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Hi Ms. Clifford,

The proposed Energy Facility near Klamath Falls Oregon is going to have a hugely negative impact on that community.

That area of Oregon has been drought stricken for years. This proposal would consume vast quantities of water during construction and for maintenance on the project once construction is complete.

This year, Oregon has suffered through record breaking wildfires partially due to the drought that has been felt across the state. This project would consume water that this already drought stricken agricultural community desperately needs. Proposing to pull millions of gallons of water out of a drought stricken agricultural community, and then running high voltage lines to move the power to it's intended location, greatly increases the risk of wildfire in the area.

This area of Oregon has some endangered/at risk species that will be impacted by the construction. Pulling millions of gallons out of the aquifers and rivers, will impact the endangered fish species, as well as some of the migratory birds that use those areas on their travels.

This project will have very few benefits for the local community. First people will be forced to sell their land some of which has been cared for by the same families for generations. Then vast amounts of water will be pulled from the already drought stricken lands hurting the entire community. Then when the project is complete the energy generated will not even be used to power this community. It will be sent to the substation that sends power to Southern California. These points far over shadow the small increase in jobs this project will bring.

If California needs power, then they should build their power plant in their own state and own the risks that come with building this type of facility. California steam rolls Oregon into owning risky projects that they don't want to deal with too often.

Please stop this project before it negatively impacts a community that already feels like the Willamette Valley walks all over their lives to benefit a different state and never gives anything back.

Annabel Nordal
Dear Ms. Clifford,

I strongly object to the purposed solar site to be installed on Teare Lane in Bonanza, Oregon. I also live on Teare Lane and I am appalled by the way these proceedings have been handled. Neighbors and community members had very little notice of this project and next to no time to voice their concerns and research the repercussions the solar farm would have on our small agricultural community. That is exactly what Bonanza Oregon is; a small agricultural community. We are small town America and a close knit community that stands up for one another and the injustices that may be thrown our way because of our size. This land is indeed agricultural land. The proposed site is a working ranch. It houses pasture for grazing, alfalfa, and grain. The ranch supports a working family, a hired hand, and many part time employees.

There are many reasons why I object to the building of a solar farm on land that has been zoned as agricultural use. The first being, a solar farm is not agricultural. At this point, I don’t think it can be deemed environmentally friendly. The amount of water that it will take to see this project to fruition is terrifying. Do you think the amount of water that is needed to build and run this plant will not affect the neighbors? We all drink from the same watershed. My wells will unquestionably feel the impact. My children will feel the impact, my animals and livestock will feel the impact. Is it fair that my cattle go without water so this company can mix their concrete? No.

The batteries that power the solar panels last 5 years on average. Where do they go after that? To the landfill? How is that environmentally friendly or efficient? What are the fire hazards associated with this project? Our volunteer fire department does not have the resources or experience to deal with a fire that could easily spread to neighboring ranches and Bryant or Gearhart Mountain. The closest town that could send back-up is 40 miles away. Our community would be burned to the ground by the time they arrived.

The area in which this borders is considered wetlands. There are many migrating birds, deer, and aquatic creatures that use these lands for habitat. We have a number of eagles and blue herons that call this area home. The water usage alone will wreak havoc on their habitats. Where should they go? How will this affect their habitat? The deer that burrow down in these forests during the cold winter months and eat the bitter brush to survive will have nowhere to go and nothing to eat. Their entire environment will be bulldozed beyond recognition.

As far as I am concerned this project comes down to corporate greed. People associated with this project are lining their pockets with no regard for the people that keep this country fed. Small town farmers and ranchers are some of the most respectful and mindful stewards of the environment and we are not going down without a fight. We will protect our land and our livelihoods until the bitter end.

Respectfully,

John and Erin Northcutt

7818 Teare Lane

Bonanza, Oregon
Good Day,

My name is Carolyn Northcutt, I live at 6521 E Langell Valley Rd in Bonanza, OR and have resided there since 1989. My husband and I raised 3 children on this 550 acre ranch. My daughter and two grandsons live in my rental on this property also. My son lives a mile away on another 200 acres at 7818 Teare rd Bonanza with his wife and two small sons. My son works for me full time, as I raise cattle and alfalfa hay on land that is connected to the propose solar farm by the Hecate Energy NAF LLC. I own approximately two miles of river frontage on both side of the Lost river.

Let me say I and growing family are definitely opposed to such a project. There are several reasons besides some most obvious such as turning a prime agriculture property into a solar farm. That ranch is prime hay and grain and cattle grazing pastures.

The use of water from that gas well is being downplayed, but in the notice of intent to apply for cite certificate they state they will be using 800,000 gallons per week for two months; then 48,700 gal per week for 10 months. And then an additional 3,150 gallons for concrete. Plus water for dust control. PLUS water for a “potential future buildout of Facility may include an air-cooled, natural gas fired Peaker generating facility, a related or supporting natural gas pipeline to the existing Malin natural gas compressor station and a related one supporting water supply pipeline. No mention of this in the letter from ODE sent to just a few neighboring ranches.

On adjacent properties there is a spring fed pond home for many birds and ducks. On page J-2 they state, “Most of it is within the boundaries of the proposed solar project. On page J-2 they state “Most of the water bodies are associated with irrigation practices. This may be true but the pond is still bird habitat and migrating birds often rest there. During drought years when we were not able to irrigate the pond was still there fed by springs. So it is a natural wetlands. The Hecate company mentions “ODFW Habitat Mitigation policy” at the end of the segment. In fact they mention mitigation after almost every paragraph dealing with environmental issues.

The document on page J-4 claims the scenic “impact will be negligible: since the site will not be visible from “Goodlow Mountain Research Natural Area, OC&E Wood Line State Trail and Klamath Falls-Lakeview Forest State Scenic Corridor”. We have no scenic value unless we can be seen by those sites? Tell that to the many fisherman, birders, bikers, hunters, campers that drive through our valley. Plus those of us that chose to live here.

On page J-5 they claim that “much of the land is uncultivated” This is an exaggeration bordering on a lie. Much of the ranch is pasture, alfalfa and grain land. The ranch has supported a family, one full time employee and several part time employees. This is a working ranch.

There is mention of fire safety during construction, but nothing about fire for the life of the facility. I am pretty sure our local volunteer fire crew is not trained to deal with a fire involving a major power line and 90 some acres of batteries. A fire on this site would easily destroy neighboring homes and spread to Bryant Mountain.

Any community member here will tell you that this property(the center and northern portion)houses one of the largest deer herds around that bed down on this property and feed down to the north every evening. The southern part of the property houses a large antelope population for most of the year. The eastern portion of the property butts up against a large marsh or pond as I mentioned above which is filled with migratory birds of every kind much of the year. Canadian geese, snow geese, swans, a variety of ducks and Sandhill cranes can be found in the eastern portion of the property every fall and spring.

It actually blows me away that this project was not stopped in its tracks for the wildlife concerns alone. I and my neighbors urge you to reconsider a more appropriate site for such a large scale project.
I am also in the process of contacting the Western Resources Legal Center for their help in stopping this project.

Sincerely,
Carolyn Northcutt,
John B. Northcutt, Erin Northcutt and Amy Hammerich and sons
Sent from Mail for Windows 10
Katie Clifford,

I want to register with your office that one month for the local community to consider and provide feedback on this project is not enough time.

We are a rural community that needs to be befriended by your agency if you want to get us to change our attitudes about non-ag use of this historically agricultural valley and community.

I only learned of this proposal a few days ago and have not had any opportunity to study or consider it. Again, ag community, people work as long as the sun is up. The only info I have is from neighbors and they are vehemently opposed and looking for support for their opposition.

I ask for more time to learn about the project and to consider the implications for the valley and our community.

