsible populati laissez-faire approach has worked with few hitches o years.

But the proposed SolarReserve® Project ain't a pole barn

A drawing on a napkin in the Oasis Restaurant will not for building plans for a ten square mile, two 8; skyscrapers, 100,000 square feet of buildings under r megawatt electrical generation facility powered by tw steam turbines rivaling those in the Hoover Dam in capa

A cynic might suggest that Saguache County was cho because of its trustful approach to building. Certainly, it is one of the few counties in the entire United States that have even one building inspector! But regardless of motives, this project demands assiduous attention to detail, formation of a real Building Department, staffed with at least 4 or 5 full-time qualified building inspectors.

Reliable estimates place the cost of this project \$1.5 billion. SolarReserve® surely is paying Tetra Tech EC, Inc. som between 3% and 10% of that total cost to prepare all of the thousands of blueprints and engineering notes required massive undertaking.

Saguache County can't afford a fully staffed building department. But if SolarReserve® is paying somewhere betw million and \$150 million for engineering, they can afford to fund a fully functioning Saguache County Building Depar

The site grading, the concrete forms fitted with appropriately sized rebar, placing 30,000 feet deep caissons to bedr specifications of the concrete used – every step of the construction must be inspected if Saguache County is to e its fiduciary due diligence to protect the public safety.

We repeat: two 82 story tall skyscrapers surrounded by 24,000,000 square feet of heliostats, with more than 100,000 feet of buildings under roof housing two 100 Mw Steam Turbines and two massive Generators, with 36 acres i evaporative ponds ain't a pole barn. It requires scrupulous and diligent oversight during every stage of const Nothing should be left to chance when lives are at stake. The contractor is not the only stakeholder in the event of a and the inevitable lawsuits that follow. The County will also be a party to those legal actions, having to spend huge i defend itself.

Woe to the County if it is shown to be the case that it didn't protect the citizens and workers with prudent foresight and careful attention to details! The County's and the Commissioners' general legal immunity from lawsuits doesn't excuse negligence, malfeasance or dereliction of duty. Attorneys love those kind of defendants! And some silly statements like "Well, they're spending a lot of money, so they'll do it right," ain't gonna cut it.

You may ask, "Why aren't the Saguache County Commissioners insisting upon adequate monies **up-front** from SolarReserve® to fund and adequately staff with 5 qualified and certified building inspectors a professional building department that will insure that all construction conforms to code?" *Wow, that is really a good question!*

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Competent Engineering: You Don't Ask a Family Physician to Perform Heart Surgery!

With all due respect, despite their recognized capabilities and credentials, Registered P.E.'s (Professional Engineers) are simply not up to the task of properly advising the Saguache County Commissioners about the ramifications of the SolarReserve® Project.

This will be the single largest construction project in Colorado since the construction of Denver International Airport.

The Saguache County Commissioners would be shirking their fiduciary duties as representatives of the citizens of Saguache County were they to rely upon the engineering data supplied by the applicants: namely, SolarReserve's® consulting engineering firm – Tetra Tech EC, Inc.®



Tetra Tech EC, Inc.® is a wholly owned subsidiary of Tetra Tech Inc.®, a publicly traded company with annual revenue in excess of \$2.29 billion and more than 10,000 employees in 280 offices throughout the world.

Pennies shouldn't be pinched. As President Reagan famously cautioned, "Trust, but verify." A different engineer should be retained to provide an unbiased and independent review of the thus-far unchallenged statements of SolarReserve® in their Preliminary 1041 Application and similar unchallenged statements in their Final 1041 Application.

There are very few firms in the United States with the expertise and track record of experience to competently advise the Commissioners in a way that assures that the applications are truthful and correct, and that the Commissioners exercised their fiduciary duties with due diligence.

One that the Commissioners might choose is Bechtel Corporation®. Bechtel Corporation® (The Bechtel Group) is the largest engineering company in the United States, ranking as the 5th-largest privately owned company in the U.S.

With headquarters in the Financial District of San Francisco, Bechtel had 44,000 employees as of 2009 working on projects in nearly 50 countries with \$31.4 billion in revenue.

