

Saguache County Land Use

Saguache County
Land Use

JAN 23 2012

Re: Solar Reserve's power tower

PO Box 326
Saguache, CO 81149

I am writing to express concerns about environmental and economic aspects of this project.

Will there be a full environmental impact statement required?

Economic benefits vs. liabilities; this is a pilot project, what if it does not work?

Please consider carefully.

Distributed solar works best for local needs (esp. agricultural),

Put the pilot projects in the desert away from established economic benefits (farms).

Thank you.

Bruce Sheldon

Wendi Maez

From: merrell.bergin@earthlink.net
Sent: Saturday, January 21, 2012 9:15 AM
To: wmaez@saguachecounty-co.gov
Subject: Saguache Solar Energy, LLC Proposed Solar Power Towers

Dear Saguache County Commissioners:

After reading about this proposal in the Salida Citizen at <http://salidacitizen.com/2012/01/the-san-luis-valley-faces-difficult-industrial-energy-challenges> I must respond:

With this proposal coming on the heels of the also grandiose Tessera project it should be clear that the Valley will continue to be a target for those who seek to extract its resources and run.

The value of any land is way more than just the solar, mineral or other form of energy that can be taken from it. Clearly, there is an abundance of natural beauty and productive agricultural land in the San Luis Valley that deserves top priority. Balancing those uses with small, locally-owned solar power generation projects is a way to maximize all the benefits of this place without ruining it permanently.

Saguache County Commissioners have been elected to represent the interest of the voters, acting as stewards of the land for the common good. Please take this responsibility seriously and don't let outsiders tempt you with empty promises of short term employment and quick financial gain. The land is forever and you are only its guardians for a brief while.

South Park has already seen its grandeur diminished by the huge and ugly new electric power poles that now march up its spine. That's just one more assault on a beautiful place only to provide cheap electricity to people far away who have no interest in conserving energy or Colorado's natural beauty. Someone blew that deal - it didn't have to be above ground transmission lines.

Don't make a worse mistake in the San Luis Valley.

Merrell Bergin
P.O. Box 868
Salida, CO 81201-0868
719-539-7240

Merrell Bergin
Hively Block LLC
719-539-7240 X103

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The message was checked by ESET NOD32 Antivirus.

<http://www.eset.com>

Wendi Maez

From: Coffeegirl <coffeegirl@miragetradingco.com>
Sent: Sunday, January 22, 2012 9:47 AM
To: wmaez@saguachecounty-co.gov
Subject: Solar Reserve

Once again, I'm writing to have my voice heard about another "bad idea solar project" for Saguache County and the San Luis Valley in general.

Once again, our county will reap no benefit from this project except for MAYBE a few construction jobs for a short time. Once again, our county is asked to be a guinea pig for technology that is unproven and not cost-effective.

Please consider this:

The San Luis Valley has long been known for its world-class scenic values. It's home to the Great Sand Dunes National Park and a place where extraordinary wildlife migrations miraculously reoccur every spring and fall.

A little known proposal to build two 656-foot tall solar thermal tower powers could intrude on the Valley's unfettered views, wide-open spaces, decimate migrant eagle, Sandhill Crane, Brazilian Free-tail bat populations, and pose unknown hazards (such as retinal damage from glare) to surrounding communities.

The project was proposed by Saguache Solar Energy, LLC, a Project-specific entity owned by SolarReserve, LLC, based in Delaware. The company wants to build the massive twin towers on a 6,500-acre swath of land just north of the town of Center, located, not surprisingly, near the middle of the Valley.

Just 58-feet short of the tallest building in Denver -- the 56-story Republic Plaza -- the massive twin towers will dominate the mostly uniform plain of the 120 x 75-mile valley floor, for miles around.

The towers will rival the 650-foot "High Dune", the tallest dune in Great Sand Dunes National Park and Preserve - a mere 30-miles east of the towers.

According to the SolarReserve application, each of the two 100 MW units will contain up to 17,500 individual 24 x 28-foot tracking mirrors (called "heliostats") on 12-foot pedestals. The mirrors will be placed in concentric rings extending 1.6 miles in diameter around each tower in an approximately 6,500-acre field.

The Nevada heliostat field has not been built yet. If the above visual "simulation" is reflective of the "truth in advertising" that can be expected from SolarReserve, what can the citizens of Center, Saguache County and surrounding communities make of the rest of their analysis?

1) What are the costs to the County? New short-and long-term costs will have to be absorbed for school, housing, emergency, road maintenance and other county services. How will the project impact housing costs and other infrastructure?

2) What are the impacts on wildlife and agricultural resources? How will the power tower, mirrors and salt-saturated evaporation ponds effect migrant birds, including federally protected Golden and Bald Eagles, and the roughly 20,000 Sandhill Cranes and 200,000 Brazilian Free-Tailed bats that migrate to the valley (and provide free pest management services to farmers) each year?

According to local experts, the power tower is located on "some of the most productive agricultural land in the San Luis Valley". While the need for agricultural withdrawals is a daunting reality in the Valley, as farmers work to make aquifers "whole" again, is conversion of 6,500 acres of prime agricultural land the best choice when degraded or unused land is readily available?

3) What are the opportunity costs? It's no secret that local community power creates significantly more jobs and local revenue than absentee owned energy generation (See Al Weinrub's Community Power Report, for more on this). What path dependencies would the San Luis Valley and Colorado be obligated to that could stymie the ability of our rural communities, farmers, ranchers and businesses to develop local, distributed solar generation in the future? How will the project impact the ability of other Colorado communities to develop local renewable energy resources given the current limited utility market for renewable energy?

4) How will the project impact ratepayers? SolarReserve is promoting the power tower as a "proven technology", yet it plans to seek an exemption from the 2% rate cap required by the Renewable Energy Standard, allowed for

"experimental" technologies. If such an exemption is granted, will there be no limit to what Xcel Energy can bill ratepayers should it negotiate a Power Purchase Agreement with Solar Reserve?

These, and other concerns deserve a full examination before Saguache County Commissioners approve a project that could severely impact the San Luis Valley's most precious natural resources and future prospects for locally-owned and controlled renewable energy development.

Locally owned and controlled renewable energy development is the only way to go for Saguache County, Colorado, the United States, the WORLD!!

DO THE RIGHT THING COMMISSIONERS!!! STEP INTO THE 21ST CENTURY !! ENERGY CONTROLLED BY BIG CORPORATIONS IS LIKE TAKING A STEP BACK TO THE AGE OF DINOSAURS!

Sharon Ray
Saguache County Resident and Business Owner

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<http://www.eset.com>

Wendi Maez

From: M/V PALERMO <nulife4u2@msn.com>
Sent: Thursday, January 19, 2012 11:22 AM
To: Wendi Maez
Subject: SolarReserve
Attachments: Dear Edito1.doc

Wendi

Please distribute our attachment in support of SolarReserve to the three Commissioners. We are firmly in support of this project.

Thanks you

Vince and Mary Palermo

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Dear Commissioners

1/20/12

SolarReserve Will Benefit Our Valley

SolarReserve will enhance our Valley's electric grid. Because it stores solar energy as heat, it provides smooth, sustained electric generation even after sunset, unlike PV electricity, which fluctuates as clouds pass and stops at night. This will make our Valley grid more robust, reliable and easier for the electric companies to interface with. The generated electrons will be utilized here first even if the electricity is billed and paid for somewhere else. Concentrating Solar Power compliments rather than competes with Distributed PV Solar.

