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07-11-2023 - Response to Pre-Solicitation Workshop conducted at San Diego State University (SDSU) - Imperial Valley Camus

Additional submitted attachment is included below.



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July 11, 2023

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Subject: Response to Pre-Solicitation Workshop conducted at San Diego State University (SDSU) - Imperial Valley Camus - in Calexico on June 27, 2023 – Nikola N. Lakic.



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1.0 STATEMENT

I am thankful for the opportunity to say a few words, in person, during the Pre-Solicitation Workshop hosted by California Energy Commission Workshop in San Diego State University (SDSU) - Imperial Valley Campus in Calexico on June 27, 2023, which was organized with the purpose to <u>inform</u> and <u>seek</u> input from participants on a proposed Geothermal Grant and Loan Program.

During the workshop instructions, I noticed a few problematic details in the approach to geothermal development projects and funding. I am writing an official comment (input) regarding that with the hope that my comment will be seriously considered.

- 1.1 I do believe that funding geothermal projects around the Salton Sea, although the right thing to do and a common practice for many years, in this case, would be losing money and time. I am pointing it out because there is no official recognition (acceptance) yet of the functional long-term solution for the restoration of the Salton Sea – a master plan – an 'architectural plan' to follow, that incorporates those geothermal and other related projects into a master plan as functional units of the self-sustaining Salton Sea. Therefore, I would suggest that funding be postponed (reserved) until the architectural plan is accepted.
- 1.2 I would like to point out that there is a 'big elephant in the room' that everybody seems to ignore or pretend 'not to see'. That 'big elephant' is the incoming ecological disaster and relevant dysfunctional project for the restoration of the Salton Sea. I would like to point out that the 'current course of action' which is the "Perimeter/Brine Lake" which is recently renamed to "In-Basin Solution" or "In-basin long-range plan" and related dust suppression projects leads to smaller, saltier, smellier, and more polluted Lake therefore the 'current course of action' needs to be abolished. Although this comment might be considered an issue of the CNRA and not relevant to the CEC's project funding, I would argue just the opposite. Please refer to the Section below (Segment 3.0 on page 12).
- 1.3 Also, I noticed in one of the slides on screen "List of Eligible Purposes" provision (k) says: "Undertaking projects for the enhancement, restoration, or preservation of natural resources, including, but not limited to, water development, water quality improvement, fisheries enhancement, and park and recreation facilities [and] in areas."
 - 1.3.1 Although the provision above perfectly fits several components of my proposals that include the recreational parks and fisheries, I am reluctant to apply for funding because it would not function if the complete architectural plan



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is not accepted. Also, the currently proposed fund would not be able to cover expenses for such projects. Therefore, the CEC, CNRA, and CalEPA need to act together by forming a special committee (a mechanism) to deal with this issue.

- 1.3.2 Relevant to the provision above and my comment, please pay attention to the recreational parks and fisheries. The water from All-American Canal, en route to the irrigation system, is used, before entering the irrigation system to form circulating Lakes (not ponds with stagnating water) and fisheries. See Figs. 12-15 in Segment (I) titled Harnessing Energy and Water in The Salton Sea (Segment I) (System for Importing Seawater). Also, my proposal provides conditions for tourism exclusive real estate, beaches, resorts, hotels, etc. The surfing waves facility will be a tourist attraction the whole year round. See Figs. 8, 10 -11 also in the Segment (I). Here is the link: 6+(I) Importing Seawater May, 2019.pdf. The recreational parks and fisheries, and/or the surfing waves facility would not function properly unless the complete architectural plan is implemented.
- 1.4 My concept for the restoration of the Salton Sea existed since 2013 but was ignored by people who occupied key positions such as directors in the Salton Sea Authority (SSA) and Assistant Secretary for the CNRA who did not have the necessary background nor needed technical knowledge to understand a technical issue involved or to visualize complete project by reading (if they ever read) only a 'blueprint' (without animation of industrial quality). No insult intended to anyone, but an environmental scientist or biologist or chemist, or geologist, is not the best selection to judge or design an engineering project that could be considered a 'project of the century' that requires technical knowledge and/or expertise in mechanical engineering, civil engineering, architecture (art), in addition to being environmentally conscious. That was/is the problem (weak link) and the reason why we are in a current grave situation today.