Bechtel participated in the building of Hoover Dam in the 1930s, particularly qualifying them to advise on the Solar Reserve Project. It has also had involvement in several other high profile construction engineering projects, including the Channel Tunnel, numerous power projects, refineries, and nuclear power plants, BART, Jubail Industrial City, the largest Airport in the world by land area King Fahd International Airport in Dammam, and Kingdom Centre and Tower in Saudi Arabia, King Abdul Aziz International Airport, the Big Dig, the rebuilding of the civil infrastructure of Iraq funded by the United States for International Development (USAID), and the hauling and installing of more than 35,000 trailers and mobile homes for Hurricane Katrina victims in Mississippi.

Of course, the applicant should provide a non-refundable deposit of a sum sufficient for Saguache County to retain a competent, comparable, independent professional engineering advice from a recognized engineering company.

You may ask, "Why aren't the Saguache County Commissioners retaining a competent, experienced, [competent](#) company?"

professional engineering firm to advise them about the largest construction project to be contemplated in Colorado the building of Denver International Airport?" *Wow, that is really a good question!*

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The Economic Loss to the Entire Valley Could Be Huge!

Our valley is widely acknowledged to be a severely depressed economic area. Contributing to the various economic problems in Alamosa, Rio Grande, Mineral and Saguache Counties are income streams primarily derived from tourism and hunting, not inconsequentially from the "birders" and the folks who visit our hot springs.

There is a good chance that many Great Sandhill Cranes and other migratory wetland birds will be incinerated while flying through the ten mile high temperature thermal field near the top of the twin towers.

Any diminution in the present quantities of 22,000 to 25,000 Great Sand Cranes migrating to Monte Vista will have a decided impact on the revenues derived by the Sand Crane Festival and the businesses in Monte Vista. They can ill afford losing income. We believe this project could be renamed "The Great Sand Crane Killer"

Alamosa, Mosca, Blanca, Fort Garland, Hooper, Center, Monte Vista and Saguache all benefit from the tourists from all over the United States and the world visiting to marvel at The Great Sand Dunes National Park and our National Wildlife Refuges.



Clearly, we can not assess the impact upon the volume of this tourism by two really ugly gray 82 story tall skyscrapers glowing brightly at the top while dozens of 60,000 lumens-bright strobe lights flash annoyingly every 2/3 second reaching high into the sky. **But surely these monstrosities can't help valley tourism.**

A reduction in tourism means lost monies for all of the businesses in the valley: directly and indirectly.

Our National Wildlife Refuges in the Baca, Monte Vista and throughout the valley attract "birders" from all over the world. These folks are often overlooked as an economic boon, but they think nothing of spending a thousand bucks for a pair of binoculars or a spotting scope, even more for cameras, etc. to engage in their bird-watching. They spend large amounts of money in the valley.

They love coming here for more than the birds -- the gorgeous scenery, the pastoral landscape, the quiet. **An intricate complex reminiscent of the East German gray cities will probably not be attractive to them.** We shouldn't be jeopardizing this income stream.

They say a prophet is without honor in his own country. The same can be said for us folks living in Saguache County. We don't always appreciate the many businesses that depend upon resources in our part of the Valley.

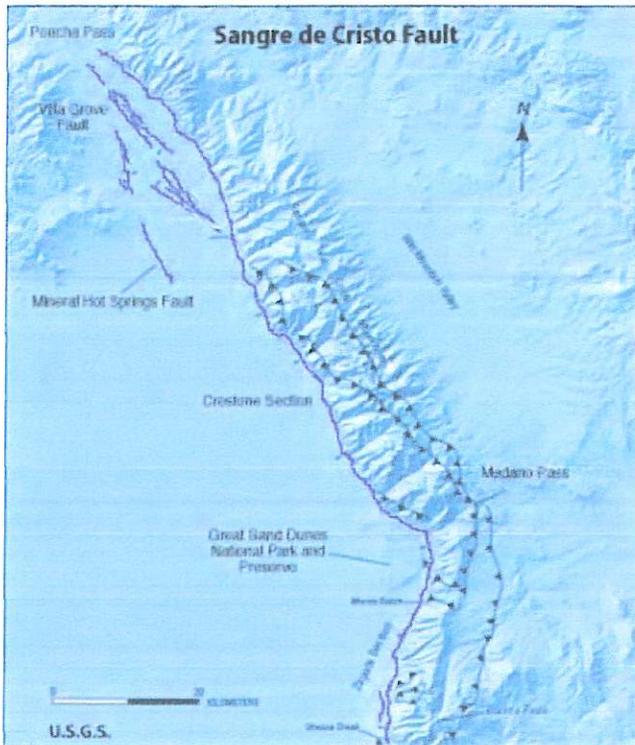
The hot springs for example: Joyful Journey, The Sand Dunes Swimming Pool, and the Orient Land Trust Hot Springs host countless visitors each year from outside the valley. Their visitors will not appreciate the huge towers looming and menacing. May well mean lost revenues, not just for these sites, but the restaurants and businesses in Villa Moffat, Hooper and Mosca.