SolarReserve will benefit agriculture in our Valley. They purposefully chose dry air-cooling over water-cooling, in order to retire a huge amount of ground water that will be made available for farming.

SolarReserve will bring 50 long-term jobs to the area, and will bring tax revenue to our County. The parent corporation, Rocketdyne, has a long track record of highly technical achievements including putting satellites into orbit. They have the engineering from the first Solar Power Tower in the world that operated in the 90's in California. There is a project under construction in Utah, which will be followed by one in Spain, then California, and then hopefully here.

We have followed and studied this project from its beginning and support their application. We feel this is appropriate technology and an appropriate project for our Valley.

Please vote yes for this project application.

Sincerely,
Vince and Mary Palermo

Wendi Maez

From: Avadhan Larson <avadhan@larsonwellbeing.com>
Sent: Thursday, January 19, 2012 1:47 PM
To: wmaez@saguachecounty-co.gov
Subject: slv solare tower proposal

To whom it may concern,

I am a resident of the SLV and am opposed to the building of the towers until a much fuller impact study can be done on the effect on wildlife, as well as human life.

I am in favor of solar-generated power, and the SLV is obviously an ideal location for solar generation, but the technology is advancing, and I hope we can wait to approve projects that will have minimum impact on our precious natural environment, as well as protect our other natural resources.

Avadhan Larson, Crestone=

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Wendi Maez

From: Adrian Drake <raresilks@fairpoint.net>
Sent: Friday, January 20, 2012 8:28 AM
To: wmaez@saguachecounty-co.gov
Subject: Solar tower comment

Please do not approve the application for the very large solar towers. It would ruin our beautiful valley. Low profile solar collectors have so little impact like the ones in Mosca/Hooper. Please do not let a "foreign... aka... not local corporation" ruin the beauty and peacefulness of our valley.

Thank you

Lynn Drake, Crestone, CO=

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<http://www.eset.com>

Wendi Maez

From: Sandia Belgrade <sandiabear@gmail.com>
Sent: Thursday, January 19, 2012 5:06 PM
To: wmaez@saguachecounty-co.gov
Subject: Solar proposal

Dear County Officials,

I protest the plans to build two 656-foot tall solar thermal towers proposed by SolarReserve, LLC, based in Delaware

- a. I believe it will injure the bird population such as migrant eagle, Sandhill Crane, Brazilian Free-tail bat populations,
- b. It will not benefit surrounding communities; energy will go elsewhere.
- c. It will bring no profit and costs will be a burden on this poor county.
- d. It will be a blight on the Valley.
- e. It will detract from all that makes this place precious.

I urge you to take steps to support distributed solar, which brings energy, jobs and benefits to our people, not a distant corporation. If the commissioners are interested I am working on a small solar production company for our area.

thank you,

Sandia Belgrade, Crestone, PO Box 414

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Sandia

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Wendi Maez

From: Linda Joseph <ljoseph@saguachecounty-co.gov>
Sent: Wednesday, January 18, 2012 9:46 PM
To: Barbara Tidd
Cc: Wendi Maez
Subject: Re: Solar Reserve comments

Dear Barb,

I was in Denver for several days of conferences when you wrote, and returned home to a very ill dog (much better now), and also the unexpected quick sale of my parents home and the arrival of their belongings and furnishings to my house. Wonderful, sad and chaotic all at the same time ...

I heard the question you note, asked at the event. The answers were that the Conservation Area is being defined, and does not influence the activities and development of nearby communities. And, as a counterpoint to the opinion that the Solar Reserve project would degrade the area, some have expressed that they feel it would make a unique attraction, in combination with recreation and other tourism efforts ... many points of view!

Did you want me to forward your email, as we are in the comment period for the Solar Reserve application? The comment period closes in a week. It will be interesting to review the comments when they are collated ... and see how County citizens weigh in.

I am sorry I'll be missing the Roundtable, but will watch for you good notes. I'm glad I get to see my Dad again, though. He's hanging in there still, much to his dismay ...

Best, Linda

At 10:42 PM -0700 1/9/12, Barbara Tidd wrote:

Linda,

I have been thinking about this, and perhaps you have too.

How does the Solar Reserve project fit into the "Recreation, Conservation and Cultural Preservation for the San Luis Valley" as was recently brought to the attention of Valley constituents by Interior Secretary Salazar during his community conversation on January 4? I understand this event attracted a standing-room only crowd in Carson Auditorium at Adams State. There must be some interest then by Valley constituents (although I realize not all in attendance were from Saguache County) in recreation, conservation and cultural preservation in the Valley.

As we know, the Valley has been selected by Gov. Hickenlooper and Secretary Salazar to be an area of focus for the Americas Great Outdoors initiative, President Obama's program on conservation, recreation and reconnecting people to the outdoors.

I do not see any way in which the Solar Reserve project contributes to this focus and program. In fact, the Solar Reserve project with its two 656 ft. towers seriously detracts from a focus on outdoor recreation, conservation, and reconnecting people to the (natural) outdoors in numerous ways that Kate Vasha delineated in her *Crestone Eagle* article and *Saguache Crescent* letter.

If the Valley is being eyed for landscape scale conservation, how does the Solar Reserve project fit into that?

Barbara Tidd

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Home/Office:
28988 County Road 65
Moffat, CO 81143
t: 719.256.5436
c: 719.221.8434
f: 866.207.4259

stay together

learn the flowers

go light

--Gary Snyder from "For the Children"

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~~~~~  
Linda Joseph  
Saguache County Commissioner

mobile / voicemail: (719) 588-7828

<mailto:ljoseph@saguachecounty-co.gov>

<http://www.saguachecounty-co.gov>

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## Wendi Maez

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**From:** Marc Syrene <marcsyrene@gmail.com>  
**Sent:** Tuesday, January 17, 2012 8:32 PM  
**To:** wmaez@saguachecounty-co.gov  
**Subject:** solar tower

Hi Wendy, my name is Marc Syrene and I am a resident of the SLV and would like to give my input on the proposed tower. While I am a proponent of renewable energy, I am not a proponent of the proposed project. The large scale industrial model of renewable energy is not suitable to create a balance between the community, the environment, and efficient use of our power grids. We cannot rob Peter to pay Paul when it comes to renewable energy (screw up 4000 contiguous acres at a time to achieve a greener future?). No research has been done to see what kind of effect this will have on the migratory birds in this valley. Please carefully consider the consequences of opening the door to large scale developers who do not know and cherish the valley as the residents of this valley do. There is a better way and it really is not all about money. Thanks for your consideration.

-Marc Syrene

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## Wendi Maez

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**From:** Wendi Maez <wmaez@saguachecounty-co.gov>  
**Sent:** Wednesday, January 18, 2012 12:38 PM  
**To:** 'Marc Syrene'  
**Subject:** RE: solar tower

Private land.