1.4.1 For example, it would be highly inappropriate to select (allocate) a dentist to perform thorax surgery (heart bypass surgery) on a needed patient although that dentist might be a good man and a great dentist. I am sure that patients would not like such an arrangement either.

- 1.5 Also, I would like to point out that the 'current geothermal projects' are not synchronized with the master plan (architectural plan) that is currently under review by the U.S. Army Corps of Engineers (USACE).
- 1.6 The 'current course of action' needs a radical change before we proceed with funding any project around the Salton Sea area whether it be harnessing



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geothermal energy or solar energy, hydropower, projects related to a clean environment, generation of potable water, or recreational parks and fisheries.

- 1.7 What is needed is a 'master plan', which we do have, but needs to be officially recognized and then, only then, followed with its strict implementation. Ignoring such facts leads to losing time and money unnecessarily.
- 1.8 Also, needs to be formed a mechanism (Committee / Commission) to manage funding and the implementation of the architectural plan.
- 1.9 As the system (framework) for funding is set today, it is limited to companies (contractors) with certain projects regardless of the 'master plan' for the restoration of the Salton Sea. The architectural plan - a master plan - is a fundamental element that is needed. It is noticeable that the current framework (system) does not consider the master plan or architectural plan as a factor. I as an architect (not a contractor) cannot qualify for any funding unless I join some organization. I think that that issue needs to be addressed (fixed). Me joining one organization would not solve the problem nor would be practical because many (not just one) contractors (organizations) will participate in the implementation of my architectural plan. The architectural plan should be an independent factor. Also, I prefer to remain with my function - an architect/inventor and the author of the viable architectural plan - and to receive appropriate benefits as such from the State - rightfully so. My architectural plan is a comprehensive design (solution) that incorporates several different technologies and several phases of great magnitude that several professional companies with the necessary expertise, experience, and record need to be involved including several companies that are currently involved in harnessing geothermal energy and the extraction of lithium.
- 1.10 NOTE: It needs to be mentioned that we are in an emergency. In the last two decades, hundreds of millions of dollars have been lost because of poor management and incompetence of some officials, especially in the last ten years since the announcement of the existence of my proposal. Now is not the time to save someone's ego and/or to protect someone's wrongdoing. Accountability matters. A radical change of the system (process) is needed before we move on the right path.
- 1.11 I respectfully urge the CEC to consider the presented information (input) and to communicate the information with other relevant agencies and Governor Gavin Newsom. Please refer to 1.2 above and Segment 3.0 on page 12.



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2.0 A FEW ADDITIONAL RELEVANT INFORMATION