Perhaps the UFO Tower north of Hooper could rebrand itself as the "Ugly Towers Observation Outpost" and glean from eager tourists wanting to study the twin aberrations "up closer", so to speak. The Alligator Farm could conduct

at night by the flashing lights.

The residents of Crestone, many of whom located here for the peaceful valley vistas stretching out to the west w front row seats in the auditorium looking directly at the two 82 story gray, formless structures glowing brightly at with the reflected sunlight by day, flashing super bright strobe lights every 2/3 second day and night. Perhaps the h effect of the repetitive flashes will assist those who practice meditation while gazing at the valley. Will some of them to move away? If so, yet another unaccounted-for economic loss to the county.

You may ask, "Why are the Saguache County Commissioners not involving the rest of the San Luis Valley citizens a County Commissioners, all of whom will surely be impacted by this decision?" **Wow, what a great question!**



The Sangre de Cristo Fault and Earthquakes

The Sangre de Cristo fault is the longest fault in Colorado and marks the western side of the Sangre de Cristo Range, the eastern margin of the San Luis Valley and extends 180 miles from Poncha Pass at the northern end of the San Luis Valley in Colorado to near Taos, New Mexico on the south.

It lies just 15 miles east of the SolarReserve® site!

Does the SolarReserve® Project engineering design account for these unusual but possible extreme stresses from massive 82 story towers?

We don't think so, and here's why: the geology of the proposed site is extremely unique. A bit like an island in a lake, the San Luis Valley Confined Aquifer below extends downward from 10,000 to 30,000 feet. That's where the closest bedrock lives: at the bottom of an ancient ravine, the San Luis Valley Rift or Rio Grande Rift and which runs through New Mexico, Northern Texas and into northern New Mexico.

They can't just plunk the monoliths down on top of a random home foundation. They need to take the caissons down

to bedrock. We're interested to see the details concerning the methodology they plan to use for drilling, casing and installing 30,000 foot deep concrete caissons, while avoiding any possible contamination of our precious unconfined and confined aquifers. We wonder if they plan to involve the State of Colorado Department of Water Resources in this interesting drilling process.

Being a California firm, SolarReserve® probably has tons of experience designing for earthquakes. That's real, because no earthquake design requirements exist in our poor backwards county.

You may ask, "Why haven't the Saguache County Commissioners demanded that SolarReserve® provide details at underground caisson support for these massive towers, and how they are providing for the event of a possible earthquake while avoiding contamination of the San Luis Valley Unconfined and San Luis Valley Confined aquifers?" Wow, really a good question!

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The SolarReserve® Project Should Be Put to a Vote of the Citizens!

We aren't County Commissioners. Nor do we want to be! But if we were, we would have recognized long ago that the SolarReserve® Project rivals the Denver International Airport in its scope when compared to the locations. **This project is certainly the very largest in Colorado history since the DIA project.**



Of course there is a difference: one was public and the other is quasi-private (if you don't count the long-suffering Alamosa County taxpayers' loan guarantees) But the sheer size and magnitude of what is being contemplated demands more than the input from the residents of one very small county decision embarked upon by three elected Commissioners of that county.

However, were we politicians confronted with the responsibility our Commissioners face, we would have been eager to solicit the approval, not just of the citizens of Saguache County, but the neighboring counties as well.

After all, the site is just four miles from Alamosa County and five miles from Rio Grande County. The citizens of those counties will be extraordinarily angry about being cut out of the project.