**From:** Marc Syrene [<mailto:marcsyrene@gmail.com>]  
**Sent:** Tuesday, January 17, 2012 8:41 PM  
**To:** [wmaez@saguachecounty-co.gov](mailto:wmaez@saguachecounty-co.gov)  
**Subject:** solar tower

Hi Wendy, Is the 4000 acres a public or private piece of land? Thanks for your reply.

-Marc

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<http://www.eset.com>

Tel & fax: 719-256-5647

Philip Incao, M.D.  
276 N. Spruce St.  
P.O. Box 894,  
Crestone CO 81131

[Philip@drincao.com](mailto:Philip@drincao.com)

Saguache County  
Land Use

1/13/2012

JAN 18 2012

PO Box 326  
Saguache, CO 81149

Saguache County Land Use  
P.O. Box 326  
Saguache, CO 81149

Subject: Reject Solar Reserves 1041 permit application

Dear County Commissioners:

I urge you to reject Solar Reserve's 1041 permit application to develop two 656-foot towers on 4,000 acres near Center, approximately 25 miles west of the Great Sand Dunes National Park. The project could change the visual landscape of much of the SLV and irreversibly impact migrant wildlife, including the 20,000 Sandhill Cranes and 200,000 Brazilian free-tail bats that visit the SLV annually.

Our vast vistas and open range is one of the SLV's most valuable assets. Such open spaces and wildness areas are becoming more and more rare in the world, and it is up to us to protect this natural resource and the ecology of the planet. Please reject Solar Reserves 1041 permit application.

Most Saguache County residents who have thought about our energy future are in favor of small, local distributed green energy development, not the large scale, industrial development that would export energy out of the Valley.

Sincerely,



Philip Incao

## Wendi Maez

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**From:** Michael Brown <mbrown@windsolarusa.com>  
**Sent:** Monday, January 16, 2012 5:06 PM  
**To:** wmaez@saguachecounty-co.gov  
**Subject:** Energy Future

Hi Wendi,

You'll never make people like Ceal Smith happy so why dont we propose this:

Our world is ever growing, and the way we respond to energy demands must grow along with it. By 2020, there will be an additional two billion people placing higher demands on electricity, and fossil fuels cannot satisfy this demand without further harming the environment.

Likewise, renewable energy sources such as solar and wind, when used alone, are not realistic solutions to meet this demand.

Natural Gas peaking plants make sense until we run out of gas. So lets take a sensible approach to Nuclear power, and put a new Westinghouse nuke on the Rio Grande.

[http://www.ap1000.westinghousenuclear.com/ap1000\\_imeo.html](http://www.ap1000.westinghousenuclear.com/ap1000_imeo.html)

It could make sense for the sake of argument. The Rio Grande has flowed for 1,000's of years, and a nuclear plant would add more jobs and a much larger tax base to the Valley economy than acres of solar.

Just Sayin,

Michael Brown  
Salida, CO

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## Wendi Maez

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**From:** George Welsh <gwelsh@center.k12.co.us>  
**Sent:** Thursday, January 12, 2012 5:01 PM  
**To:** wmaez@saguachecounty-co.gov  
**Cc:** George Welsh  
**Subject:** Solar Reserve Comments

To the Commissioners of Saguache County

I am writing this letter to offer input on the decision the Saguache County Commissioners will soon be making regarding the proposed Solar Reserve solar electric generating facility.

As a resident of Saguache County and a Saguache County School District Administrator it is my belief that projects such as this offer our best and brightest youth the ability to explore hi tech work opportunities right here in the San Luis Valley, as opposed to having to pursue such options elsewhere.

In the 21st Century it is important that we seek new ways to grow our economy. It is my opinion that there is no better way to diversify Saguache's economic activity than to look toward hi technology and renewable resources as this project offers.

Inviting Solar Reserve to engage in this project will benefit the citizens of the county by providing additional construction and operation jobs and focusing attention on our willingness to move toward the future.

I appreciate the importance of the decision you have to make and encourage you to cast your vote in favor of this type of progress.

Sincerely,

George Welsh  
Town of Center and Saguache County Resident Superintendent of Schools Center, Colorado

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Katherine Michalak  
PO Box 604  
363 E Copper Ave  
Crestone, CO 81131  
719-588-0420  
[kmichalak@myfastmail.com](mailto:kmichalak@myfastmail.com)

Saguache County  
Land Use

JAN 10 2012

PO Box 326  
Saguache, CO 81149

Wendi Maez  
Saguache County Land Use  
PO Box 326  
Saguache, CO 81149

January 6, 2012

Dear Ms. Maez,

I would like to comment on the SolarReserve project for Center. While I understand why the San Luis Valley is being targeted for large scale solar projects, I also feel that each proposal must be approached with much caution. On first impression, these projects sound appealing economically and environmentally, but it has been my experience that once the details are examined, they are often revealed to be risky at best.

As a constituent of Saguache county, I care about the valley and want to see it used in the most responsible way possible. Perhaps SolarReserve will prove to be such a use, but I don't think we can afford to go with first impressions or the word of the company, whose statements will be biased by commercial interests. Let's be smart and demand rigorous research into the potential benefits and risks of these solar towers before granting a permit.

Thank you for considering my perspective.

Regards,

Katherine Michalak



## Wendi Maez

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**From:** Barbara Tidd <slvbarb498@gmail.com>  
**Sent:** Monday, January 09, 2012 10:42 PM  
**To:** Linda Joseph  
**Cc:** Wendi Maez  
**Subject:** Solar Reserve comments

Linda,  
I have been thinking about this, and perhaps you have too.

How does the Solar Reserve project fit into the "Recreation, Conservation and Cultural Preservation for the San Luis Valley" as was recently brought to the attention of Valley constituents by Interior Secretary Salazar during his community conversation on January 4? I understand this event attracted a standing-room only crowd in Carson Auditorium at Adams State. There must be some interest then by Valley constituents (although I realize not all in attendance were from Saguache County) in recreation, conservation and cultural preservation in the Valley.

As we know, the Valley has been selected by Gov. Hickenlooper and Secretary Salazar to be an area of focus for the Americas Great Outdoors initiative, President Obama's program on conservation, recreation and reconnecting people to the outdoors.

I do not see any way in which the Solar Reserve project contributes to this focus and program. In fact, the Solar Reserve project with its two 656 ft. towers seriously detracts from a focus on outdoor recreation, conservation, and reconnecting people to the (natural) outdoors in numerous ways that Kate Vasha delineated in her *Crestone Eagle* article and *Saguache Crescent* letter.

If the Valley is being eyed for landscape scale conservation, how does the Solar Reserve project fit into that?

Barbara Tidd

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Home/Office:  
28988 County Road 65  
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t: 719.256.5436  
c: 719.221.8434  
f: 866.207.4259

*stay together*  
*learn the flowers*  
*go light*

--Gary Snyder from "For the Children"

## Wendi Maez

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**From:** Deborah Michalak <shekinahhealingarts@gmail.com>  
**Sent:** Friday, January 06, 2012 11:52 AM  
**To:** wmaez@saguachecounty-co.gov  
**Subject:** SolarReserve proposal

Dear Ms. Maez,

I understand that SolarReserve is proposing to build two 100 megawatt solar facilities near Center, for a total of two towers and 200 megawatts of power. I also understand these are pilot projects, and so have not been tested elsewhere on this scale. I'm glad to know that a number of computer simulations have been generated, as well as independent impact studies conducted. However, I'm wary that SolarReserve will overstate accuracy and understate any negative findings yielded by this research, due to their commercial interests. They speak as a non-local voice with profit as the bottom line; those of us who live in the valley speak with the understanding that if the impacts prove worse than anticipated, we and the following generations in the valley will be stuck with an environmental "science experiment" which cannot be undone. I feel that our local government has a responsibility to obtain highly accurate and thorough research on the effects of every aspect of these projects before granting permits.