- 2.1 After numerous attempts by many companies and individuals to solve the problem of the dying Salton Sea in the last 50 years, we (the people – the State) finally do have available a comprehensive 'architectural plan' for the restoration of the Salton Sea (my design) that incorporate several breakthrough technologies in the energy industry (hydro, solar, geothermal) and several projects that contribute to the final product which is the self-sustained Salton Sea that would, first of all, it prevent the incoming ecological disaster that would cause tremendous liabilities to the State, provide a clean environment, generate a substantial amount of potable water (desalinated seawater - I am not talking about expensive reverse osmosis), generate revenue of at least \$500,000,000 per year from clean renewable energy - out of blue - literally, in addition to other activities that would generate revenue including from tourism that would bloom and put the Salton Sea on World map as a tourist destination. The project would cost only about \$15,000,000,000 and can be finished in about 5-6 years. The project could be funded with \$1 billion from the state government, \$1 billion from the federal government, and \$1 billion from the private sector each year for five years. That should not be a difficult task as long we are on the same page (synchronized) and following the master plan. Now we are not synchronized because there is no official recognition and acceptance by all stakeholders of the master plan yet. That is the problem.
- 2.2 As I said in my short comment, every participant (stakeholder) including companies for harnessing geothermal energy and extraction of lithium are working (pooling) for their own interest (their projects) without understanding (seeing) that there is a master plan that will be beneficial to all of them and much more. They are missing the whole picture. The voice of unity is missing.
- 2.3 Each of participating companies is preoccupied with its own interest (profit) and currently is not coordinated to fit into the master plan (architectural plan) for the restoration of the Salton Sea. Again, a comprehensive architectural plan for the restoration of the Salton Sea already exists. To make those players (companies) coordinate to fit into the architectural plan was/is the job of the State. That should be a function of the Assistant Secretary of the California Natural Resources Agency (CNRA). For the Assistant Secretary of the CNRA to function properly he/she needs to be informed of the complete situation all options and proposals relevant to the restoration of the Salton Sea which includes projects for harnessing geothermal energy and importation of the seawater and such person needs to have the necessary technical knowledge to understand the technology involved and its functions. Such a position communicator, problem solver, and uniter requires a respectful person to be objective and have the capability of critical thinking. That function (link) in the



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system of coordination between the State policies and participating stakeholders was missing during the previous two Assistant Secretaries of the CNRA that I dealt with. Sorry to say, I met two previous Assistant Secretary of the CNRA and they did not have the necessary technical background nor independent minds to function properly during their tenure. Their resumes, and conduct (actions, and decisions) are recorded. I do not know who currently occupies that post nor what his/her background or standing is with respect to the restoration of the Salton Sea.

2.4 I would like to say the following because all stakeholders need to understand the whole situation: Came to my attention link to a recently recorded presentation (April 26, 2023) of Mr. Jim Turner COO of Controlled Thermal Resources. The presentation is about 1:24:15. Here is the link: Lithium at the Salton Sea - YouTube. I am mentioning it because it is relevant to this case and reinforces my statements. In his presentation, Mr. Jim Turner talked first about the history of the Salton Sea, mentioning the appearance and disappearance of the 'body of water' (Salton Sea) through millennia, and that life was there before the recent formation of the Salton Sea (showing photos with people and activities) indicating that it is normal change to be without the Salton Sea. Then, he talked about their (Controlled Thermal Resources) project "Hell's Kitchen" and the technology involved in the extraction of lithium Then there was a segment of Q and A.

During the presentation, Mr. Jim Turner talked about shrinking Lake and how it would be beneficial to their project (See the sequence of the video at about 1:01:00).

2.4.1 That means that Mr. Jim Turner and Controlled Thermal Resources are counting on the destruction (shrinking) of the Salton Sea. That is also reinforced by a public statement by Rod Colwell, founder of Controlled Thermal Resources in the Desert Sun article titled "In search of 'Lithium Valley': why energy companies see riches in the California Desert".

Here is the link to the article:

https://www.theguardian.com/us-news/2021/sep/27/salton-sea-californialithium-mining.

In the article above, Mr. Rod Colwell, from Controlled Geothermal Sources, Commissioner at Lithium Valley Commission, and colleague (friend) of Vice-Chair Mr. Ryan E. Kelley was quoted saying the following referring to shrinkage of the Lake: *"Let private enterprise deal with it"*. Also, he said, *"We're trying to commercialize an environmental disaster."* Also, was written, *"Colwell keeps track of the Salton Sea's water levels because as it evaporates, more land becomes available for Controlled Thermal Resources"*.



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This article reinforces (proves) the accusations that I stated in my numerous public comments. Unfortunately, nothing has been done by the authorities about it.