This is a massive industrial complex that will forever change the character and landscape of the entire San Luis Valley.

Usually, with questions of this magnitude, the citizens are given a more direct way to express their views to the officials. **They are given an opportunity to vote upon the project!** Clearly the SolarReserve® Project deserves this consideration for the views of the impacted citizenry.

We citizens all vote on school bond, library bond and tax increase issues in our regular and special elections issues, which are considered important enough to be put on the ballot, pale by comparison!

Were the Commissioners sensitive to the magnitude of this project and its impacts on the wildlife, the environment and the economic well-being of the entire valley, they would immediately put a hold on this application and, in coordination with the County Governments of Alamosa, Rio Grande and Mineral, schedule a special election allowing the citizens of the entire San Luis Valley to vote on this project.

You may ask, "Why are the Saguache County Commissioners not involving the rest of the San Luis Valley citizens and the County Commissioners, all of whom will surely be impacted by this decision?" **Wow, what a great question!**

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Fundamentalist Islamic Terrorists Will View the Twin Towers Next to The Great Sand Dunes National Park Very Differently than We Americans Do...

It's a horrid thought to contemplate, but those massive towers will be a tempting target for terrorists. Any attack upon them would be impressive and certainly glean the attention of the entire world.

SolarReserve® is proposing to store 24 million gallons of highly explosive potassium nitrate (saltpeter) and sodium nitrate (Chilean saltpeter) at their massive industrial complex. These "benign eutectic salts" actually will have the explosive potential of 182,000 tons of TNT, which, if detonated, would ravage the entire San Luis Valley with a blast zone estimated at 40 miles!

Tourists from all over the world visit our local natural wonder to marvel at the unusual geologic phenomenon.

A few security guards will clearly be insufficient to protect the towers and explosive salts from attack. Heightened security similar to that which presumably surrounds our nuclear installations is called for. **This will be the largest solar installation anywhere in the world.**

Worse yet, the proposed site is only 250 miles from an unprotected border to the south. And Saguache County is protected by a small Sheriff's office that clearly cannot provide the kind of resources needed to adequately defend the twin towers.

You may ask, "Why aren't the Saguache County Commissioners requiring the SolarReserve® corporate executives seriously address this very real possibility of a terrorism incident?" **Wow, what a great question!**



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Don't Compare the Heliostats with Frying Magnifying Glasses!

Anyone who has fried a bug with a magnifying glass knows that there won't be high temperatures around the towers. But the expedient of putting an oven thermometer where a bug is being fried or tinder is being kindled will show that the temperature around the focus point of light gains in temperature as well.

Heat is transferred in three different ways: conduction, convection and radiation. All three methods of heat transfer are present with the SolarReserve® towers. Heat radiates from heated objects.

The heliostats -- all 24,000,000 square feet of them -- focus sunlight on the top of the twin towers will not just radiatively heat the receivers at the top of those towers. Heat will be transferred to the towers themselves by conduction, not all heat is absorbed by the receivers, meaning that the excess heat is

somewhere. This is not a static paradigm. Convection, conduction and radiation are interacting continuously with the sunshine is being reflected from the heliostats.

The heliostats will not be perfect focusing devices. Some of the reflected light will "miss" the receivers. Theory and practice in the real world is another. In addition, Saguache County is famous for its complex inversion layers contributing to the renowned mirages so endemic. These temperature inversion layers can only complicate the heat transfer analysis.

Much more analogous is the popular 9" x 12" solar oven, at the right. Open up the mirrored wings on a sunny day, and you quickly have temperatures in the center of 400° or more -- plenty high enough to cook your meal.

This example much more closely approximates the conditions above the heliostats and around the towers. A giant oven is created -- stretching over the ten mile site.

If the temperature at the top of the towers is 2000 °F to effectively heat the highly explosive eutectic salt solution to 1050 °F in a dynamic heat transfer process, it can be predicted that the surrounding ambient temperature will surely be sufficiently high enough to fry any of the thousands of wetland birds flying through the high temperature field along their usual migratory path.

You may ask, "Why aren't the Saguache County Commissioners requiring the SolarReserve® engineers address this possibility



of frying our migratory wetland birds?" Wow, what a great question!

