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**Controlled Thermal Resources - Letter to the Community regarding
Nov 17 Community Forum**

Additional submitted attachment is included below.

Monday, February 7th 2022

An Open Letter to the Imperial County and Salton Sea Communities.

Hello and thank you for taking the time to read this letter.

My name is Rod Colwell. I'm the founder and Chief Executive Officer at Controlled Thermal Resources.

We are developing a geothermal renewable power and lithium project called Hell's Kitchen in Imperial County.

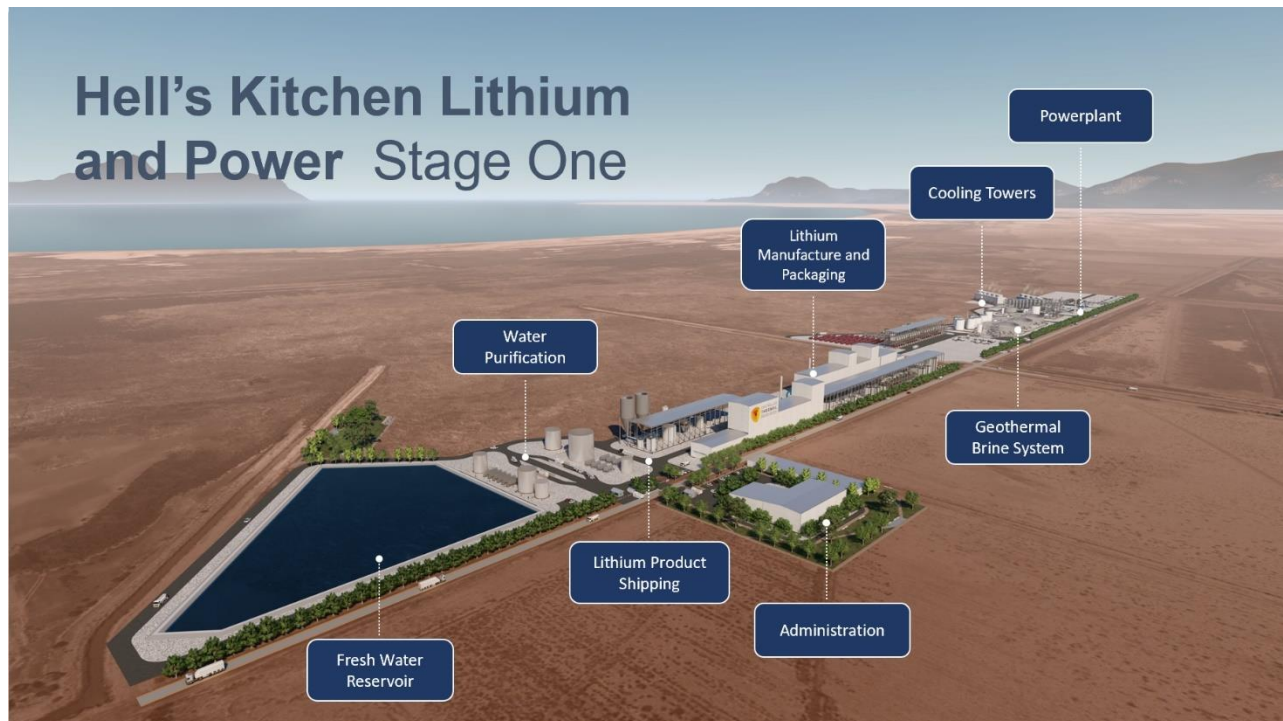
As one of the commissioners on the Lithium Valley Commission, I was there for the first Community Forum held on November 17, 2021. I listened to the questions and comments shared and I wish there had been more time to answer these questions on the night.

So, I went back through the meeting notes and have responded to these questions to the best of my ability in this letter.

Thanks to everyone who came along and participated. I certainly hope there will be more opportunities like this to talk and gather our shared knowledge.