Thank you for taking local voices into account.

Sincerely,

Deborah Michalak

Crestone, CO

719-256-4250

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## Wendi Maez

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**From:** Elizabeth Michalak <estrella@myfastmail.com>  
**Sent:** Friday, January 06, 2012 12:08 PM  
**To:** wmaez@saguachecounty-co.gov  
**Subject:** Solar tower proposal, Center, CO

Regarding the SolarReserve power tower proposal:

As a long-time resident of the San Luis Valley, I look to the future and hope that this valuable part of Colorado will be allocated responsibly, not just for economic gain in the next ten years, but for future generations. I consider solar to be a viable energy alternative, but I also feel that the specifics of solar projects must be evaluated carefully, as there are as many faulty, inefficient experiments as there are effective ones. Once a project is undertaken, it will be here to stay, so let's make sure that only the best of the best of solar innovation makes its mark on the valley. Although impact research takes time, money and political pressure, and although it's tempting to choose the "quick and dirty" research track in order to get a solar project underway and therefore reap an economic boost as quickly as possible, I believe that it would be wise for our local government to proceed with caution. Let the solar world compete for this gem of a location; the pickier we are, the better facility we will get in the end, and the better our economics and environmental resources will fare in the long term.

Thank you for considering how to make the best possible use of our precious resources.

Regards,

Elizabeth Michalak

Elizabeth Michalak

PO Box 604

Crestone, CO 81131

719-588-0287

On December 6, 2011, SolarReserve® filed their Final 1041 Application with the Saguache County Commissioners. The Commissioners accepted the filing and gave the public until 3:00 p.m. on Thursday, January 26, 2012 to file written comments. Written comments can be either emailed to:

Wendi Maez at [wmaez@saguachecounty-co.gov](mailto:wmaez@saguachecounty-co.gov)

or mailed to:

Saguache County Land Use  
Wendi Maez, Land Use Director  
PO Box 326  
Saguache, CO 81149.

The Saguache Board of County Commissioners will hold a Public Hearing in the Auditorium of the Center School, Center, Colorado to consider the proposed Final 1041 Permit Request of Solar Reserve from 2:00 p.m. to 8:00 p.m. on February 2, 2012.

These are our comments for the Public Record:

**1. SolarReserve's® Project Creates an Extraordinary Safety Hazard:** They propose to install 182,000 tons of high explosives (sodium nitrate and potassium nitrate) with absolutely inadequate security precautions to protect against accidental detonation due to workplace accidents, accidental detonation by local hunters using interposed tracer rounds, purposeful detonation by terrorists or detonation caused by the not in-frequent summer lightning strikes at the proposed site.

- **a. How Great is the Hazard?** Almost unimaginable. SolarReserve® plans to contain these unprotected explosives in four 6,000,000 gallon tanks that are not armor-plated nor sufficiently equipped with lightning diverters to prevent electrical detonation. A few tracer, incendiary or armor-piercing rounds deliberately fired into one of the tanks by a terrorist, or worse yet, a rocket propelled grenade (RPG) carried to the site by a terrorist across the unprotected border just 275 miles to the south would be sufficient to detonate the contents of one of the massive tanks, creating sympathetic detonation in the surrounding tanks.
- **b. Just How Large an Explosion?** The 24 million gallons equate to 182 kilotons of these explosives -- equivalent in explosive power to six atomic bombs the size of those dropped by the United States on Hiroshima and Nagasaki, Japan at the end of the Second World War, albeit without the concomitant radiation -- small consolation to anyone blown to smithereens by the explosion.
- **c. Destruction within the Blast Zone:** The 40 mile radius blast zone encompassed by such an accidental or purposeful detonation would obliterate most of the San Luis Valley, with a loss of life of at least 10,000 humans with non-lethal casualties numbering nearly as high. It is probable that the blast would perforate the boundary membrane of blue clay between the unconfined and confined aquifers, thus creating one of the largest lakes in Colorado.
- **d. Psychological Damage:** The effect of such an accident or deliberate terrorist event adjacent to and simultaneously wiping out the Great Sand Dunes National Park and as many as ten towns and cities in the San Luis Valley would have highly desirable psychological damage to the United States for any motivated terrorist, rivaling that following 9/11.

**2. Air Pollution:** The highly explosive molten salts will be boiling/decomposing at 712 °F, the mid-range of the purported operating temperatures between 500 °F and 1050 °F, yet the engineering firm is proposing to simply vent the gaseous by-products (similar to steam from a teakettle) into the ambient environment, stating cavalierly that they do not need to be contained since they will condense back into the two explosive salts in the colder atmosphere, to fall harmlessly to the ground. The farmers nearby may appreciate the additional commercial fertilizer being donated unsolicited to their lands, perhaps then burning their crops into extinction due to over-fertilization.

**3. Inadequate Storage of Toxic Waste Sludge:** Incomprehensively, SolarReserve® is proposing to construct not one, but two 15 acre open air ponds to "evaporate harmlessly" their industrial toxic sludge by-products.

- **a. Pond Liners are Totally Inadequate:** 15 acre toxic waste sludge is proposed to be stored above ground in ponds and will be purportedly "safely contained" against leaks into the upper water aquifer located just eighteen feet below in saturated sands simply because they will install 40 mil plastic pond liners.
- **b. Leak Detection Alarms Provide False Sense of Security:** Their only proposed "safeguards" are a number of state of the art leak detection devices. This notion that detection will prevent leaks is patent insanity. If a leak is detected, it is far too late to empty the contents of a 15 acre lake into alternate containers of some undisclosed sort before the unconfined aquifer is irretrievably contaminated.
- **c. Pond Liners Will Inevitably Leak.** Our local ranchers and farmers know exactly how long 40 mil pond liners will endure in our high mountain plateau with its radical temperature fluctuations before leaching poisonous chemicals into the precious water supply shared by all of the valley.
- **d. No Protection for Indigenous Wildlife:** No precautions are proposed to be taken to prevent birds and animals from sampling the inviting ponds in an ecosystem where surface liquids are anxiously sought.

**4. Absolute Disingenuousness Concerning Migrating Waterfowl:** More than half of the annual 20,000 to 25,000 Great Sandhill Cranes plus tens of thousands of Snow Geese and multiple varieties of Ducks and other migratory waterfowl that migrate to Monte Vista twice a year do so from the Great Sand Dunes National Park and the Baca National Wildlife Refuge located just 8 miles to the east of the proposed SolarReserve® site, flying on an thousands-of-years-established migratory path directly over the 6,200 acre, near 10 square miles where this ill-thought-out industrial complex is to be built.