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Can The Ancient Rickety Wooden Towers for This 230 Kv Electrical Transmission Line Really Carry the 200 Megawatt Electrical Output from the SolarReserve® Installation? **Nope! Someone Is Omitting Information!**



Contemplate, if you will, the so-called "High Voltage Towers" crossing the SolarReserve® Site shown at the left. Inspire confidence in you? This highlights the dirty little secret about the SolarReserve® Project: **there ain't a way to get the 200 megawatts that would be generated out of the San Luis Valley.**

We can only guess that they have a strategy to convince landowners from here to the plains to grant easements for the largest electrical transmission lines in Colorado to cross their properties. Landowners who will not be a bit concerned about the massive EMF radiation near their homes.

And the cost? **\$1 million per mile** for the towers and lines, not including easement purchase and eminent domain court fights. **Unfortunately the existing 230 Kv lines ain't capable of carrying the 200 million watt output of the plant!** Why? Xcel® is already using the antiquated lines. And Tessera is also claiming they will be using those self-same lines. Kinda like trying to squeeze an elephant through a garden hose!

There are a great many myths about losses during transmission, as well. Indeed, phony postings to sites like wikipedia claim only 6% - 8% losses. Don't You believe it! Before they take it down, here is the actual skinny from the United States Department of Energy in their "[Energy Efficiency & Renewable Energy Pages](#)" relating to Electric Resistance Heating. (If you click on that link and some DOE faceless lackey has removed the page, we took a picture of it today, November 4, 2010 and [you can see it here](#)).

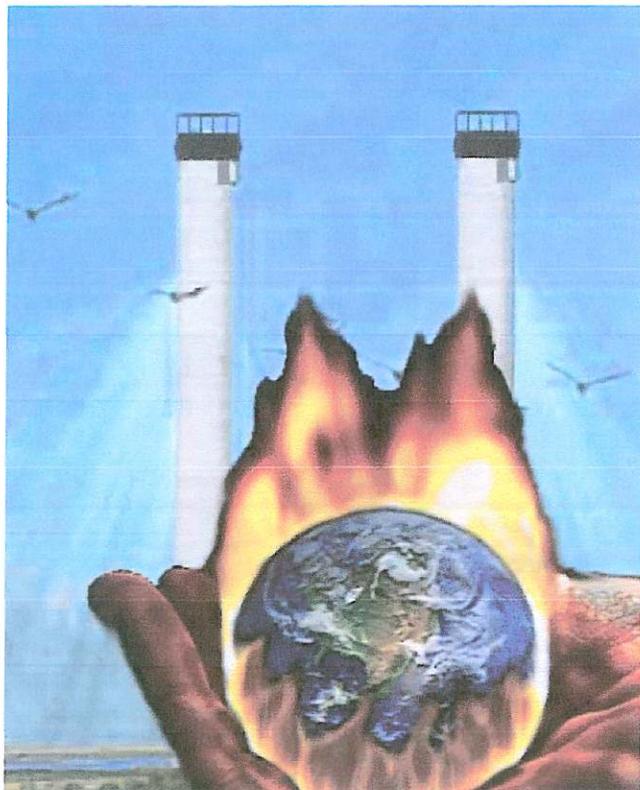
And we quote them exactly: "Electric resistance heating converts nearly 100% of the energy in the electricity to heat. However, most electricity is produced from oil, gas, or coal generators that **convert only about 30% of the fuel's energy into electricity.** Because of electricity generation and transmission losses, electric heat is often more expensive than heat produced in the home or business using combustion appliances, such as natural gas, propane, and oil furnaces." (Emphasis ours)

That is precisely where the dirty little secret leaks out! **70% of the energy is lost!** This means that electricity always costs about **3 times as much** as other energy sources, be it natural gas, propane or gasoline. You might think about that "inconvenient truth" before you rush out to buy an electric car, just so you can be environmentally sensitive – you'll be paying 3 times what you'd pay for gasoline!

Now, electricity is our friend. It is far and away the most convenient and clean way (at least in your home) to power stuff. Well worth paying three times as much for that convenience.