Thank you,
Ceola Norton
Hello Kae,

Thank you for your email response and the information you sent. When I wrote to you that the local communities have not had enough time I did not mean we needed another 30 days to comment. My point is that the Oregon Department of Energy has not done the groundwork in this and probably other rural communities.

For the past 5, 10, 20 years local ranchers and farmers have begun adopting solar energy in small ways: to open and close gates, operate water trough floats, even power fairly lengthy electrical fencing, probably other uses. These uses were excellent openings to educate and indoctrinate rural landowners and communities to consider solar power in a more integrated and universal way. All of these years folks from DOE and the solar industry could have been in the schools and communities helping youth and their families to look at their land in a new way and to consider the value of rural landscape as important to the future of clean energy in the USA. Rather than investing in relationship building folks here feel blindsided by yet another government agency coming out of the blue saying this is what is going to happen in your community.

It's perceived as arrogant. It is oppressive and disrespectful. I strongly recommend that the leadership in your agency make real efforts to build relationships in the communities you foresee as viable for solar power in the future. Bring people along rather than starting a brawl.

Thank you,
Ceola

On Thu, Oct 29, 2020 at 6:35 PM CLIFFORD Katie * ODOE <Katie.Clifford@oregon.gov> wrote:

Good evening,

Thank you for submitting a comment on the Bonanza Energy Facility Notice of Intent. **We wanted to let you know that we have extended the comment period through November 30, 2020.** We encourage you to share the extended comment deadline with other folks who may be interested.

The Department and applicant held a virtual public informational meeting on October 13, 2020. Audio and video recording from the informational meeting, along with the agenda and presentation information, are available on the Department’s project webpage: [https://www.oregon.gov/energy/facilities-safety/facilities/Pages/BEF.aspx](https://www.oregon.gov/energy/facilities-safety/facilities/Pages/BEF.aspx). The webpage also includes a copy of the Notice of Intent.

*If you would like to receive future email notices for this project or other Energy Facility Siting Council notices, please sign up here: [http://web.energy.oregon.gov/cn/a6n53/subscribe](http://web.energy.oregon.gov/cn/a6n53/subscribe)*.

Thank you, and have a good night.
Greetings,

Please find this email in opposition of the proposed Bonanza Energy Facility which would be located in Langell Valley, Oregon.

As a life-long resident born and raised just a few miles from the proposed facility, my concern is with the loss of potential land, which is zoned for agricultural and forest use. This land, obviously, is very valuable. My grandfather and his brothers were original homesteaders in Langell Valley and my father continued to keep the ranch in our family possession. Consequently, I have assumed ownership and plan on passing our ranch on to my children in the future. Agriculture is very important to our family and we are concerned that the proposed energy facility will open the door to additional loss of valuable ranch and farm land.

I have seen non-yielding turn land turned into profitable and productive land with persistence by ranch and farm owners. Although the proposed site for the facility may not currently be productive it very well could be. It would be devastating, if in the future, the site could not be use for agricultural purposes due to damage from the energy facility. As the proposed site would hook up to the Captain Jack Electric Substation it doesn't even appear any Oregonians would benefit from the energy facility.

My concern is that this email, along with opposition expressed by other local residents, will fall on "deaf ears" as a decision to approve the Bonanza Energy Facility may have been already determined. I also understand that this proposed facility is backed by corporations with a significant amount of money and influence. There is even a picture of the proposed Bonanza site on the Hecate Energy web page! Consideration for alternative means of energy is good, but I hope those who are determining approval of this facility know where their food is grown. The construction of the proposed facility could have a ripple effect on other local ranchers and farmers.

Please note that I oppose the construction of the proposed Bonanza Energy Facility by Hecate Energy, which would be located in Langell Valley, Oregon.

Deborah Ochoa
Circle 5 Ranch
Bonanza, Oregon
Katie Clifford
Senior Siting Analyst
Oregon Department of Energy

October 26, 2020

Katie Clifford,

Please find this email in opposition of the proposed Bonanza Energy Facility which would be located in Langell Valley, Oregon. As a life-long resident of Langell Valley, born and raised just a few miles from the proposed facility, my concern is with the loss of agricultural land and valuable ground water. This property is currently zoned for agricultural and forest used.

My grandfather and his family arrived in Langell Valley in 1882 when he was 10 years old. My grandfather, William David (W.D.) Campbell, lived and raised his family in Langell Valley until his death in 1960. During his life-time he mainly produced hay and cattle on approximately 7,000 acres most of which was prime agriculture land. My grandfather worked cooperatively with his neighbors supporting all efforts to develop and sustain the land with a goal of producing quality beef and crops. He was recognized as a very successful rancher and farmer in Klamath County and was critical in the development of agriculture in Langell Valley.

After his death, W.D. Campbell passed on his legacy as an agriculturalist on to his adopted son, Louis Randall. W.D. and his wife Mildred, adopted Louis, and his sister Willie Mae Randall, during the Depression Era from Texas relatives. Louis was about 13 years of age when he arrived in Langell Valley in the mid-1930's. Louis graduated from Bonanza High School and briefly left to attend college at Linfield. He soon returned to Langell Valley to live and work with W.D. Campbell on the Circle Five Ranch which was created in the early 1900's. Louis assumed ownership of the Circle Five Ranch after the passing of W.D. Campbell.

My father Louis Randall, continued to develop the Circle Five Ranch and extended the ranch property to include about 9,000 acres, much of which was prime cattle and crop land. My father understood the importance of land conservation and was recognized by many local, state, and national organizations for his preservation of land and wildlife habitat. Awards for his management included bird and wildlife safeguarding and he was one of the first ranchers in Oregon to pursue juniper tree removal. He understood the impact that juniper trees had on water consumption and the importance of conserving water to develop prime agricultural land.

The Circle Five Ranch has been in our family for over 100 years and is in its third and fourth generation of continued operation. My son and I are currently operating the cattle ranch and continue many of the same conservation practices both my grandfather and father started. We understand and practice the importance of keeping and honoring the legacy both have left; including but not limited to working with our neighbors to develop prime agricultural land and the preservation of the resources which support the land.

As a life-long resident of Langell Valley, I oppose the construction of the Bonanza Energy Facility for the following reasons:

- Tremendous amount of water used for this project will impact other land owners’ water
• Waste water from the project may not be suitable for agricultural use
• The wetlands in the project area are year-round (not just seasonal) and would be detrimental to bird habitat, including the Bald Eagles and Sandhill Cranes
• Much of the land for this project is still used for agricultural purposes (this is a working ranch)
• Disposal of the solar panels and associated equipment after use is uncertain
• Corrosion and failure of battery operations may have a negative impact on local land owners
• Fire management/control for this project is of major concern
• The scenic value of this area will be hurt
• Wide ranging property values may diminish due to this project
• The aesthetics of a country drive will be impacted as the project will be located on a main route to outdoor recreation areas, i.e. Gerber Reservoir

We need to honor those who have honored our land by practicing good conservation practices with the simple goal of keeping and developing good quality agricultural land; agricultural land that will continue to produce food for people, and for the animals that feed people.

As an elected representative of the people of Oregon, and not one who is representing an out-of-state corporation, I’m asking that you help stop this energy facility from being built. It will be a detriment to Langell Valley.

Please contact me with any questions.

Thank you,

Deborah Ochoa
Owner, Circle Five Ranch
Langell Valley, Oregon
Email: daochoa93@yahoo.com
Home phone – 541-545-6662
Katie,

Please find attached a letter from myself and Greg identifying our concerns as to how the proposed Bonanza Energy Facility will affect our property. If this is approved, we believe the property value will diminish and might not be sellable. Also, have attached a map, showing the actual location of our property, within the proposed solar array area, confirming how it will be impacted.