1. What will CTR's Lithium and Geothermal power facilities look like?

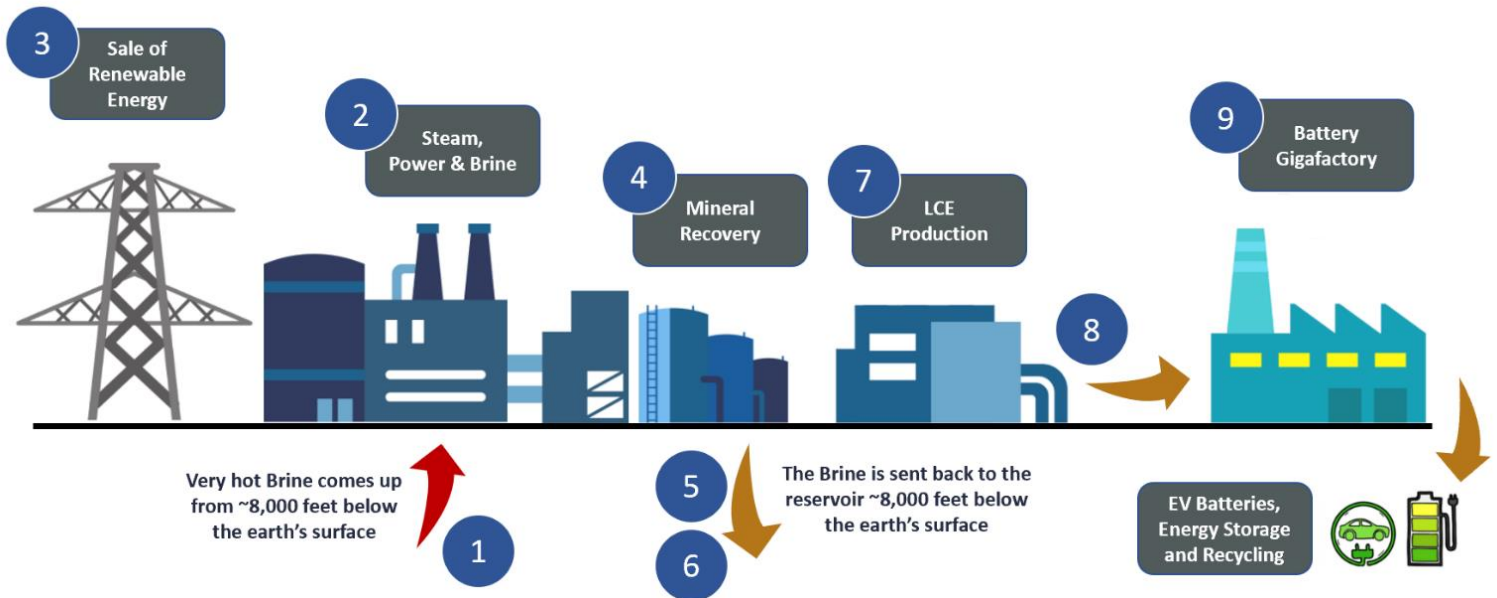
There were many questions about what the Hell's Kitchen development will look like. Below is an artist impression of our first 49.9-megawatt power plant and 20,000 tonne lithium facility. The size of this development is expected to be less than 50 acres.



[Click on the image to watch an animation video](#)

2. How does lithium production from geothermal brines work?

Many people in the community wanted clearer information about how geothermal and lithium production works. I've added an image and a description below which I hope will better explain it.



1. Very hot brine (salty water) travels up a production well from about 8,000 feet below the earth's surface.
2. The hot brine produces steam, some of which turns a turbine to produce renewable power. The power and excess steam are used to make highly sustainable lithium products.
3. All excess renewable power will be delivered to the electricity grid.
4. The hot brine goes through a series of closed pipes and tanks in a process to produce lithium and other products.
5. The brine then goes back down to the underground geothermal reservoir and the renewable process starts again. The brine does not have contact with the outside environment. It is all contained in a 'closed-loop' system of pipes and tanks.
6. The process will produce battery-grade lithium products including Lithium Hydroxide and Lithium Carbonate.
7. The time it takes for the brine to be returned to the geothermal reservoir and lithium products to be produced is less than an hour.
8. At the end of the process, the battery-grade lithium products looks like fine white powder or sand grains. These products are packaged into large 'super-sacks' and transported to the cathode and battery manufacturers to make batteries for EV's or energy storage systems.

For more information, here is a link to a video from the Department of Energy on geothermal production:
[A video from the Department of Energy](#)

NO open pits or evaporation ponds at the Salton Sea.

I'd like to clear up some confusion and misinformation about geothermal power and lithium production that came up in the Community Forum.