You may ask, "**Why haven't the Saguache County Commissioners demanded that SolarReserve® disclose exactly how they really plan to deliver the energy they produce?**" **Wow, that is really a good question!**

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Changes to the Sand Luis Valley We -- Our Own Local Global Warming?

The San Luis Valley is a 10,000 square mile high desert lying at an average elevation of 7500 feet. This plateau is **bow**, surrounded by some of the highest mount Colorado.

This giant bowl results in some of the most interesting in the entire state. Locals know the wind can be blowi from the east and from the west in the very same field.

When the wind is not blowing, we get inversion layers. the upper valley (Saguache County) is renowned for its due to those layers at different temperatures.

Means that temperatures can **lie in layers** that significantly. The excessive temperatures produced SolarReserve® Twin Towers will not **all** be captured collectors at the top of the towers.

So, where does all that excess heat go? Thermodyna would be quick to point out that most of the excess h rise by convection, dissipating "harmlessly" in atmosphere. **Yeah, if it weren't for those pesky inversion and our perfectly mountain-range-surrounded bowl.**

We would not be surprised if the average temperature in our pleasant valley rose by 20°, 30° or even more. Our m mid-80's could metamorphose to 100° or 110° or even more during the summer. Think of it this way, we are p 24,000,000 square foot miniature sun on the valley floor just north of Hooper.

How will that eventuality affect our year-round climate? Worse yet, could it have unforeseen consequences on agriculture in the valley?

Is this a "Chicken Little" doomsday prediction? We don't really know. And that's the problem. Something on thi could really have unforeseen and unfortunate consequences.

You may ask, "Shouldn't the Saguache County Commissioners insist upon extensive localized monitoring follo competent computer modeling to insure that they aren't frying us all?" **Wow, what a great question!**

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Will The Great Sandhill Cranes and Other Birds Be Safe?

We don't think so. We are not engineers. That being said, we have great concerns for the safety of these magnificent birds, not to mention the tens of thousands of other wetlands birds that migrate directly across the path of the proposed SolarReserve® Project every year.

Especially of concern are the Mexican Spotted Owls and Southwestern Willow Flycatchers that we see regularly on our own property, just 4 miles away from the proposed site. **Both of these beautiful birds are on the Endangered Species List!**

Admittedly, we don't know if these precious endangered birds migrate over the SolarReserve® Site, but it stands to reason that they do. It is only four miles away, after all!

The 24,000,000 square feet of SolarReserve® Mirrors are continuously focused to the tops of the 82 story tall gray towers, generating heat in excess of 2000 °F, glowing brightly, like twin miniature suns for all citizens of the valley to admire.

The point, of course, is to capture some part of that thermal energy, transferring it to the eutectic salt solution circulating at extraordinarily high temperatures (1050 °F in the hot tanks and cooling to 550° in the cool tanks)

Unfortunately, the laws of thermodynamics dictate that massive amounts of that focused energy will **not** be captured and transferred. You may well ask, "Well, what happens to that lost focused and amplified energy?" Good question. It will **linger and hang about** before dissipating more or less "harmlessly" in the surrounding area and to the upper atmosphere (Talk about Global Warming!) However, there will probably be a thermal field reaching 500° or more as low as 200 to 300° over the 10 square miles of mirrors.

It is our fervent belief that any waterfowl or other migratory birds flying through that thermally elevated region are entering a "kill zone". Perhaps we're wrong. But nowhere in the pleasant SolarReserve® 1041 do we find this critical and important issue addressed.

It is to be assumed that the highest scatter temperatures will be at the higher elevations over the site -- exactly where waterfowl and other birds fly. Presumably these extraordinarily high temperatures will not be so elevated close to the ground level. The Endangered Species Uncompahgre Fritillary Butterflies which are prevalent in this part of the Valley may therefore, survive this convection oven, if the updrafts due to natural convection do not sweep them up into the inferno.