Furthermore, would you be able to provide a list of the committee members and their titles/positions, as people in the community are asking for this information?

Respectfully, Alison Parsons.
6201 Teare Lane
Bonanza, OR 97623

14th October 2020

Referencing: Bonanza Energy Facility.

We successfully took possession of this property in December 2019, after spending 3 years looking in Oregon for property that would meet our requirements. We wanted to have wonderful natural views, peacefulness in a rural community, with many opportunities to see wildlife, and be able to own some livestock. As this property is EFU-CG zoned (Exclusive Farm Use – cropland/grazing) we believed our intentions were fulfilled.

On 30th September 2020, we received a letter from the Oregon Department of Energy dated 29th September 2020, and actually postmarked 28th September 2020. The letter documents them receiving a Notice of Intent (NOI) from Hecate Energy LLC who intend to construct and operate the Bonanza Energy Facility, a proposed PV Solar energy generation facility occupying approximately 1,851 acres of private land in Klamath County, southeast of Bonanza. Maps show the solar panels completely surrounding our property, thus impeding on our scenic views; and the proposed high fences will prevent wildlife coming through. Also maps indicate there is an intention to hook up to an existing water well for extensive water usage during construction, and as our personal well is located no too far away from this well, there is a possibility of no water available to us. The battery storage system is to be housed in up to 11 separate enclosures, each 600 feet in length, by 600 feet wide, and up to 30 feet in height, equivalent to 91 acres. Consequently, our property will be firstly in a construction zone, and then end up in an industrial zone, scenarios that totally go against our wants.

Some research has revealed that Hecate Energy LLC was formed 09/18/2014, completed a wildlife study 6/12/2020, collected tax lot information 07/27/2020, and submitted paperwork August 2020. If they have had years to compile this application, why do private property owners only get 1 month to respond, as the Public Comment Deadline is 29th October 2020. Protocol should allow for far more time for research and response.

Concerned that the construction, maintenance, removal after use fullness or technology changes, and the hazardous waste generated from the solar panels (lifespan up to 20 years) and batteries (lifespan 5-15 years) will impact the environment. Also question why private primary agricultural land is to be used, instead of applicable state or federal owned land. We are reaching out to any and all entities that can help to disagree with this proposal, and allow existing private property owners to continue farming and remain in an established rural community. Wish to announce that if this proposal is approved, that we want full money compensation for our property, and for moving expenses that will be incurred as we vacate the property.

Gregory P. Ashbach 10/14/2020 Cell # (907) 460-7601

Alison J. Parsons 10/14/2020 Cell # (907) 799-4174
I do not want your Bonanza Energy Facility.....Keep Bonanza safe for Rancher's, Farmers..Not big city government.

susan Patton
October 26, 2020

Katie Clifford, Senior
Siting Analyst
Oregon Department of Energy
550 Capitol Street NE
Salem, OR 97301

Dear Ms. Clifford,

WHY? Why are we even having to defend our precious community in Langell Valley? I've been a part of this community for over 45 years, as my family moved here in 1976. My parents moved my brother and I to Langell Valley to get away from the city life, and most importantly because my dad wanted to be a farmer/rancher. That was his life-long dream. He was 31 years old at the time and he still to this day farms his land along with my mom. They are both now in their 70's and work as hard today as they did in their twenties and thirties. They did not make all the sacrifices that they have, to now have to defend this precious valley because some company wants to come in and put in an energy facility. This land is indeed agricultural land and the proposed site is without a doubt a working ranch that houses pasture for grazing, grows alfalfa, grain and potatoes. This ranch supports a working family, a hired hand, and many other employees.

Every year we pray that we receive enough water from snowpack or rainfall to water our cropland and grazing land. This energy facility will most definitely impact our water supply. The amount of water that this facility will need is appalling. Do you or the Hecate company honestly think that this facility won’t impact our groundwater? I live on Teare Lane and I know this will have a negative impact on my property, my neighbor’s property, and future generations to come.

There are numerous environmental concerns with this proposed facility. The hazardous
waste that will be generated from the solar panels, and the batteries that will be used to power them are a huge concern. The batteries themselves only have a lifespan of 5-15 years. Do they then go to a landfill? How does this not have an environmental impact on our valley? We all drink from the same watershed. Can you guarantee that our water won’t be contaminated by this energy facility?

The land that borders the proposed site of this energy facility is considered wetlands. The wildlife will most definitely be impacted. We have deer, migrating birds, and other critters that live in these wetlands. Where are they supposed to go if this facility is allowed to be built? The height of the fencing alone will impede their ability to migrate to another place. We pride ourselves in what our area has to offer. We have many people that bike and take car rides out to our area just so they can take in the beauty and peacefulness that it has to offer.

In closing, I adamantly object to this project even being considered in our beautiful valley. This is just another project being considered for big corporate gain and not the well-being of the community members that live in this valley. The energy generated by this facility won’t even benefit our area. Don’t let this company ruin our small town America!

With Respect,
Bernis and Trevor Peterson
I am writing this to express my views on the proposed energy facility to be built south east of Bonanza Oregon in Langell Valley.

I am opposed to this project for numerous reasons. The proposed site borders my private property which I and my family have owned since 1978.

Besides being a landowner in the Langell Valley & using the land for agriculture use for which it is zoned for. I believe this project does not belong in this beautiful valley. The zoning is for Agriculture and forest not power and energy facilities. The reason I live here and my family before me and now up and coming young family members live here is because of the beauty and lifestyle we have all come to embrace. Having an Energy/Power plant as neighbors is not what I had in mind for my retirement years. I had planned on living the rest of my days out on this place which I’ve called home for the past 42 years. The 1,862 acre site is the gate way to Langell Valley. The proposal site is zoned for Agriculture and forest and should remain as such.

Over the past 4 decades with landowners permission I have rode horses, hiked and 4 wheeled all over the proposed site and have seen countless wildlife such as Bald Eagles, Coyotes, Cougars, etc. it is a known Winter migration area for deer. How could this project not change what I have witnessed for decades?

Also a known area for Native American Artifacts, possible burial sites. I am sure the tribes would not be excited to see this.

I have questions about the proposed buildings 3.95 million square feet that house how many batteries? How can that be a good thing? How much water and how will it affect the neighboring properties domestic or irrigation wells. Not to mention the decline in Property value for everyone that’s a neighbor to this plant.

Tonya Finkley  
37150 Jones Rd.  
Bonanza, Or 97623
My name is Tonya Pinckney
37150 Jones road
Bonanza Oregon 97623
541 892 2792

I am a neighboring property owner adjacent to this proposed site: I am opposed numerous reasons: Zoned agriculture, not industrial.
Wildlife/ winter migration for deer, Antelope, bald eagles Sandhill cranes, Canadian geese, & numerous other birds fly over this year around, wetland area on proposed site
Native American artifacts on proposed site.
Water taken for project WILL affect aquifer for domestic & irrigating wells in this area.
Location could be just a few miles west on non productive ground on Bryant mountain closer to Captain Jack substation.
Please do not build this in the Langell Valley

Tonya Pinckney
From: George Rajnus
Sent: Thursday, October 29, 2020 2:05 PM
To: CLIFFORD Katie * ODOE
Subject: solar panels in langell valley

Follow Up Flag: Follow up
Flag Status: Completed

Katie,
It is in the interest of the folk of the Langell Valley to not clutter such beautiful landscape with solar panels.
   It will interfere with migrating antelope, winter range deer, farm crops, bald and golden eagles, and endanger Sandhill cranes.
I own 209 farm acres where these animals live.
Sincerely,
George Rajnus
No on this proposed facility. Driving to work, the park, to town we would have to pass by this facility. I moved here over 40 years ago to live@ A in the country. This will change the beautiful view that is there. That would be bad for our grand children's future. That land is zoned agricultural and should stay that way.