- **a. Unreliable "Studies" Performed for the Applicant:** An "expert" biologist hired by SolarReserve® somehow was able to officially report that only 359 Great Sandhill Cranes were observed flying over the site and that none landed on the site. This despite the fact that local residents traveling County Road G or County Road 59 or County Road 53 evidently were hallucinating when they observed thousands of the Cranes, Snow Geese and multiple varieties of Ducks all foraging on the ground at the proposed site and somehow managing to land there -- miraculously landing there without flying there.
- **b. Inadequate Study of Endangered and Threatened Species:** The same biologist was unable to notice any occurrences of the many different endangered species that everyone else in the area has been able to see on occasion.
- **c. Where Are the Environmental Activists and the U.S. Environmental Protection Agency (EPA)?** SolarReserve® has already had experience in Nevada and California with the massive problems endangered species -- like the desert tortoise -- can cause to their goals, so it is not surprising that they would allege that no endangered species exist on their optioned site.
- **d. Endangered Species Do Live on the Proposed Site:** We have personally seen appearances on our own property just 4 miles away from the proposed site -- admittedly rarely -- by eight endangered species: the Uncompahgre Fritillary Butterfly, the Black-footed Ferret, the Mexican Spotted Owl, the Southwestern Willow Flycatcher, the Canada Lynx, the Kangaroo Rat, the Bald Eagle and the Silky Pocket Mouse. We are not alone in these observations, despite the laughably conducted "research" by SolarReserve's® hired biologist.
- **e. Endangered Species Observed on the SolarReserve® Proposed Site by the Colorado State University Natural Heritage Biologists:** In a copyright report dated October 26, 2010, the Colorado State University Colorado Natural Heritage Program reports upon the locations and status of Rare and/or Imperiled Species and Natural Communities known from or likely to occur within the area of interest for The SolarReserve® Project in Saguache County, Colorado, both the Silky Pocket Mouse and The Bald Eagle with actual observations in Section 6, Township 40N, Range 010E and Section 12, Township 041N, Range 009E. These observations were made by real (not commercially hired) professional biologists -- someone besides us doddering old folks.

**5. The Reason We Have Great Concern about the Migrating Waterfowl is Simple:** the two 656 foot tall slip-formed gray concrete towers looming skyward to house the collectors at the top will be bombarded with reflected solar rays from thousands of acres of mirrors (heliostats) that will create temperatures of nearly 2000 degrees Fahrenheit in order to transfer temperatures of 1050 °F to the circulating, highly explosive sodium and potassium nitrate "eutectic salts".

- **a. Uncollected Solar Energy:** The heat loss to the ambient from the uncollected solar temperatures will create a surrounding ambient air temperature estimated to range from 500 degrees low down on the towers to well in excess of 1000 degrees Fahrenheit at the top of the towers.
- **b. Dynamic Thermodynamic Process:** Admittedly, this is a dynamic process that will have convective heat losses rising high in the sky above the tower tops. But any competent, non-biased engineer can confirm that ambient air temperatures averaging 750 degrees will stratify on occasion, particularly during our frequent atmospheric inversions, at exactly the altitude the migrating waterfowl typically travel.
- **c. This Spells Death for all Birds:** No mammal can survive these temperatures long enough to escape, once the high temperature field has been entered. A Thanksgiving turkey is cooked at a mere 350 degrees, by comparison.

**6. Inadequate Understanding by the Applicant of the Underlying Geological Structure of the Valley below the Proposed Site:** The two massive towers will require extraordinary foundational support, like any skyscrapers. Unfortunately for SolarReserve®, the proposed site is in one of the worst locations possible in Colorado.

- **a. Eighty Feet of Water-saturated Sand:** Below the towers-to-be is 80 feet of water-permeated sand -- called the "unconfined aquifer". The static level of the water permeating this sand varies from 30 feet to as little as 18 feet below the surface, depending upon drought conditions prevailing at the time. Clearly, this substrate is completely incapable of supporting the two towers.
- **b. The Blue Clay Layer is Four Hundred Feet Thick Below the Site:** This water-saturated, relatively impermeable, spongy blue clay layer, like the water-saturated sand above it, is totally incapable, even in conjunction with the sand, to support the incredible weight of the towers. A simple call to the State Division of Water Resources would have informed SolarReserve® of the conditions below the site.
- **c. These Two Layers "Float" upon Approximately 10,000 to 30,000 Feet of Water Below:** Here in the valley, we call it the "confined aquifer". Not even SolarReserve's® engineers would have the gall to suggest that the towers themselves could be floated upon the surface of this deep lake.
- **d. The Towers Must Be Supported by Caissons to Bedrock:** However, bedrock is at least 10,000 feet -- nearly 2 miles -- below the SolarReserve® site -- and some engineering reports place bedrock even deeper at 30,000 feet -- nearly 6 miles. Please refer to Exhibit A to these comments, where cross-sectional diagrammatic maps prepared by the Colorado State Division of Water Resources illuminate the problem.
- **e. Construction of the Necessary Caissons Would Be Problematical:** Drilling and dropping huge large-diameter caissons of rebar-reinforced concrete to depths at least twice those of the infamous British Petroleum Oil Platform in the Gulf of Mexico through our precious water supplies without creating contamination is indeed a formidable engineering challenge -- one which may well be impossible. One would hope that the State Division of Water Resources would be extremely concerned and require assurances that SolarReserve® has actually thought this through and provided adequate safeguards against poisonous contamination.
- **e. This Is a Hazardous Earthquake Zone and Monumentally High Wind Area:** Any notion that supporting caissons are not needed is simply foolhardy. Just 15 miles away to the east lies the longest earthquake fault in Colorado -- the Sangre de Cristo fault. Refer to Exhibit D to these comments. The winds that created and still maintain the precious sand dunes often exceed 80 miles per hour. Need more be said? Claims that the Sangre de Cristo fault is not active ignores the evidence on the ground of the myriad artesian hot springs erupting from the confined aquifer on the western perimeter of the valley, just east of Colorado State Highway 17, from the Alligator Farm to the Orient Mine Hot Springs.

- **f. Consideration of the Residents of the San Luis Valley Is Missing:** Both of these aquifers are critical to agriculture and ranching and, not unimportantly, the humans residing in the valley, yet little concern for the residents, especially those in "low value structures surrounding the site" according to the 1041, is evinced by the applicants. But then, they live in California, and Idaho grows enough potatoes. Who needs the San Luis Valley?

**7. Visual Pollution Is Simply Ignored by These Folks:** The two 82 story tall gray featureless crematorian-like obelisks topped by attention-getting bright magnified solar fire will most certainly detract from the recently congressionally-approved Great Sand Dunes National Park which owes much of its attraction to the pristine, unspoiled surroundings and the adjacent Baca National Wildlife Refuge at the base of the snow-capped Sangre de Cristo mountain range rising majestically more than 14,000 feet above.