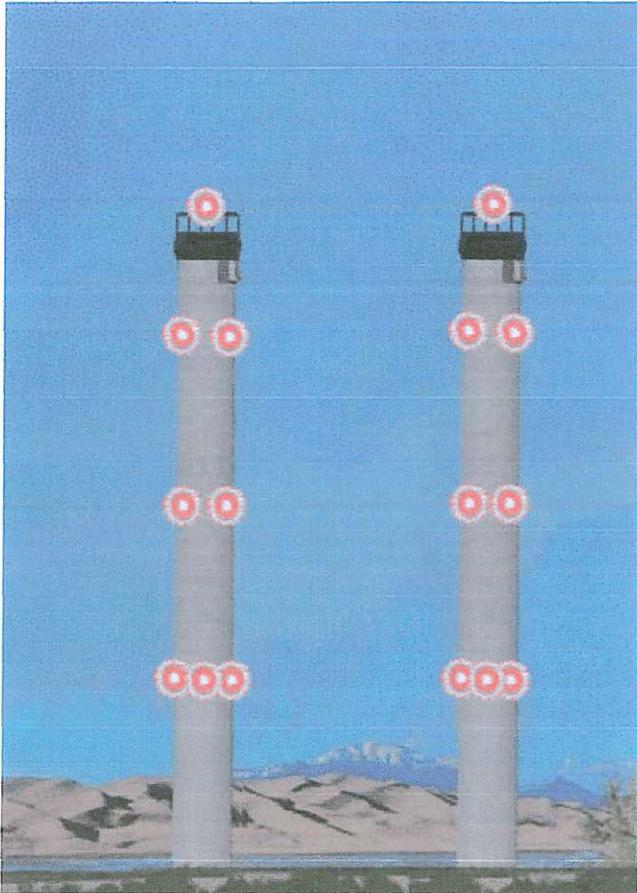
A significant complicating factor lies in the 36 acres of evaporative ponds contemplated containing toxic substances. These will serve as giant magnets drawing the birds right into the convection oven. It is in the nature of the birds. So when they survive transverseing the blast furnace, they can docilely land and partake of the toxic cocktail prepared so obligingly for them by SolarReserve®.



In addition, these ponds will be attractive to ground mammals, including the Endangered Black-footed Ferret and Lynx which absolutely inhabit this part of the valley.

You may ask, "Why are the Saguache County Commissioners not involving the rest of the San Luis Valley citizens and County Commissioners, all of whom will surely be impacted by this decision?" And why is the Environmental Protection Agency absolutely refusing to take any action whatsoever? **Wow, what great questions!**

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F.A.A. Requirements for Aircraft Safety Will Create Massive Visual Pollution Day and Night

At the left is an artist's simulation of the twin towers for aircraft safety (at least as presented in their Final 1041) Strobe lights actually be much, much brighter than we can show

The F.A.A. requires 60,000 candelas (lumens) for strobe light. By comparison, the typical 75 watt produces 900 lumens.

These 60,000 lumen strobe lights would flash every second both day and night!

Worse yet, these towers would be the tallest structures on the western slope of Colorado.

Trying to Visualize Just How Huge Ugly Gray 82 Story Towers Would Look

It really is hard to imagine, in the absence of any reference points, just how tall these towers will be. The image shows the three story Saguache County Courthouse scale at the base of one of the towers. For more examples, [click here](#)

On the other hand, these incessantly flashing strobe light towers illuminating the previously pristine valley night sky will eliminate the expense of installing and maintaining street lights in Center, Hooper, Moffat and Crestone!

The Massive 82 Story Towers Will Flash All Day, As Well -- Focusing Attention Away from the Great Sand Dunes National Park

It is hard to believe that the National Park Service is not raising hell all over the place about this potential pollution and detraction of a park renowned for its natural beauty, wildlife and setting at the base of the majestic Sangre de Cristo mountain range.

You may ask, "Why in the world aren't our Saguache County Commissioners seriously addressing the problems of visual pollution and acoustic pollution caused by 2 100 Mw steam turbines powering 2 huge electrical generators and the addition of an absolute blight -- an atrociously massive, ugly set of towers -- to the land just west of the beautiful Great Sand Dune National Park?"

Wow, that is really a good question!



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Some Minor Wetlands at the Eastern Edge of the Site

Of course, they aren't huge. But they will be dwarfed by the **36 acres of toxic evaporative ponds** SolarReserve® plans to build to store sludge from the processes at the towers.

Why does that matter? Those would be additional **poison wetlands** built right where they will attract migrating wetland birds that have been traveling directly over this site for centuries.