During the presentation, when host Mike McElhatton, Educational Programs Director, Anza-Borrego Desert Natural History Association, read someone's question about how much water is needed for the extraction of lithium and where they are going to get it – Mr. Jim Turner answered that all water coming from the Colorado River and that they have <u>secured</u> <u>some water</u> from the Imperial Irrigation District (IID).

- 2.4.2 NOTE: With the "current course of action" which is the "Perimeter/Brine Lake" or recently renamed "In-basin long-range plan" and geothermal power plants with their focus on the extraction of lithium which are based on the "Smaller Lake' and exposed playa which is the "Perimeter/Brine Lake" we do not have enough water for even mediating dust suppression projects on the exposed playa of shrinking Lake. Mr. Jim Turner did not answer the question of how much water is needed for the extraction of lithium. Maybe Mr. Jim Turner forgot to answer that critical question … it is possible, but I doubt it.
- 2.4.3 I happen to have a note from previous similar presentations and articles that for a metric ton of lithium is needed 500,000 gallons of water. That means 1,000 metric tons of extracted lithium would need 1,500 acre-feet of water. Also, it means that 600,000 metric tons of extracted lithium, as they projected when the whole seven phases are completed, would need 900,000 acre-feet of water. That is a little short of the needed water to balance the evaporation of the Salton Sea per year, which was/is about 1,200,000 acre-feet. It also means '<u>Goodbye</u>' to the Salton Sea.
- 2.4.4 NOTE: Most shareholders especially nearby population including tribes believes, based on pamphlets published by the Salton Sea Authority (SSA) in order to get their support, that a 'Smaller Sustainable Lake', which sooner or later would end up as a cesspool, will be 'healthier Lake' and the best solution for the nearby communities. Such a statement is utterly untruthful.
- 2.4.5 If we add two more companies that Mr. Jim Turner mentioned (Berkshire Hathaway Energy; and Energy Source Minerals that are also in the business of the extraction of lithium the logical question rises Where they are going to find water for their extraction of lithium? (See the sequence of the video at about 1:12:00).



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That reinforces my accusation that the "current course of action" which is the "Perimeter/Brine Lake" or recently renamed "In-basin long-range plan" is not a feasible 'long-term solution' concept and requires radical change as I indicated in numerous of my comments and presentations.

- 2.4.6 NOTE: During the presentation, Mr. Jim Turner also talked about the closed-loop system that they intend to use and reuse water (See the sequence of the video at about 05:00 and 1:14:00).
- 2.4.7 That is nice that Mr. Jim Turner intends to use the closed-loop system and reuse water, but in my patented architectural plan (proposal) for the restoration of the Salton Sea, which was rejected by the UCSC Panel, in collusion with the Water Board / SSMP team, and Tetra-Tech, I am explaining how we can have enough water for the extraction of lithium from geothermal brine and other purposes by recycling water by using the 'closed-loop' system for harnessing geothermal energy and also creating the 'closed-loop' system environment for generating potable water. Also, I have included the closed-loop system explaining how we can generate potable (distilled) water using geothermal and/or solar energy.
- 2.4.8 It is important to mention that my patented closed-loop systems used in my proposal for the restoration of the Salton Sea, besides generating electricity by using geothermal energy (heat) and/or solar energy (heat) generate distilled water and concentrated salty brine that can be used for the extraction of lithium.
- 2.4.9 My architectural plan provides numerous geothermal power plants nearby the Salton Sea of circular shape with a diameter of about 500 meters each such power plant with four mineral extraction facilities. The mineral extraction facilities use heat from the hot geothermal piping system to induce the evaporation of concentrated salty brine in a closed-loop environment system (similar to the greenhouse effect) to generate potable water and recycle it. Many companies that are involved in the extraction of lithium can, and should, use my system for recycling water and increasing the concentration of salinity of the brine regardless of the specific method that each of them is using for the extraction of the lithium whether it be 'Ion-Imprinted Polymers' or any other methods - known or to be discovered.
- 2.4.10 NOTE: I am mentioning this because it is relevant to the possible illegal conduct by some companies involve in harnessing geothermal energy and extraction of lithium (See 2.4.6 above).
- 2.4.11 I would like to emphasize that my proposal for the restoration of the Salton Sea is not in conflict with companies that are involved in harnessing geothermal energy and the extraction of lithium from geothermal brine but rather helping