- **a. This Would Be a Massive, Sprawling Industrial Complex Large Enough to Encompass All of the Cities in the San Luis Valley:** SolarReserve® is proposing a sprawling and ugly industrial complex stretching over 10 square miles just 15 miles to the east of the Great Sand Dunes National Park, belching sublimated explosives and steam high into the air above. The proposed complex is an abomination and should have been stopped before it was ever begun. It would have been stopped dead by any responsible county officials, had they been present. Imagine the Great Sand Dunes in the middle of industrial-gray and dirty cold war East Germany and you will get the picture. We have included a map of the site with the cities of the San Luis Valley overlaid in Exhibit B attached to these comments.
- **b. The Extraordinarily Deceptive "Computer Simulations" Provided by SolarReserve®:** Their Final 1041 Application simulations are laughable at best. 82 story towers seen from a distance, yet in the "simulations" no taller than an inconveniently adjacent 30 foot tall electrical power pole!
- **c. Our Own "Computer Simulations":** Attached as Exhibit C to these comments are a number of "computer simulations" we have prepared to put the lie to their transparent disingenuousness. Our simulations show that the towers are taller than the St. Louis Arch, the Statue of Liberty, the tallest redwood in Yosemite Park, the Washington monument, the Leaning Tower of Pisa, the Great Giza Pyramid, Mount Rushmore, the Salida Smelter Smokestack, Old Faithful Geyser, Victoria Falls, the Bellagio in Las Vegas, London's Big Ben, the Rio de Janeiro Jesus, the Seattle Space Needle, Denver's Republic Plaza, the Brooklyn Bridge, Schloss Neu Schwanstein, the New Orleans Superdome, the San Francisco Transamerica Pyramid, Niagara Falls, the New York Fair's Unisphere and the Abu Dhabi Leaning Tower.

**8. Sound Pollution Is Also Not a Consideration for the Solar Reserve® Engineers:** The two 100 megawatt steam turbines will each create 165 decibels of noise which will somehow, almost miraculously, be "contained" in industrial size steel buildings. Interesting. In addition these remarkably inefficient Rankine cycle engines (nominally 15% efficient) will be driving two huge generators the size of those roaring in the bowels of Hoover Dam. These noisy beasts will also be "soundproofed" inside commercial steel buildings. The redeeming grace seemingly, is the fact that they will mostly run all through the night. Your neighbor's tractor fired up in his steel building will seem puny by comparison, and you may come to appreciate the fact that the noise of the tractor starting is short-lived after enduring the first few weeks of SolarReserve®. And we won't even discuss the ridiculously low water consumption estimates provided by Adam Green of SolarReserve®. Steam engines suck up water like it is going out of style -- remember all of those water towers arrayed at regular intervals along the old railway steam engine routes? And even with careful recapture for recycling, super-sized clouds of steam will be billowing skyward whenever the enormous steam engines are chugging.

**9. The Mythical Jobs Created for Local Residents:** Yes, there may well be some temporary construction and grunt jobs created while they industrialize the valley. But temporary jobs are not real jobs. Temporary jobs typically are structured as independent contractor positions with no deductions and no benefits.

- **a. The Myriad of Jobs Created for Local Residents in Saguache County:** Once done, figure it out: there will be intermittent jobs for unskilled window washers to clean the heliostats -- perhaps as often as once a year, unless rain does the job for free. A few full-time security guards to staff the entrance guard shack. But this complex will need only a very few highly qualified steam-fitters and engineers to oversee and maintain the operation. The operation will be remotely controlled and operated on a day-to-day basis via computer linkups from Santa Monica, California, using the same few people to do so for all of their industrial complexes from one centralized location.
- **b. About the Thousands of Purported "Indirect" Jobs:** We've seen grandiose claims by SolarReserve's® very active Public Relations department about thousands of "indirect" jobs created in the communities surrounding Tonapah, Nevada, for example, where a similar abortion is being started. (See, they've never actually built one of these before)
- **c. Define the "Indirect" Jobs Specifically:** What indirect jobs? The operator of a sandwich wagon to supply food to the single security guard at the gate? A local computer expert to oversee the computer linkup to California? No, these "indirect" jobs bear a remarkable similarity to the millions of jobs claimed to be "saved" by the Obama Administration while unemployment continues to rise unabated.
- **d. Just Apply Some Common Sense:** "If you can't see them, they ain't there." Here in the valley, we call that "farmer logic". Similar to, "You can't harvest potatoes unless you plant them." The same kind of logic that is remarkably lacking from the SolarReserve® Final 1041 Application to the Saguache County Commissioners. We think we are entitled to see the Great Oz belching unsubstantiated claims of "green energy" from behind the curtain.

**10. The Looming Property and Business Taxes Scandal:** SolarReserve® is obtaining \$1.5 billion in guarantees from the U.S. government (read American taxpayers) for this project in Saguache County. Why, if it is the cat's meow as they claim, aren't private investors clamoring to fund it? In the real world, private investors rush to invest in profit-making start-up ventures. Again, why aren't they rushing to SolarReserve®?

- **a. Property Tax Assessment of the SolarReserve® Project:** Using typical and traditional rules of thumb applied by Tax Assessors all over Colorado, this property should receive an approximate property tax assessment of 30% of the real value -- or about \$450 million, in this case.
- **b. Properties in Colorado Are Then Taxed at 7% of Assessed Value:** At the statutory Colorado property tax rate of 7%, SolarReserve® would therefore be paying about \$31.5 million per annum in property taxes.
- **c. Have Our Sworn Fiduciary Officers, the Saguache County Commissioners Ignored the Law?** However, according to the SolarReserve® Final 1041 Filing, this massive industrial complex with the second and third tallest skyscrapers in Colorado will carry an assessed value of just \$5.5 million (not the appropriate \$450 million) and will pay just \$135 thousand (not \$31.5 million) per year in taxes!
- **d. Perhaps the Commissioners Will Reduce Your Property Taxes by a Corresponding Amount:** SolarReserve® will pay a mere 1% of what they should be paying for property taxes each year. Try asking the Saguache County Commissioners to reduce your property taxes by **99%**! If you are harboring the lingering suspicion that this has the stench of political corruption and secret backroom deals with suitcases of money being furtively exchanged swirling around it, you would not be alone.

**11. About Our Observations:** We fully expect these comments to be completely ignored, just as our earlier observations about this foolhardy non-green project have been. We have believed from the beginning that "the fix was in". You may then ask why we bother to go through the futile exercise of preparing comments.

- **a. When the Inevitable Accidents and Tragedies Occur:** We are convinced that when the chips begin to fall, all of the public officials will deny, deny and deny, running away from the problem and claiming no knowledge of the potential hazards posed by this politically connected enterprise.
- **b. We are Providing a Public Record:** These comments are being entered into the official public record to provide a clear and very defined road map for the scores of class action attorneys who will most certainly descend upon Saguache County after the inevitable happens.

- **c. Their Claimed Ignorance of the Formidable Hazards Will Not Fly:** Our Saguache County Commissioners, their own attorney, nor any of the SolarReserve® executives will be able to pretend they didn't know that unsupportable explosive hazards existed, that extreme damage to the environment was a foreseeable event, that extreme hazard and even extinction of endangered species was clearly foreseeable, that contamination of the unconfined and confined aquifers was probable, etc., etc. Corporations and Public Officials are responsible to their neighbors and must bear the consequences of deliberately dangerous actions, rulings and activities.