Worse yet, they are planning to line those ponds resting near the water level of the San Luis Valley Unconfined Aquifer with mere 40 mil plastic liners. Well, plus "leak detection" equipment! Any idea how long it would take to empty 36 acres of ponds after a leak is detected? Or just what container you would use to hold 36 acres of sludge in a big hurry to contamination of the valley's drinking water once the leak is detected?



You might ask, "Why aren't the Saguache County Commissioners requiring SolarReserve® to address these prob advance?" **Wow, that is really a good question!**

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Why Use Rubber Stamp Commissioners When a Better, Rubber Stamp Alternative Exists at the Federal Level?

SolarReserve® is going at this the hard way -- missing the target bet that lies just within their grasp!

Just in the month of October, 2010, Interior Secretary Ken Salazar (brother to our own San Luis Valley Congressman Ken Salazar) OK'ed not one, not two, but **six** massive solar projects on federal lands in California and Nevada.

Over the vociferous objections of -- well, you know, the people in those areas -- the voters who clearly don't understand what's important nearly as well as the Washington D.C. power elites.

Well, we have nearly 2 million acres of federal lands in the Rio Grande National Forest and tens of thousands of BLM Land Management lands right here in Saguache County.

SolarReserve® should just ask our San Luis Valley born and raised Kenny to approve their wonderful solar towers sited on the thousands of acres on BLM land north and east of Moffat -- we're certain Commissioners Pace and Garita wouldn't object! Or their towers could rise majestically on the 11,460 acres of BLM land currently being leased by the L Cross Ranch -- we're certain Commissioner Spearman wouldn't object!

Even if endangered species might be eradicated, it's OK. Just get an accommodating Governor Hickenlooper to approve "relocating" the endangered critters, like Governor Schwarzenegger did in November 2010 in California. A couple of the solar projects Secretary Salazar approved.

If he can grandly approve six projects further out to the west, in California and Nevada, **why not three or four more here in Saguache County?** Or, better yet, adjacent to the Salazar Ranch -- we're certain Former Congressman John Salazar wouldn't object!

Federal Mandates of just about anything these days seem copacetic. And it seems that Congress has no inclination whatsoever to question any of the actions of this administration, no matter how high-handed they are. And you? You're supposed to sit back and grin and bear it!

You may ask, "Why isn't SolarReserve® bypassing the obliging Saguache County Commissioners and just going to -- to Interior Secretary Ken Salazar -- to eliminate all this tedious bureaucratic stuff?" **Wow, what a great question!**

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Designing for 150 mph Wind Speeds and F1 Tornadoes

We only have a few tornadoes in Saguache County -- just 3 since 1980 and pretty small: one F0 and 2 F1 -- occurring in June and July.

Alamosa has experienced more. Seven since 1955 -- 2 at F0, 4 at F1 and one at F2

As can be seen by the data below, the maximum winds over the past 19 year period in Alamosa, Colorado average 71 miles per hour annually.

Unfortunately no data has been collected for the corridor precisely 4 miles to 7 miles north of Hooper, Colorado. However, local residents can attest that winds exceed those experienced in Alamosa on a regular basis due to the different topology.



Maximum Recorded Wind Speeds in Alamosa, Colorado:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
58 mph	62 mph	60 mph	71 mph	63 mph	69 mph	66 mph	51 mph	54 mph	62 mph	63 mph	54 mph	71 mph

Note: Tower Height 30 meters. Source: NCDC (National Climatic Data Center)

But even using the data captured for Alamosa at 30 feet high, we can assume that 82 story tall, 656 foot high tower SolarReserve® will experience extreme wind loading far in excess of the 30 feet measurements.

The SolarReserve® engineers need a factor of safety when designing free standing 82 story tall towers exposed as **obstructions to the howling winds and dust storms** in the central valley. Probably the minimum safe design speed 150 mph or even more in light of the F1 tornadoes that occur from time to time. And don't forget to account for the incursions reaching down 30,000 feet (nearly 6 miles!)

You may ask, "Why haven't the Saguache County Commissioners insisted upon data confirming that the structures will be safely designed to stand up to valley winds?" **Wow, that is really a good question!**