Sent from my Verizon 4G LTE Smartphone
Dear Katie,

I would like to encourage you to do DENY the application for site certification for the Bonanza Energy Facility (solar photovoltaic energy.) This proposed site is located in a scenic and agriculture area and will do grave harm to the land owners and the people who enjoy the birds and wildlife that reside in the area. I am a cyclist, that area is a very popular ride for cyclists. We have century road rides hosted in the area that bring people from all over the world to our little town to enjoy the beauty of our rural lands.

Please do not allow this facility to go in!

Sincerely,

Debbie Rodgers
Accountant/Buyer
Production Metal Forming, Inc.
8888 Highway 66
Klamath Falls, OR 97601
541-882-9088
To Whom it May Concern,

As a resident of Klamath County residing in Langell Valley near Bonanza, OR, I would like to voice my strong opposition toward the proposed Bonanza Energy Facility as put forth in a Notice of Intent from Hecate Energy LLC. This project is HIGHLY opposed by most, if not all, residents of the immediate surrounding and outlying areas of the project. We do not want to see our beautiful, wildlife-filled valley turn into an industrialized, energy-producing wasteland. This property SHOULD NOT be re-zoned from its current agriculture and forest use.

1. The use of water is being downplayed. In fact, the letter that was sent to neighbors of the project didn’t even include the amount of water that is to be used. On page J-2 of the Notice of Intent, it states that “Approximately 11.5 million gallons of water will be needed...” and “If the water source is not sufficient, an alternative offsite source will be considered, or water will be obtained from an onsite well to be permitted under a limited water use license and used during operations” (page K-1). I have MAJOR issues with this, as water rights are an enormous point of contention in Klamath County. For instance, this company can propose to use 11.5 million gallons of water over the course of 12 months but I, as a homeowner, cannot get enough water permissions to irrigate 10 acres of pasture. With the corruption I have seen in Klamath County in regards to water rights, I do not see how this company will not find loopholes to get whatever water they “need” from wherever they “need” it.

2. The impact of this project on wildlife will be irreversible. Just tonight when I was driving home from Bonanza, there were 60 deer feeding in an alfalfa field before going back to their bedding area that is within the proposed solar array area. If this project goes through, their bedding area would be gone. There are also ponds with most of their boundaries within the proposed solar area, which is claimed on page J-2 of the Notice of Intent to be “associated with irrigation practices”. While this is true, migratory birds use the ponds to rest in while migrating. By removing/draining/altering these ponds and significantly changing the footprint of the land, the ecosystem of the area would be destroyed.

3. The claim on J-5 of the Notice of Intent that “much of this land is currently uncultivated” is borderline lie. Much of this land is developed ranch land consisting of pasture, alfalfa, and grain land. It is a working ranch that would be destroyed for the greediness of big corporations who only value dollars and not livelihoods.

4. I am also concerned that this construction project will make Langell Valley less safe. We moved to this valley because it is a safe place to live and raise our children. This is a quiet valley, but according to page K-2 of the Notice of Intent, “a peak construction workforce of 300 workers will be employed” and that makes me concerned for my family's and property's safety. There are less than 1,000 people who live in Langell Valley, and 300 extra people is a lot to add to the area, even temporarily. I would not feel safe living in my own home knowing there are 300 extra people (whom I don’t know) less than a mile from my home.

5. What concerns me most is the lack of focus on potential fire hazards. As is commonly known, the California power company PG&E has been responsible for causing over 1,500 California fires in the past 6 years because of lack of maintenance and equipment failure. From reading the Notice of Intent from Hecate Energy LLC, it seems as though there is very
Thought or concern for potential fire hazards. After construction is complete, fire protection would fall directly and solely onto the Bonanza fire department. The Bonanza fire department is completely volunteer, and doesn’t have the proper training to handle a fire involving a massive power line and 90+ acres of solar batteries. Knowing this, the residents of the surrounding areas are very concerned that ANY fire after construction could very easily grow out of control, destroying neighboring homes and spreading to Bryant Mountain and beyond. Because we have such a similar climate to northern California, many residents see how Hecate Energy could easily become like PG&E and be responsible for starting many destructive fires here in Klamath County. If that hazard can be prevented by shutting down this solar energy project, it should be.

The approval and construction of this proposed energy facility would DESTROY the hearts of the people of Langell Valley, who live and work in this valley and enjoy and appreciate the beauty it brings. Should this proposed energy facility be constructed, much of our joy of the scenic valley would diminish as we would be forced to see thousands of acres of solar panels every time we drive out of our beautiful valley.

Please DO NOT re-zone this area from its current agriculture and forest uses.

Sincerely,

Amanda Roehrig
(208)-249-5222
39709 Bunn Way
Bonanza, OR 97623

Sent from Mail for Windows 10
Katie,
My name is Stephen Roehrig.
I reside in Langell Valley with my wife and 3 children. Please consider the letter addressed to our commissioners.
Please let me know if there’s something more I can do to help shutdown this idiotic proposal.
28 October 2020

Stephen and Amanda Roehrig
39709 Bunn Way
Bonanza, Oregon 97623

Klamath County Board of Commissioners
Donnie Boyd, Commissioner, Position 1
Kelley Minty Morris, Chair, Position 2
Derek DeGroot, Vice Chair, Position 3
305 Main Street
Klamath Falls, Oregon 97601

RE: Proposed Bonanza Energy Facility

Commissioners,

As a family whom would live in the shadow of the proposed Bonanza Energy Facility we kindly ask you to reject further consideration of the proposed energy facility located within one half mile of our home. As citizens of Klamath County we strenuously object to this project. We stand with others whom have presented objections in person or though cards and letters.

The Oregon Energy Facilities Council appointed the Commissioners of Klamath County as a Special Advisory Group as required by State of Oregon Statue. As our representatives it is your duty to reject the project proposed by Hecate Energy Bonanza, LLC as it imposes substantial risk to the rural community of Klamath County. In addition the Town of Bonanza would be negatively impacted by the construction activities and not gain any long term economic benefit from the project. Homeowners adjacent to the project would sustain the risks of property devaluation, ground water (aquifer) shortages and potential hazardous material contamination of the soil.

- The transportation infrastructure is ill suited to support the heavy equipment required at the proposed location. Substantial improvements would be required the transportation infrastructure.
- Residents surrounding the site would suffer delays in emergency services during the site construction as the projected 300 personnel and heavy equipment travel to the jobsite daily blocking already narrow roads.
- The Lithium Ion battery system proposed suffers from a defect called thermal runaway; where an internal short circuit of the battery packs overheat producing a significant fire risk. When thermal runaway occurs large amounts of water are required to cool the battery packs before fire suppression can even begin. For example, Toyota states in their hybrid powered vehicle service manuals that it may require more than 2500 gallons of water to cool and suppress a thermal runaway condition of their battery pack. The proposed battery installation of the Bonanza Energy Facilities is exponentially larger than that of the Toyota vehicles.
• The Town of Bonanza has one main thoroughfare which would experience an estimated 300 construction workers traversing the one street – daily. These individuals would reach the jobsite from surrounding communities according to the Notice of Intent.
• There is limited, if any, long term economic benefit to the Town of Bonanza or the residents whom would be impacted by the project. A short term surge of personnel and vehicle traffic during the construction phase is far outweighed by the fact that there is no long term financial benefit to the community once construction is finished.
• There is little financial risk on the part of Hecate Energy Bonanza, LLC as the project is likely funded by Federal and State Grants and energy buy-back requirements when compared to the financial risks of the families and communities surrounding this project whose property and standard of living will be impeded by this project.
• The substantial amount of water required for the project during construction would negatively impact the water supply for the Town of Bonanza and the surrounding community.
• Solar facilities, such as those proposed by Hecate Energy Bonanza have negatively impacted the environment and wildlife. Solar facilities are responsible for thousands of bird deaths annually. Wildlife such as the indigenous deer and antelope population of rural Klamath County will have their established migration patterns interrupted which may lead to high winter kill of these animals.
• Weather patterns have been shown to change with installation of solar facilities as the reflection of solar radiation causes increased atmospheric temperatures in and around these facilities. Changes in the amount of rain and snow fall are reduced, which directly reduces much needed water for farming.