Submitted this 3rd day of January, 2012:

  
John H. Keyes

  
Erika E. Keyes

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**Attachments:**

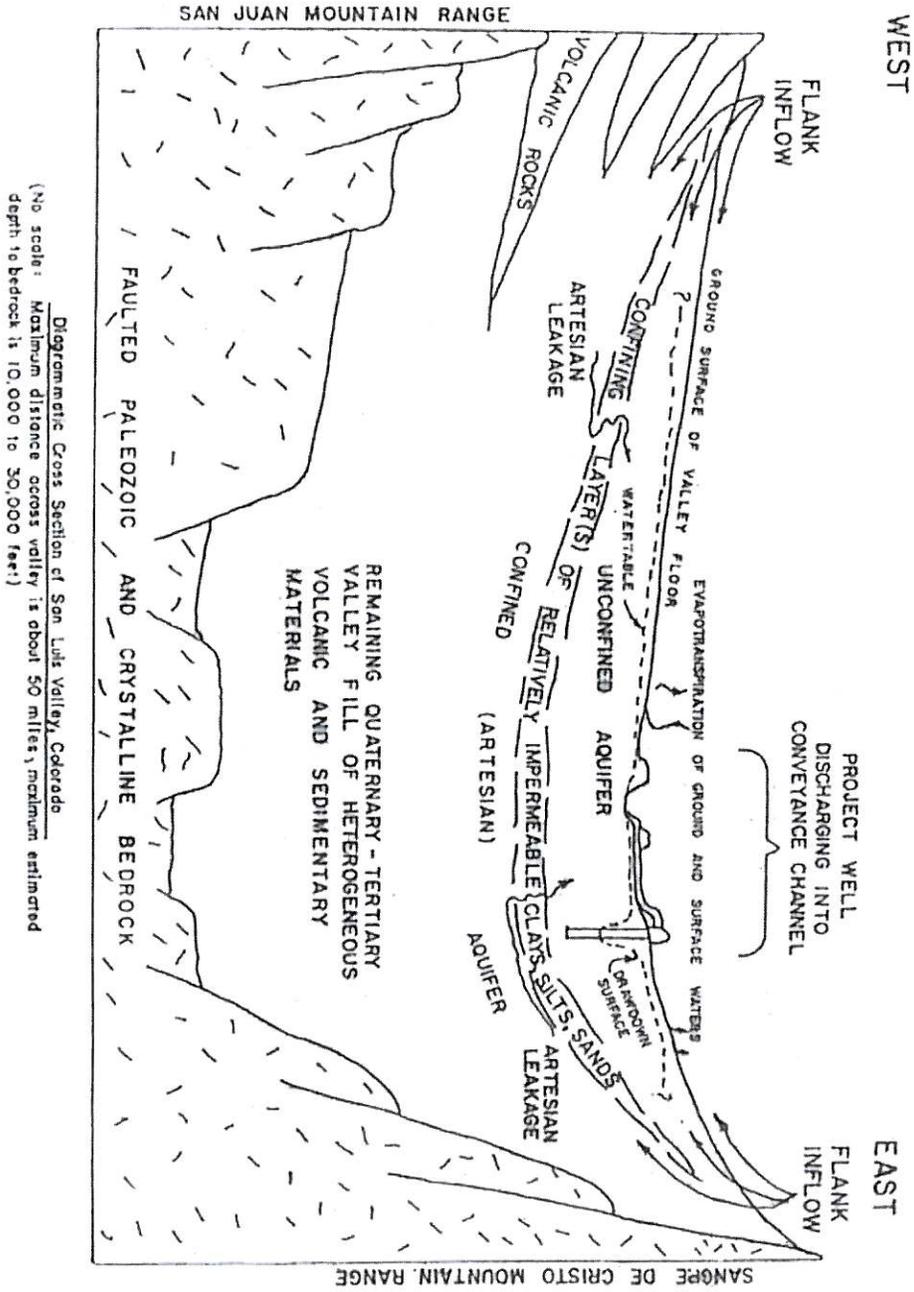
**Exhibit A - Geological diagrammatic cross-section of the San Luis Valley, Colorado, provided by the Colorado State Department of Water Resources**

**Exhibit B -Map of the proposed SolarReserve® site with San Luis Valley towns and cities (all shown to the same exact scale)**

**Exhibit C - Our own computer simulations of the proposed SolarReserve® ugly gray 82 story tall slip-formed concrete towers.**

**Exhibit D - The Sangre de Cristo Fault diagram prepared by the United States Geological Survey**

Exhibit A to the comments by John and Erika Keyes to the SolarReserve® Final 1041: a geological diagrammatic cross-section of the San Luis Valley, Colorado provided by the Colorado State Department of Water Resources.



Diagrammatic representation of depth to bedrock at proposed SolarReserve® site, showing necessity of 10,000 to 30,000 foot caissons (2 miles to 6 miles depth to bedrock) Modification of diagram provided by Colorado State Division of Water Resources.