- CTR's facilities have NO connection to the Salton Sea, nor does lithium production.
- CTR's Stage 1 development is located 1.5 miles from the Salton Sea shoreline.
- The Salton Sea does not need to shrink any further to recover lithium (as it comes from deep underground), we don't want the dust either.
- We do not take water from the sea and our operations are not connected to the sea. The Salton Sea is a geographical reference point only.
- There are NO production 'tailings' (like rock ore, clay or hazardous materials) that need to be removed from the site or put into landfill.
- There are NO evaporation ponds used (you can see in the picture on page 1 that there is only a small water storage pool onsite)
- There is NO open pit mining.
- The roads connecting our project to Highway 111 will be designed to minimize dust.
- The project is approximately 4 miles from the township of Niland.

Geothermal Lithium Salton Sea and Germany

- ✓ Small physical footprint
- ✓ No open-pit mining or evaporation ponds
- ✓ No tailings or overseas processing
- ✓ Fully integrated onsite process
- ✓ Powered by renewable energy and steam
- ✓ Near-zero CO₂ emissions
- ✓ Ideal for auto, battery and government sustainability mandates



Evaporation Ponds Mainly in South America

- Large physical footprint in environmentally sensitive locations
- Residual salt waste tailings can be toxic
- Large amounts of water lost through evaporation methods
- Generally processed overseas (China)
- Higher CO₂ emissions in production, transport and processing
- Longer production lead times



Open Pit Mining Mainly mined in Australia

- Large physical mining footprint
- Permanent environmental impacts
- Large amounts of tailings
- Generally processed overseas (China)
- Higher CO₂ emissions in production, transport and processing
- Longer production lead times



3. Environment and Health:

Several people asked about potential environmental health hazards including air emissions and soil and water contamination. I want to share with you a 20-point Environmental Checklist that CTR uses to make sure our project will not harm the environment, and in fact, can be an environmental benefit to Imperial County and the surrounding communities.

1. Aesthetics/View lines

- a. The Project is improving an environmental disaster area by helping dust abatement onsite.
- b. There are no residences with a view of the site and there are no direct views from a designated scenic highway.

2. Agriculture and Forestry Resources

- a. There is enough space over the site and exposed playa to include renewable agri-business programs.

3. Air Quality

- a. The Project will be operating with similar parameters to the existing geothermal plants that have been operating for over 38 years.
- b. The Project will receive an Air Permit in accordance with all rules and regulations required from the Imperial County Air Pollution Control District.
- c. The lithium facility is a closed-loop system which produces near-zero emissions (e.g., minimal to no waste streams).

4. Biological Resources

- a. The Project will create improvements through land development and dust abatement in an area that California has designated as “high emissive soils with a negative impact on the environment”.
- b. A minor portion of the Project site (~100 acres out of ~7,200 acres) are existing degraded areas and CTR intends to build facilities on these degraded land areas.

5. Cultural Resources

- a. There are no existing buildings or historic resources onsite.
- b. A Cultural Resources Technical Study will be conducted to identify any archaeological resources.

6. Energy Use

- a. The Project will be operated with renewable, baseload (24/7) energy.
- b. The Project can help the State of California meet its Renewable Portfolio Standard goals by 2030.

7. Geology / Seismic Activity / Soils

- a. The Project will create an improved environment through dust abatement.
- b. The project does not create any process waste or water streams that would affect soil health.
- c. The current soil health in the project area is highly degraded.
- d. The Salton Sea region is prone to seismic activity given the natural geology. It is important to note that no major earthquakes have been attributed to geothermal production in the 38+ years of operations. A new scientific report also suggests geothermal operations can, in fact, lesson major earthquake activity in a region. You can read more about this [HERE](#).

8. Greenhouse Gas Emissions

- a. The Project will help the State of California meet its Clean Energy goals by 2030.
- b. The Project includes renewable energy generation and a closed- loop lithium production process. Geothermal power generates minimal to insignificant greenhouse gas emissions approximately ten times less than a natural gas plant.

9. Hazards & Hazardous Materials

- a. The Project does not generate process or hazardous waste.
- b. The Project does not require a landfill for process waste disposal.

10. Hydrology / Water Quality

- a. The Project does not use evaporation ponds, leach ponds, open pit mines, waste tailing piles or tailing ponds.
- b. CTR is investigating ways to capture any unusable, degraded water and recycle it.

11. Land Use / Planning

- a. The Project's land use and planning permits will be registered with Imperial County (e.g., Conditional Use Permit).
- b. All planning and land use will adhere to the laws and regulations governing operations in the area.