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them. With the 'current course of action' and their plan, they would not have enough water for the extraction of lithium and for saving the Salton Sea (See 2.4.3. above). My proposal saves and restores the Salton Sea and provides a substantial amount of water that could be used in many different applications including the extraction of lithium.

- 2.5 In my papers, I am explaining how we could extract lithium from imported seawater of about 1,000 tons per year during the first several years because currently, the salinity of water in the Salton Sea is 50% saltier than the salinity of the Ocean. After we reach (equalize) the salinity of the Salton Sea with the salinity of the Ocean in about 5-6 years we would be able to generate about 750 tons of lithium per year. The 750 tone is not an impressive number, but it would be the constant amount as a byproduct of the desalination of the Salton Sea.
- 2.6 At this time, my proposal is under review by the US Army Corps of Engineers (USACE), and I hope that they have the necessary expertise and will be objective in studying my material and reviewing my proposal thoroughly as a whole. I am hoping that the USACE will not succumb to the pressure of some people as was the case with the California University Santa Cruz (CUSC)'s Panel of 'independent' reviewers.
- 2.7 Therefore, I think that the CEC should wait for the USACE's report and postpone (put aside) funding until there is an official 'architectural plan' accepted by all stakeholders to follow. That is important because proceeding with projects that are not coordinated but would need to be monitored, preferably with some kind of results in several years will delay the implementation of the main project 'architectural plan' for several years. Also, 'cherry picking' smaller elements even from my proposal, but not accepting a 'master plan', would be 'butchering' my design and would not work properly. The problem with the current grave situation is that people in key positions have no engineering background and think that proceeding with the 'current course of action' is OK and 'somehow' later we will just add (incorporate) a new concept if needed. It does not work that way.
- 2.8 NOTE: People need to understand, especially those without an engineering background, the following: An analogy You cannot start building a skyscraper and then later return to finish a proper foundation.
- 2.9 Because this is an unusual situation that involves issues of the environment, water, energy, the health of the population of nearby communities, and the economy in general, I respectfully suggest that the CEC, CNRA, and CalEPA



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act together by forming a special committee/commission (a mechanism) to deal with this issue – raising fund, managing the fund, communicating with all stakeholders, contractors and state and federal officials. Such an organization (committee/commission) needs to be formed by professional engineers with experience in managing big projects. I am sorry to say that the Salton Sea Authority (SSA) is not qualified for such a task, especially not after intentionally ignoring my proposal for 10 years. They caused serious damage to the communities and the loss of potential revenues of billions of dollars - unnecessary.

- 2.10 I would like to emphasize that the essence of my architectural plan for the restoration of the Salton Sea is dividing the Lake into three sections so that we would need less water from the Colorado River (only for smaller the Northern and Southern Lakes) and still have a full-filled Lake with the water level of the 1950s and the 60s because now we can import seawater into the large central section from the Gulf of California and Long Beach. That is not difficult to understand, and one does not require extensive expertise to understand it, especially after my numerous presentations. The reason for ignoring my proposal by some officials for 10 years could be a lack of basic technical knowledge, incompetence, or some 'other' reason that might surface later.
- 2.11 In addition to the architectural plan, the essence of my system for harnessing geothermal energy is the implementation of a completely closed-loop system the first heat exchanger in the source of heat and the second heat exchanger in the boiler of the power unit. My system is not limited to geothermal reservoirs. My system is very simple and original and very possible will make the geothermal industry the number one producer of electricity in the future the sooner the better.
- 2.12 My attorney will soon contact several companies that are involved in harnessing geothermal energy and extraction of lithium from geothermal brine nearby the Salton Sea in Imperial County namely the Berkshire Hathaway Energy (BHE Renewables, LLC (CalEnergy Operating Corporation); Controlled Thermal Resources; EnergySource Minerals; and Cyrq Energy, Inc., to see if any of them is willing to purchase license for using my patented closed-loop system for harnessing geothermal energy and patented closed-loop system for recycling water which is an essential factor in the restoration of the Salton Sea. Whoever purchases a license to implement such technology in California will be able to subcontract the license to other companies through California regardless of the Salton Sea project. We intend to offer the same to potential producers/contractors for solar and hydro systems. Licensing of technology is a standard process in all sectors in all industries. Also, in addition to licensing deals