Commissioners, these specific examples are provided to demonstrate reasonable objection to the proposed Hecate Energy Bonanza approval. On behalf of my family and with other members of rural Klamath County we strongly encourage you to stand with us and reject this project.

Sincerely,

Stephen Roehrig                           Amanda Roehrig

References:
Oregon State University Lithium Battery Safety and Handling Guide
Oregon State University Lithium Fire Prevention Safety Instruction
National Renewable Energy Laboratory: Thermal Evaluation of Toyota Prius Battery Pack
Coordinating Committee for Automotive Repair: Thermal Trending of Lithium Ion Battery Systems
Forbes Magazine: If Renewables are so great for the environment, why do they keep destroying it? May 2018
To whom it might concern,
I hear that you are planning on putting a solar facility in or near the small town of Bonanza, Oregon in the Langell Valley. Please, please don’t. It is such a beautiful valley and that beauty would be taken away. I love driving through there and visiting my daughter who lives in that valley. Would you rather see a large metal facility or the beauty of the land, the wild flowers, the birds, the animals. Maybe it won’t be seen from the Goodlow Mountain Research Natural Area, the OC&E Woods Line State Trail and Klamath Falls-Lakeview Forest State Scenic Corridor, but it will still be seen by those who travel through to reach those areas. I understand that this is a natural migration area for deer or birds like geese and just the reflection off that much metal will kill the birds. Just the fence around that facility will stop the migration. Hunters and fishermen will have to find somewhere else to go. The bikers and campers won’t want to travel that way any more. Who wants to camp or bike or hike near or around a big metal facility. They go there to get away from that. As you drive down a country road do you really want to see metal wherever you look or do you want to see the wild flowers and wildlife that abound. You just start digging and the flowers and wildlife will be gone. Once it is gone it will not be back no matter what you do to try to entice it.

What about the water that is going to be used by this facility. That alone will take away what the people of that valley need to survive. The rivers will dry up if some big facility moves in that is going to take that much water. The people of this valley need this water to survive. Their farms and ranches would not be able to function if you took that much water away from them. I can’t even begin to tell you how this would effect everyone who lives there. Not just the water being taken away but the land where you want to build this facility supports a family. They need the pasture and alfalfa to feed the livestock. The grain land helps to support them as well and also may even help to feed others around the world in the breads and other foods we eat.

Now let’s talk about fire danger. I could write a book on that. You see I lived through the most horrendous wildfire in California history. You start putting that many power lines through there and it only takes a spark from one of them that would burn down that entire area as well as Bryant Mountain not to mention the many other small towns that dot the countryside. The fire department is not equipped to handle a fire of that magnitude. It wouldn’t just burn up and destroy that facility which would melt under such a fire, but it would destroy the homes of people for miles around and many lives would be lost. Oh, you say, that won’t happen to me. Yea, that is what the town of Paradise said as well. But it did happen. November 8, 2018 is a day I will never forget. It was started by just one spark from a power line. I and 20,000 + people still have nightmares. Imagine being in your 70’s or even 60’s and having to start over as if you were only 20. Losing everything you own. All the mementos that you had from your children as they grew up. Losing the last mementos from a loved one that had passed away just days before. Paradise was just one town lost. There have been other wildfires that have been started by just one spark from a power line/pole. Lives are lost and property destroyed and for those who live through a fire such as that their entire life is changed forever. The mental anguish I can’t even describe. Trust me on this, you do not want to put the people that live there or travel through there through something as catastrophic as a wildfire. Yes, it can happen. It can happen to you. Even if you take all kinds of precautions and try to keep everything well maintained. It can still happen to you.

Just to summarize: First you take away the livelihood of the many working farms and ranches by taking away their water and the land they use. At the same time you take away the food, water...
and habitation from the wild life that lives there and from the birds that migrate through. Not to mention the natural beauty of the area that brings the bikers and campers. Then you add the fire danger. You might not care about the wild life, birds and working farms and ranches, but what about the lives that could be lost in a fire. Just think of the terror and pain. I’ve seen people die in their cars trying to flee a wild fire. I’ve seen others leave their cars and flee on foot. Some made it but others did not. Some ended up in hospitals for months in the burn unit. They had made it out but at what cost. Please reconsider this project.

Thank you,
Peggy L Roth
This is about the negative effects of building this facility! I feel this is a injustice to the Oregon rural life for
the community of Bonanza. This ground is zoned agricultural and it also has Native Indian history and
Artifacts. Please do not approve this facility!

Sincerely
Suzanne Smith

Sent from my iPad
Ms. Clifford,

I am writing today to add my voice to those who are speaking up in opposition to the proposed 2,733 acre Bonanza Energy Facility. My concerns for this project are not just about the possible loss of valuable agricultural land now however, but for the long term reach of what this project might do to the area’s natural resources (especially water), land values, and way of life. Additionally, I am concerned that the impact on our environment from the solar byproducts will not outweigh the possible benefits of the energy.

To address water first: this is an area of ongoing concern in Langell Valley and surrounding areas. The farmers and ranchers strive to be stewards of the land, and this project proposes to use thousands of gallons of water in the constructions and dust control of the power plant. The problem lies in the fact that they have not declared where that water will be pulled from in its entirety, but the water that is known would be sourced from the on-site private wellll that is connected to the saame aquaaffor thata the nearby town of Bonanza uses. This is not an endless resource, and the risk to the town’s water and surrounding irrigation is a real and viable fear, especially in the high desert.

Additionally, acreage of the proposed project is along a wetland ecosystem of ponds which home many migratory birds, as well as purifying cattails and aquatic animals. The risk of run-off from the construction of the project is a consideration that has not been addressed in any proposal. It would also continue to be a concern if the power plant was in place, as damaged panels have the possibility of releasing damaging products into the ground.

When considering the consequences of damaged panels, it is also important to consider that there are very limited resources available for the thoughtful recycling of old or damaged panels. Currently, many panels are taken to local landfills and/or ground up to be toxic glass, because the expense of recycling their ingredients has not been made worth the financial effort. This means that unless substantial progress is made, this green energy could in fact result in damaging long term effects to local landfills, or worse, the panels would remain in the field to decompose. This situation is not too uncommon to overlook, as the cost of taking apart the plant might be too much for the company to consider, and the panels would be abandoned to ruin agriculture land for future use.

Any way you consider it, this project comes at great risk to the land and home owners in the area. It would devalue neighboring property, and put the land at risk of possible dangerous run-off if irrigated, or fires if not irrigated. Not to mention that there is no local fire station with the capabilities of managing any fire in the facility’s proposed battery storage buildings.

Lastly, there are limited green ways to maintain the land under the panels. If not irrigated, it is not just fires that are a concern, but also the growth of scrub plants that would grow under the panels. These types of plants would be a fire risk, while also requiring the use of more pesticides than might otherwise need applied to this land. Again, putting more
Thank you for your time and consideration to the concerns of the local residents. The people who live in the area truly care about their land and lifestyle and strive to use the land for responsible production. I feel as many of them do: that there is a valuable future for solar panel energy plants, but we must not jeopardize the future of our natural resources for a project that would function effectively in a more suitable location. It has to be possible to keep our dreams of a clean energy future alive while also keeping our pastures and ag lands green and growing. Personally, I hope this is the future that my daughter grows up to see in Langell Valley; not just responsible development in alternative energy, but also fields of healthy animals, successful wildlife habitats, and clean water.