12. Mineral Resources

- a. The Project will produce products with elements listed on the U.S. Critical Minerals List and is considered critical to U.S. national security.
- b. This sustainably produced lithium will assist in the global transition to electric vehicles which is essential to curb global carbon emissions.

13. Noise

- a. Noise generated from this Project will meet or be less than all federal and state requirements.
- b. There are no sensitive receptors near the Project site.

14. Population / Jobs / Housing

- a. CTR expects to create approximately 220 direct jobs in Stage 1; 940 direct jobs in Stage 2; and an estimated total of 1,400 direct jobs at full project capacity in a California disadvantaged community.
- b. The Project is creating jobs with an average salary that is almost twice the current average salary in the community. (Source: www.ivedc.com)
- c. There are enough unemployed, and willing people in the region to meet the job increase demand of the overall project development.
- d. Over 95% of all jobs will be sourced from Imperial County.
- e. There are Imperial County plans to develop affordable and sustainably built housing in the county to meet further population growth. CTR is collaborating with the local counties, cities, non-profit organizations, and builders to assist in these efforts.
- f. CTR is working with Imperial County and various education providers to support education development in high school, college, and university programs as well as recruitment and on-the-job training programs.

15. Public Services

- a. The Project will not be a drain on existing service ratios, response times or other performance objectives for fire protection, police protection, schools, parks, or other public facilities.
- b. The Project team is working with County officials to facilitate and support any additional needs for emergency management as a result of this project development.

16. Recreation

- a. The Project area is not designated as an active recreation area.
- b. The Project will enhance future recreation because it will help to mitigate the dust that prevents the public from enjoying open space.

17. Transportation

- a. The Project will not conflict with local transit, roadway, bicycle and pedestrian facilities.
- b. Any necessary roadway improvements as a result of this project development will be made based on the results of the appropriate traffic studies.

18. Tribal Cultural Resources

- a. Tribal consultation is ongoing and will continue including the completion of a Cultural Resources study as part of the permitting process.
- b. Preliminary consultation with the Tribes to date indicates that there are no Tribal Cultural Resources on the project site.
- c. CTR welcomes ongoing collaboration with Tribal representatives appointed to the Lithium Valley Commission, as well as planning for further site visits and discussions on activities relating to Tribal needs, workforce training and other community initiatives.

19. Utilities / Service Systems

- a. The Project will purchase water from Imperial Irrigation District (IID).
- b. The Project will sell power to the Imperial Irrigation District (IID) connecting to the grid at an existing interconnect point.

20. Wildfire

- a. The Project is not located in an urban-wildlife interface that would subject people to wildfire dangers.
- b. The Project includes land management of exposed dry lakebed (playa).



Exposed 'playa' at the Salton Sea



4. How will new development help with ongoing Salton Sea environmental issues?

I remembered a very important comment made at the Forum: “Jobs are great, but health comes first.”

The residents and communities around the Salton Sea – especially at the North End, have suffered the ongoing negative effects of the shrinking Salton Sea for many years.

According to the California Department of Water Resources, the “Alamo North Area” has high priority emissive soils. This area accounts for **over 50% of the dust emissions** affecting the region.

While geothermal power production is not responsible for these dust emissions, finding solutions is still a high priority for the community and our company will do its part to decrease dust emissions on our lease area.

The state and local government agencies tasked with finding the right solutions to help stop the dust are supportive of geothermal and lithium development in this area as it could:

- Help reduce dust from the exposed lakebed playa as part of the development.
- Bring additional economic prosperity and investment to the region to fight this ongoing problem through avenues such as property tax.
- Shine a spotlight on the Salton Sea and Imperial County to attract more support and attention to the current environmental issues affecting the community.
- Support government in their community initiatives and Salton Sea environmental programs to address the dust issue.

We want to do whatever is appropriate to support these efforts. We live and work here too and breathe the same air, so it is in everyone’s best interests to be part of the solution!

5. What kind of economic benefits will there be for the community? What jobs will be created and what kind of training is planned?

There were many questions about how geothermal power and lithium production will benefit the community. I’ve highlighted the key benefits below.