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for the use of breakthrough technologies, there is an architectural fee, as a certain percentage which is based on the fair market value of the project, which in this case is a substantial amount. That is standard practice for any project whether it be a residential house, industrial building, skyscraper, golf course, hydroelectric plant with a dam, or stadium, etc. There is nothing unusual or new about it. So far, that important component has been ignored. That needs to be properly and fairly addressed.

2.13 I respectfully urge the CEC / State to respect and enforce the patent law.

3.0 **RECOMMENDATIONS**

- 3.1 Because the restoration of the Salton Sea involves issues of a new resource of potable water, a clean environment, clean renewable energy, and the health of the nearby population, I am recommending, after my proposal is thoroughly reviewed and hopefully accepted, to be formed a Committee/Commission from the members of the CNRA, EPA, CEC, and several relevant agencies and stakeholders to deals strictly with the implementation of the project for the restoration of the Salton Sea until its completion in 5-6 years. After its completion, the Committee can be abolished or reduced to overseeing maintenance issues and alike.
- 3.2 A voice of unity is needed. Such a committee/commission should be involved in raising funds, managing funds, and communicating with all stakeholders, contractors, and state and federal officials. Such an organization (committee/commission) needs to be formed by professional engineers with experience in managing big projects preferably hired from outside. I am sorry to say that most of the members of the Salton Sea Authority (SSA) are not qualified for such a task, especially after intentionally ignoring my proposal for 10 years. Also, none of the members of the SSA have the necessary technical knowledge for such a task. They (the members of the SSA) are fighting (arguing) for the interest of the companies that they represent. So far, they, with their conducts (recorded actions) have been dysfunctional ... they did not work in the interest of the Salton Sea, environment, or nearby population and did not follow the fundamental policy of the State. In fact, they did just the opposite. They have caused serious damage to the communities and loss of time (10 years) and potential revenues of billions of dollars unnecessary.
- 3.3 First of all, it is important that the architectural plan for the restoration of the Salton Sea (my proposal) is properly reviewed and accepted, and then to be formed a special committee/commission (a mechanism) to manage its implementation.



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3.4 Those who make policies need to understand that the Salton Sea situation is very unique in the whole World. The depression of over - 220 feet below sea level is in a <u>desert</u> about 200 miles from both - the Gulf of California (San Felipe) and the Pacific Ocean (Long Beach). In the area, there is a prevalent geothermal source and many sunny days over the year.

Importing seawater and using those natural sources (geothermal and solar), as I explained in my proposal, the Salton Sea can and should become a hub to produce potable water that can be used in many applications. Although I have explained the function of the feasible concept with a pipeline diameter of 48", through which can be imported about 1,000,000 acre-feet of seawater from the Sea of Cortez and about 2,000,000 acre-feet from Long Beach, the system can be multiplied – something for future generations to do.

Think for a moment about the alternative – the current course of action – the disappearance of the Salton Sea – exposed lakebed (playa) – toxic dust storms, degrading environment, the health of the population, and economy.

This is a rare opportunity that should not be ignored as was the case in the last 10 years.