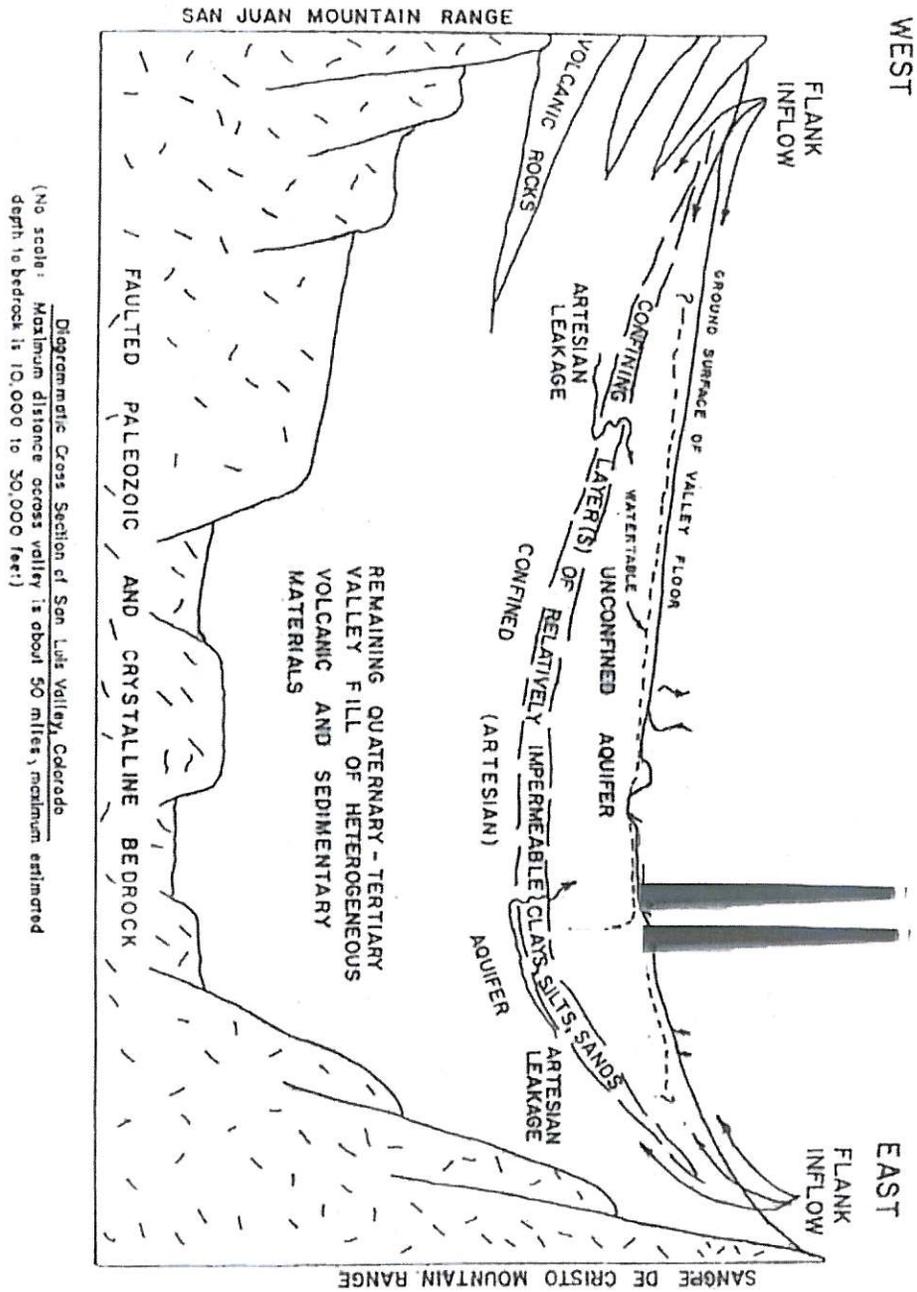


Exhibit B to the Comments by John and Erika Keyes to the SolarReserve® Final 1041: Map of the proposed SolarReserve® site with San Luis Valley towns and cities (all shown to the same exact scale) overlaid. This depiction helps to visualize just how massive this contemplated industrial complex, which will be belching steam and gaseous sodium nitrate and potassium nitrate into the Saguache County atmosphere, would be.

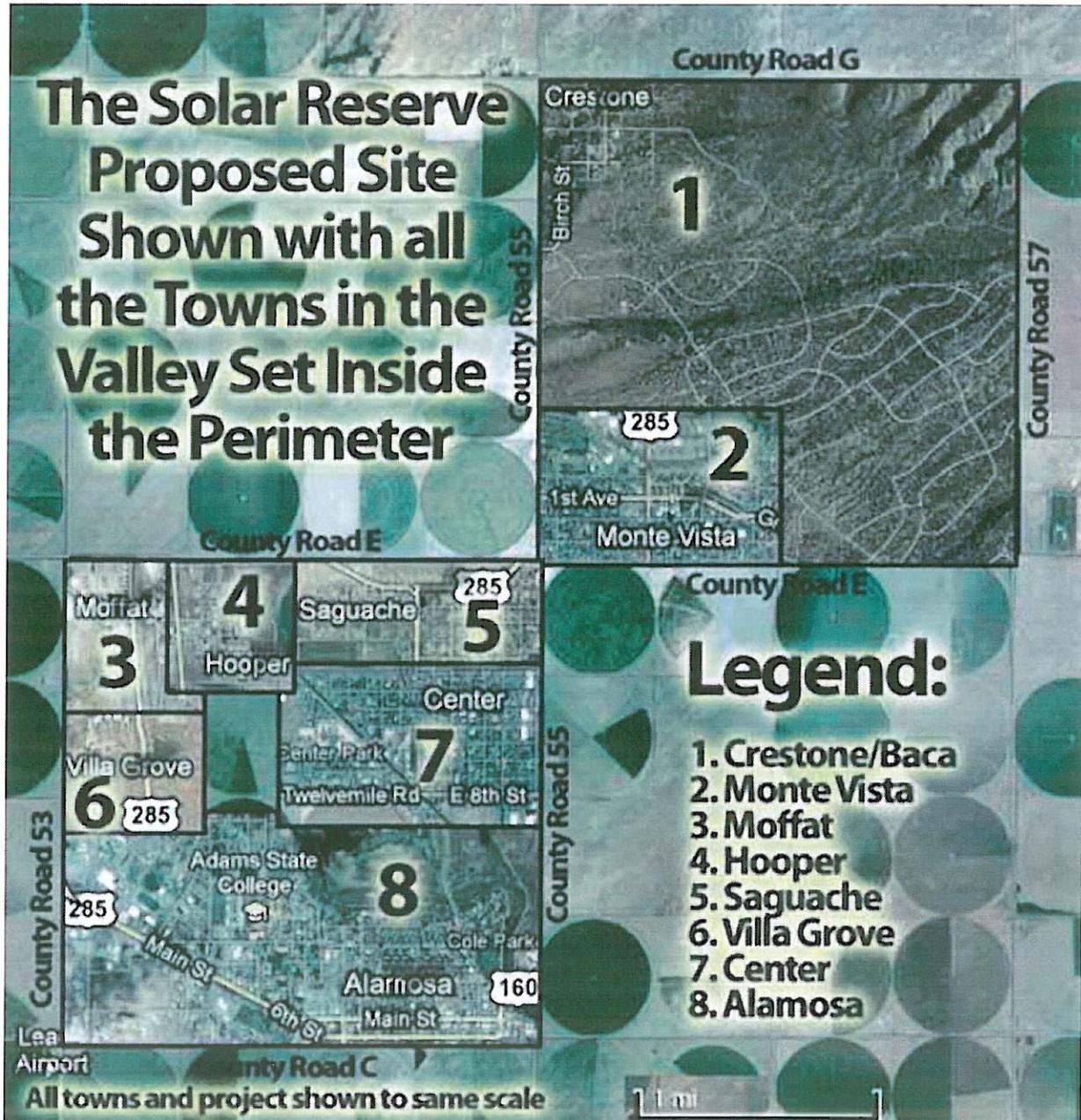


Exhibit C to the Comments by John and Erika Keyes to the SolarReserve® Final 1041: Our Own Computer Simulations of the Proposed SolarReserve® Ugly Gray 82 Story Tall Slip-formed Concrete Towers -- not Alongside the Great Sand Dunes, but Adjacent to Other World Famous Tourist Attractions. Would the Officials at Those Attractions Permit Such Abortions Nearby? Even With Massive Under-the-table Payoffs?



Statue of Liberty:  
305 Feet

Solar Reserve:  
656 feet

San Francisco  
Transamerica Pyramid:  
850 Feet

Solar Reserve:  
656 Feet

London's  
Big Ben  
Tower:  
316 Feet

Solar  
Reserve:  
656 Feet

Old Faithful:  
145 Feet

Solar Reserve:  
656 Feet

Victoria Falls:  
360 Feet

Solar Reserve:  
656 Feet

The Brooklyn Bridge:  
277 Feet

Solar Reserve:  
656 Feet

Tallest Redwood:  
379.1 feet

Solar Reserve:  
656 feet

"Hyperion" Redwood  
in Humboldt County, CA

Rio de Janeiro Jesus:  
130 Feet

Solar  
Reserve:  
656 Feet

Leaning  
Tower  
of Pisa:  
186 Feet

Solar  
Reserve  
Tower:  
656 Feet

Schloss Neu  
Schwanstein,  
Germany:  
213 Feet

Solar Reserve:  
656 Feet

Great Sphinx of Giza:  
66.34 feet

Solar Reserve:  
656 feet

Salida Smelter  
Smokestack:  
365 Feet

Solar  
Reserve:  
656 Feet