Economic Benefits

- Current economic modeling from Imperial County suggests that the County could double its current property tax income over the next 8 years.
- The Imperial Valley geothermal industry is the single largest property taxpayer and private employer. Localization of U.S. lithium production and its ancillary uses could triple that work force and subsequent property taxes.
- CTR, in support of Imperial County, has undertaken a housing initiative in support and in concert with the project development with recent residential land acquisitions in Calipatria, and negotiations underway in Niland, Brawley and Imperial.

- Beyond lithium production, the Imperial Valley is a new canvas of opportunity. If we can attract elements of the auto supply-chain to the region, instead of China, we could create a much larger economic base here in the Valley.
- According to the Imperial Valley Economic Development Corporation's (IVEDC) Economic Impact Assessment:
 - *“For every \$1 spent on payroll, CTR’s project is estimated to generate an additional \$1.23 for the community in local taxes and earnings, which would more than double the initial local investment. Also and according to IVEDC, the creation of 1,400 jobs will result in an estimated \$161.4 million in initial earnings and an additional \$197.9 million in local taxes and ancillary job earnings.”*
 - *“Using these projections, Controlled Thermal Resources Hell’s Kitchen Lithium and Power Project can have a significant economic impact in our region with an estimated local impact of 4,285 jobs and \$359.3 million in overall earnings and taxes generated for the community.”*
- Discussions are underway for additional ways industry can assist the community development and environmental programs.

Source: IVEDC: **Controlled Thermal Resources Hell’s Kitchen Lithium and Power Project - Economic Impact Analysis**

Jobs:

- CTR expects to create many direct and indirect good paying jobs in Imperial County.
 - Construction: 480 ongoing jobs over 8 years or until all project stages are complete.
 - Stage 1 - 220 direct jobs
 - Stage 2 – 940 direct jobs
 - Stage 3 – up to 1,400 direct jobs upon completion of all 3 project stages
- The average wages are expected to be almost double that of the current median wage in Imperial County.
- Over 95% of these jobs will be filled by residents of Imperial County.
- It is also estimated by IVEDC that CTR’s project will create 2,500 ancillary jobs in the region. So that’s more hairdressers, teachers, bakers, retail and hospitality jobs to mention a few.

Education

- Over 90% of these jobs will go to residents with a high school diploma or equivalent.
- A smaller percentage will require community college diplomas or university degrees.
- This project will create equal opportunities for all levels of education and skill sets.
- CTR is working closely with the County’s Workforce Development team, the local high schools, Imperial College and SDSU to assist in providing information to support STEM programs and other education programs.

Training

- CTR is working closely with Imperial County and education providers now to establish what types of jobs and education requirements are needed.
- CTR will also work closely with local high schools to create ‘from-school-to-job’ employment opportunities.
- Once employed, CTR intend to provide on-the-job training programs, including apprenticeship programs and mature-aged training programs.
- It is CTR’s hope that we will create a safe and exciting environment for this generation and the next generations to learn and grow and thrive.
- The majority of the direct jobs will be operators and maintenance personnel, plus engineers, accountants, chemists, laboratory technicians, and other office personnel.

Project timing:

- CTR expects to deliver the first 49.9MW of clean power by late 2023 and its first 20,000 tonne lithium train in 2024.
- U.S. and global automakers have all committed to selling electric vehicles much earlier than anyone expected.
- The auto companies now need hundreds of thousands of tonnes more lithium than is currently produced, and they need it by 2024/25.
- The time to take advantage of this once-in-a-generation opportunity is now.
- A recent report from the National Renewable Energy Lab suggests that the Salton Sea Geothermal resource could produce up to perhaps 600,000 tonnes of lithium every year in a sustainable and responsible way. This could help reduce carbon emissions and quite literally, help save the planet!

More collaboration, more questions, more answers, and more understanding.

It has not been easy to get to here, others have tried, and those attempts have left many people in the community wary of more promises. In the past 10 years since I came to Imperial County, I've spoken to many people about their hopes for the future and I've seen how families have suffered more hard knocks than any community should have to deal with.

It is my sincere hope that we can all work together to make real change happen, not just in the next couple of years, but for decades to come!

I'd like to again, thank everyone who attended the first Lithium Valley Community Forum.

Many things such as development timing and job numbers, will rely on local and state approvals as we move forward and I will keep you updated as we progress.

My responses to your questions are based on the information I have currently.

Thanks again for your time and I hope to see you all at the next Community Forum.

Warmest regards,



Rod Colwell

Chief Executive Officer

www.cthermal.com



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