Again, thank you for listening.
Emma Stalder
D & L Livestock
Debbie Stevenson
P O Box 176
9796 East Langell Valley Rd.
Bonanza Or. 97623

DRStevenson13@yahoo.com

Katie Clifford, Senior Siting Analyst
katie.clifford@oregon.gov

Re: Proposed Bonanza Energy Facility by Hecate Energy NAF LLC

As a Landowners in East Langell Valley, I am notifying the Oregon Department of Energy, and Klamath County Land Use and Planning officials that we are extremely OPPOSED to this industrial project on East Langell Valley Road, south-east of Bonanza.

There is so much wrong with this project that it is hard to know where to start. My first thought is the ground this “Solar Farm” is being proposed on is Zoned Ag and Timber land. How can our County Commissars and State Representatives, along with all others involved approve these 1851 acres of Solar Panels, Battery Storage Facility, and water guzzling project.

This area is a very rural area, sometimes our closest neighbor is 2 miles away. I’m deeply disappointed that the only people that were sent a notice of this development were within 500 feet of this project. Thank goodness the 4 neighbors that received notice reached out for community support.

We feel there is so much misinformation in the material we received. Oregon is so protective of their water, both ground and surface, how is a project that will be consuming Millions of gallons of water ok. How is building 91 acres of Battery Storage facility either environmentally friendly or appealing to the eye with “no significant scenic impact”.

Environmentally it is so wrong; first it is near a wetlands area that is home to many different types of water fowl, deer, ducks, eagles, sand hill cranes and antelope. We don’t want them to just mitigate these issues offering something, somewhere else in return. Take this project somewhere else. In addition, the Lost River runs through this property, where will all there waste and toxic discharge end up? I see it going into and down the river.

Again their high water use will drop the current water table and draw on the other land owner’s water. This Valley is dependent on the water for irrigation for our Cattle ranches and hay production. How can this be mitigated?

My next concern is the unknown life span of both the Solar Panels and the Batteries. According to an article dated 2/13/2020 states “Oregon Department of Energy Issues Notice of Violation for Disposal of Radioactive Materials at Arlington Landfill.” It goes on to say that Oregon law prohibits the disposal of radioactive materials in the state. I’m not sure Solar Panels and Batteries fall into the category of Radioactive, but I would like to know how they intend on disposing of these, or are they just going to walk away when they quite working. Which I have heard is common.

They claim the scenic “Impact will be negligible” because it won’t be seen from a few carefully chosen places not even in our area. I call BS on that. They also say “much of this land is currently uncultivated”
again I'm calling them on this. The only part of this ranch that is uncultivated is land that they don't intend on using, from what I can see on the map. The property currently is running 400 head of cows on Irrigated Pasture ground. How is that uncultivated ground.

This Development needs to be in an area ZONED for INDUSTRY. Not on precious Farm and Ranch property. There are plenty of old mill sites, land fill facilities, and buffer zones surrounding land fill areas that would be much better suited for these types of projects,

Respectfully,

Debbie Stevenson
9796 E Langell Valley Rd.
Bonanza, Oregon 97623

530-949-9450
I am writing this letter in concern for my neighboring community members in Bonanza, OR (Klamath County) about the proposed Bonanza Energy Facility by Hecate Energy on Teare Lane and surrounding area. This would be a huge building site of solar panels and battery storage systems. I oppose to this project and to any solar project in Klamath County. This site would be a bad eye sore for all the people who have joining property and those within site of this 1,851 acres. It would also be bad for property values, and it is agricultural land and needs to stay agricultural land. Let’s remember Klamath County's Comprehensive Plan for open spaces and to protect the environment including all the wildlife and the important wetlands in the area. This facility would be a huge mistake for our area. The proposed site is even larger than the whole town of Bonanza. Please help Bonanza stop this horrible plan and help the people in our community save their way of making a living on the neighboring ranches that have been established for many years. We need your help in stopping this project from happening.

Thank you,
Carrie Tenold
Dear Ms. Clifford and Oregon Department of Energy,

Hello, my name is Maureen Thomas and I reside at 6516 Teare Lane, Bonanza, OR, along with my husband Greg. We have lived on our ranch for the past 25 years where we raise and sell Hereford and Angus seedstock cattle. We raised three boys here on the ranch and now our grandchildren come here and enjoy our country lifestyle, along with helping with all ranch duties. It’s a wonderful life and no better way to raise children.

We are terrified that this will all come to an end if the proposed Bonanza Energy Facility will be allowed to be built. Our cattle will run right next to the solar panels along with the dreaded battery storage buildings.

We are strongly opposed to this project for many reasons.

We don't understand how land that is zoned EFU-CG (Exclusive Farm Use-cropland/grazing) can now be changed to house this horrendous facility. If my husband and I wanted to subdivide our ranch here and sell 5 acres lots for houses, we would never e allowed to do that-would we?

According to Oregon Land Use Laws Governing The Siting of Large Scale Solar Facilities:
On more than 48 acres it must not materially alter the stability of the overall land use pattern of the area. This can occur by making it difficult for existing farms and ranches in the area to continue operation due to diminished opportunities to expand, purchase or lease farmland, or acquire water rights, or by reducing the number of tracts or acreage in farm use in a manner that will destabilize the overall character of the area.

Large scale solar facilities can require a lot of water for cooling and washing off panels. Removing water from a surrounding area for use can divert water away from agriculture, ranching, plants and animals-and could likely raise legal water rights issues. The use of water is really being downplayed but in Notice of Intent to apply for a site certificate they state they will be using 800,000 gallons per week for two months, then 48,700 per for 10 months. What will that do to our domestic wells-our water levels- our water for our cattle?

If we keep taking productive land out of use, who will feed the American public? Depend on foreign countries four all our food? No thanks.

This brings up another subject on Land Use. Again in the Notice of Intent on page J-5, they claim that "much of this land is currently "uncultivated". This is basically a lie. Much of the ranch is in pasture, alfalfa hay, and grain land. The ranch supports a family, one full time hired man and several part time employees as well as running approx. 300 cow/calf pairs. I've attached a few photos of the land that will be under solar panels and it is clearly not "uncultivated" land.

Another great concern is for the wildlife here in Langell Valley. The ranch is known for it's winter range habitat of deer and migration corridor for numerous birds, on the ponds that are full year around. What will happen when 8 foot fences are built, the noise and bright lights will disturb all the animals and they too will disappear. also, birds mistake the reflective surfaces of the mirrors and solar panels as a body of water, known as the "lake effect", causing injury or death from collisions by concentrated beam of sunlight.

Solar development should be sited at or near point of use or within the built environment, such as on existing industrial sites and otherwise unusable space. The EPA and the American Planning Assn., encourage development of solar on targeted sites such as RCRA sites, mining sites, landfills, abandoned parcels, parking lots ad commercial/industrial rooftops, instead of greenspace.

We are asking for the right to continue our lifestyle that we've worked for our whole lives to continue ranching and remain in our home and on our property which will border this facility. The negative impacts to the land and surrounding land including wildlife will be horrific. Will the Oregon Department of Energy offer compensation for our property when we are unable to raise our cattle-our source of income for our livelihood? What about our property values? Can you honestly say you'd want this as your next door neighbor? And be honest.

Thad you,
Greg and Maureen Thomas
Sent from Mail for Windows 10
To Katie and everyone involved in this project:

I am a resident of Langell Valley, who lives just a few miles from the proposed solar project. I am very disturbed that Hecate Energy LLC has been working on this project and this is the first our community has heard about it – not from them either- but from only a couple others in the community who received a letter. We do NOT want this huge solar project here in the planned location, that is beautiful agricultural land.

Our wild life and our agricultural land will be impacted negatively, our property values could go down.

And from what I understand, the amount of water necessary for this project would have an extremely negative impact on our ranchers and farmers. We already struggle with enough water for irrigation in some places and this could effect our wells on top of that!

It is not right for some big conglomerate to come in and force this on a community where it is not wanted!

Regina Wagner
40325 Bunn Way
Bonanza Oregon
From: Ronald Wagner
Sent: Monday, October 26, 2020 9:15 PM
To: Clifford Kae * ODOE; bocc@klamathcounty.org; Sen.dennislithicum@oregonlegislature.gov
Subject: Proposed Bonanza Energy Facility, Public Comment

I found out about the Proposed Bonanza Energy Facility because the two people who received a letter of intent were kind enough to inform us. That is the first knowledge I have of the project and that was two days ago. First, I don’t want the ugly panels in our valley. They certainly don’t fit with the beauty or function of our valley. We are proud of our valley and take care of it and its wildlife as well as our animals and crops. I am not sure these “investors” as I will call them from the big city have any idea what it means to be part of a valley that has been farmed and ranched by generations of family and community members. We love our land, take care of it, and produce food for our nation. We tend to water issues. There is not an overabundance of water in the Klamath Basin and management and conservation are key issues. We do know they propose to use millions of gallons of water during their construction process. What impact is that going to have on our valley and the town of Bonanza, and on our farmers/ranchers. We must take the time for discovery and evaluation of the issues. There have to be many issues that must be addressed and which the residents of the valley have a right to know and consider. I don’t think we should put up with any who would destroy what we have created.

We need time and information before we are even asked for comment. It appears this is being crammed down our throats without due consideration. I want full copies of all documents pertaining to this project BEFORE public comment. I want the public comment open to the public so there can be discussion. I know that is difficult with Covid-19. Maybe we should wait until the pandemic is over before we even start public comment.

I look at the hills around us and at one array that can be seen from East Langell Valley Road. That is at least not as much and eye sore and better use of land. That land is not very suitable for farming. There is, I am quite sure, lots of that land available.

My feeling is evident I am sure. Hecate Energy needs to get back in their jet and find a more appropriate location.

Ron Wagner
40325 Bunn Way
Bonanza
Dear Ms. Clifford,

Please find below my concerns regarding the propose Bonanza Energy Facility. My major concern about this project is wondering how any group of investors based on the Eastern Seaboard can possibly look at the vast stretches of land out here, whether under cultivation or fallow, and possibly see how many people and animals depend on the wheat, alfalfa, and rice grown here, and the riparian areas and open fields that shelter migrating birds and grazing livestock. The EIRs provided to you are just dry facts and figures gathered by workers in their particular fields. I know, because I worked for many years for a firm of this kind.

One of the first facts that really concerned me as a small farmer was the fact that 11.5 million gallons of water would be used just in the construction phase of this proposed project. This figure really concerned me, because even though I live in the Willamette Valley, and not the region affected by this project, last Spring there was immense concern that there would be enough alfalfa and grass hay available in the Fall due to proposed rationing and non delivery of water to farmers in the Klamath Basin once again this year due to a variety of issues. Almost every farmer here in the Valley depends on the alfalfa and grass hay from over the Cascades to feed out sheep and cattle flocks. The many acres this project will plow under, whether under cultivation or “fallow” as your report describes, are vital to the constant feeding of agricultural livestock over a vast area of the West. As an aside, fields are constantly allowed to lie fallow between growing cycles. Also fields that look inedible quite often provide great grazing for ruminants like sheep, goats, and wild hoofed species, that also keep down fire dangers as the close crop large areas. I have heard also that there is some new “science” being forwarded about growing crops under the expansive fields of solar panels. This boggles my mind. Not only is this science barely in the talking stages, but I would be very concerned about the effect on crops of any outgassing or accidental leaking of the rare earth and toxic chemicals and minerals used in creating these panels. I also saw mention of electrical and magnetic effects, but was not able to access this part of the report. Then there is the issue of what kind of crops could possibly be grown, fertilized and harvested economically and what farmers would have the financial acumen to take a chance in any profitable way on something so prone to adverse issues.

There are just way too many negatives in my mind, way beyond the agricultural ones I have put forth here, of taking such vast stretches of land, both with this start-up proposal, and the almost guaranteed expansion once this might become reality, that myself, and many other land based residents strongly object to any projects of this kind being built in this area. Why not focus the minds of engineers and scientists on seriously non-productive lands such as deserts, rocky mountain areas, etc. that would not disrupt agricultural production and grazing in the bread baskets of the Western states. Thank you for considering my concerns.

Carol Wiggins
Proud (small) farmer in the Willamette Valley of Oregon
November 16, 2020

Re-sent as a file attachment to reduce distortions to text November 25, 2020 K Williams

Comments on the Bonanza Energy Facility proposal from Karen Williams, kage.wms@charter.net, Klamath County resident, 1700 Fairmount Street, Klamath Falls, OR 97601 pH.541-884-3175

Summary conclusion: Presently I do not support the installation of the Bonanza Energy Facility physical plant.

I was asked by a friend who is directly and negatively impacted by the proposed Bonanza Energy Facility physical plant to share my thoughts on this project. While I am by no means any kind of solar technology expert, I definitely have formed some opinions on the matters at hand which are bolstered by those who do claim some expertise. My take on the solar power industry and the current rampant installation of solar farms locally is limited by my layperson perspective; however I feel I must share the following comments.

After a brief search of internet articles regarding photovoltaic (solar) panels, also referred to as pv panels, and various authors insights into potential benefits and harm, I have come to the conclusion that in order for us to coexist with this technology the industry as a whole, including researchers, developers and investors owe the general public a committed and continued development of safe guards and protections.

Finite land surface

I will begin with an observation that our county seems to be inundated with willy-nilly little pockets of solar panel installations already. Just how many more does Klamath County have to have? Does the county or the state have a well-developed master plan in place, or is this a land grab get-rich-quick scheme for those with few scruples and lots of cash? Unfortunately, by my untrained eye, these installations are appearing on farm land as well as less productive tracts. There may be untoward consequences in our future. We will be viewing these “eye sores” in various stages of function for at least several decades to come. My own preference as a community member is utilization of less productive lands for solar energy capture use rather than sacrificing fertile land tracts to these glass and metal monoliths. We must acknowledge that our land is not an unending resource, but, rather, is mostly finite in supply and should not be squandered for someone’s greed and another’s detriment.

Potential chemical contaminants

Numerous articles I came across in my search on this topic either blithely or alarmingly mention that there are some dangerous contaminants associated with pv panel installations. One being cadmium (Hinderaker, 1), which some casually mention “washes off” the panels with precipitation (Shellenberger,
as if that completely takes care of the problem. Well, once washed off the panels the cadmium is incorporated in the surrounding soil which may possibly be dispersed further in dust by the wind, mud on one’s boots, or may be introduced into aquifers, rivers, ponds, and wells. (see further discussion of cadmium contamination under Decommissioning and long-term waste management challenges.)

Cadmium (Hinderaker, 1) is a carcinogenic chemical. OSHA describes cadmium and its compounds as being very toxic; exposure can cause cancer. Cadmium and related compounds affect the human body’s respiratory, reproductive, neurological, renal, gastrointestinal and cardiovascular systems negatively.

The Concerned Citizens of Fawn Lake in Virginia where a 6,350 acre solar farm was proposed a couple years ago, estimated that there are 100,000 pounds of cadmium contained in the 1.8 million panels (Hinderaker, 1; Shellenberger, 4). Leaching from rain and the myriad of possibilities of damage to panels, as well as contaminant release during the process of decommissioning were identified as concerning.

Lead (Shellenberger, 3; Hinderacker, 1) is another potential contaminant from pv panels; exposure to lead has long been known to be detrimental to child brain development. Exposure can also lead to damage to kidneys, reproductive, nervous and cardiovascular systems at any age.

Antimony (Shellenberger, 3) has been identified as another potential contaminant from pv panels; per the CDC (Centers for Disease Control and Prevention) this chemical is harmful to eyes and skin, respiratory, cardiovascular and digestive systems.

All of these potential contaminants and possibly others can wash or leach out of solar modules by rainwater as discussed; they may be released from broken panels damaged by hail storms, severe wind storms, earthquakes, and at the time of decommissioning. Other parts of these pv panels include plastics, glass, and metal (Shellenberger, 3).

**Habitat degradation and environmental hazards**

Another concern is habitat degradation. Large tracts of land (Gaille, 3) blocked by pv panel installations and related equipment surrounded by fencing interrupt migration or established travel paths of wildlife. Land previously accessed by wildlife, both land-based animals and fowl, for food or shelter is rendered mostly inaccessible or physically altered by the equipment and fence installations. Less open and free land means wildlife must compete more with humans for the remaining space which could contribute to more incidents of disease, injury and destruction of wildlife populations, and less harmonious encounters in what would be left of Nature.

Other concerns are the interference of existing land uses and the consequential long-term alteration of many acres of land. Converting land over to solar farming often involves clearing (deforestation or removal of plant life) and grading of the land which in turn results in soil compaction, erosion, and drainage channel changes (Tajne, 3).
As mentioned previously, the soil and water contaminant potential impacts habitat for wildlife and human communities. There may be serious untoward short- and long-term health risks to many life forms in the vicinity of solar farms.

The eco-system as well as the immediate microsystem effects of pv panel installations (arrays) is not fully realized or understood yet (Armstrong, abstract 1), though there may be some detrimental consequences to the local climate. There seem to be contradictory conclusions in various research articles as to soil temperature and moisture responses to the ground being covered with solar arrays, so I won’t delve into that broadening area of discussion here, though one could certainly peruse any number of scientific studies looking at such topics as “photovoltaic heat island effect” to begin an understanding (Barron-Gafford, et al, 1). But I will still ask, what impact could arise from large tracts of photovoltaic encrusted land with temperature and moisture variations on the local weather and/or climate? Are there benefits, or detriments, both? We need further investigations and scientific studies to determine. There is a possible negative outcome of disastrous environmental consequences if we proceed without measured intelligent scientific scrutiny.

Dual-use of solar farm land (Thoubbbron, 3) is touted by some in the solar power industry, however sheep grazing on tainted grass growing on contaminated soil and watered by contaminated water sources; contaminants including cadmium, lead, antimony (Shellenberger, 3; et al) and other substances… just doesn’t sit well with me.

In addition, an identified environmental hazard to living beings, animal and human, is wireless radio frequency radiation. As one source (Photovoltaic Electrical Systems Fact Sheet by Building Biology Institute, 2019) cited this radiation risk is “sufficiently well documented to warrant immediate preventative public health action(2). This comment was directly linked to photovoltaic electrical systems. This source also cited high magnetic fields, and the previously mentioned “dirty electricity” (electrical noise) as hazards to contend with in this industry, and by the general population of humans and wildlife.

**Aesthetics**

Some might find solar farms aesthetically charming, others may view them as a blight on the land, or somewhere in between. One plus may be low noise pollution, though some experts argue that there is untoward electrical noise, aka “dirty electricity” (Building Biology Institute, 2); visual glare might come into nuisance play as well. Regardless, the rapid influx of these facilities presents a much larger window of potential problems to communities than just looks. If we must have them in our communities, we must become responsible stewards.

**Economic attractions and detractions**

I found some sources whose focus was more on the perspective of the economics of solar energy with much comment on the concept of tax credit effect on local or state economy. There is an element of
unfairness in tax breaks for solar power investors, especially if they are long term in nature. The revenue loss to state and local governments related to tax credit incentive programs for solar farm investors results in less available funds for services to its population in terms of salary increases for teachers, firemen, police, state employees, as well as money for economic development in other areas or industries (Eckerlin, 3). Of concern also are the costs of decommission management of damaged or end-of-life solar energy equipment, and the costs of health care and costs of loss of productivity of those made ill by contaminant exposure hazards. In other words, in our county, the more land we turn into tax free or tax reduced solar enterprises, the less tax money, the less we can provide for our schools and essential service entities and economic development.

Another economic detriment to consider is the trend of bankrupt solar firms, leaving local government to contend with the mess and environmental challenges left behind. Several firms identified in my search include bankrupt companies such as Sungevity, Beamreach, Verengo Solar, Sun Edison, Yingli Green Energy, Solar World, and Suniva (Shellenberger, 6). These bankruptcies leave the public to bear the cost of managing the vast detritus of equipment and chemical contaminants littering acres of land, as well as leaving local government to face the momentous challenges of health risks of continued exposure to hazardous materials, recycling or deposition of photovoltaic waste and dealing with frequently insurmountable local, state and federal disposal regulations.

**Water use in the solar arrays**

Klamath County climate of late tends toward draught conditions, so any new enterprise needing a supply of water should be looked at thoroughly. Reassurances abound from the solar supporters that water usage is limited to an office bathroom, and maybe pv panel cleaning once or twice a year with some assist from local precipitation (O’Brien, 2; Tavares, 1). The truth is dust and bird droppings, vegetative debris and mold may significantly and negatively impact efficiency of pv panels, thus the frequency of cleaning with water and probably some surfactant could occur more frequently throughout the year. The cleaning process includes costs of labor, machinery and gasoline; “in a water-starved desert (article example was southern Nevada), the additional consideration is how much of the region’s most critical natural resource will wind up evaporating or dripping into the desert” (Tavares, 1). The volume of water required varies, but may be a much as several household’s annual usage per unit of solar array.

**Decommissioning and long-term challenges of waste management**

Recycling of decommissioned solar panels is often prohibitively expensive per Japanese and Chinese experts (Shellenberger, 5) In the United States, California’s Department of Toxic Substances Control (DTSC) has acknowledged that there is difficulty in testing whether a solar panel being removed at end-of-life decommissioning would be classified as hazardous waste or not (Shellenberger, 3). So the quandary begins.

The challenges of solar panel safe and responsible disposal are going to hit hard in the next twenty to thirty years (Hinderaker, 1; Shellenberger,1) or less. World-wide there may be hundreds of thousands to millions of tons of solar panel waste which needs to go somewhere. Are we ready for that locally? Is this...
disposal or recycling issue addressed sufficiently in Oregon’s and our local management plans? Leaching of contaminants is a problem with intact, or damaged, or decommissioned units, so where are we planning to contain or recycle non-functional solar farm equipment? Landfills are not really a feasible option (Hinderaker, 2; et al); hazardous waste facilities may become over run at some point. Recycling has its own drawbacks of expense, low demand for scrap, and high costs of disassembling the units (Hinderaker, 2).

An incomplete conclusion

In this incomplete discussion and conclusion, I will admit I have left many of the positives of solar energy for others to review and debate. I also leave a few questions unanswered for others to ponder. I would urge our state and local community leaders, and community members to contemplate a much broader scope - beyond the immediate goal of an achievement of more electric power - to determine what long-term path to pursue for the good of the entire population impacted.

As I stated before, I have come to the conclusion that in order for us to coexist with this technology the industry as a whole, including researchers, developers and investors owe the general public a committed and continued development of safe guards and protections. Presently I do not support the installation of the Bonanza Energy Facility physical plant.

References


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