- 3.5 Because the Salton Sea Authority (SSA) since its formation in 1993 played the role of authority and failed to produce anything useful for the restoration of the Salton Sea, in fact systematically ignored and rejected a proposal for the restoration of the Salton Sea (my proposal) since 2013 that successfully deals with the restoration of the Salton Sea despite restriction of water from Colorado River, I respectfully suggest that top officials of the State of California (Governor and Secretaries of CNRA, EPA, and CEC) consider abolishing the Salton Sea Authority (SSA) as authority to decide on the fate of the Salton Sea. Also, I respectfully suggest that top officials of the State of California abolish the role (task) of CNRA with their branches (sub-agencies) Water Boards, SSMP, and advising companies (Tetra-Tech and Pacific Institute) assigned by Order WRO 2017-0134 to find a long-term solution for the restoration of the Salton Sea. It is clear from the SSMP report that the CNRA / SSMP failed to provide a functional "long-term plan" for the restoration of the Salton Sea by December 31, 2022, as required by WRO 2017-0134. Therefore, their task of finding ('designing') a long-term solution was/is officially finished on December 31, 2022. Here is the link to the SSMP report: Salton-Sea-Long-Range-Plan-Public-Draft-Dec-2022.pdf (ca.gov).
- 3.6 I would like to mention that regardless of the Salton Sea project, my patented systems can be used in many different applications such as the desalinization of seawater by using solar energy to produce electricity, potable water, and concentrated salty brine which can be frequently collected and used to produce



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lithium. The system can be used in many locations from San Diego to Vancouver, or for example Cabo San Lucas, etc., and any coastal cities that have many sunny days, seawater nearby, and are lacking potable water.

4.0 SEVERAL LINKS TO A FEW RELEVANT CORRESPONDENCES

Here are included just a few links to the letters that are relevant to this case which I sent for the record and to reinforce my statements here.

- 4.1 Here is the link to the letter (62 pages) that I sent to Honorable Wade Crowfoot Secretary for California Natural Resources Agency on December 30, 2022, in response to the Salton Sea Independent Review Panel Summary Report published on or around September 29, 2022, and Request for its abolishment. Response to the Report of Panel of independent reviewers.pdf. To avoid repeating myself ... This letter has a substantial amount of information including my correspondence with the Panel of independent reviewers. Also, have the links to the recorded meeting in which principal investigator Professor Dr. Brant Haddad explained the reasons for not reviewing my proposal (See page 14 out of 62). Please read it.
- 4.2 Here is the link to the letter (36 pages) that I sent on June 6, 2023, to the U.S. Army Corps of Engineers in response to the State Water Board Salton Sea Workshop and Public Meetings for the Imperial Streams Salton Sea and Tributaries Feasibility Study conducted on May 18, 2023. <u>Comment to U.S Army Corps of Engineers - May 30, 2023.pdf</u>.
- 4.3 Here is the link to the letter (10 pages) that I sent on October 27, 2022, to the CEC titled "Comment on Draft Report of the Blue Ribbon Commission on Lithium Extraction in California Pursuant to Assembly Bill 1657 (E. Garcia, Chapter 271, Statutes of 2020). <u>Comment on Blue Ribon Draft Report October 27, 2022 Copy.pdf</u>.
- 4.4 Here is the link to the letter (12 pages) that I sent on October 21, 2020, to the CEC titled "My Public Comment following three virtual community meetings facilitated by the U.S. Army Corps of Engineers, the Salton Sea Management Program (SSMP), and the NAPE on July 7, 2022 (2 meetings) and July 12, 2022". Letter to Lithium Valley Commission -September 22 Copy.pdf.
- 4.5 Here is the link to the letter (13 pages) that I sent on October 21, 2020, to the CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD COLORADO RIVER BASIN REGION titled "2020 Triennial Review Public Comment".



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Public Comment - 2020 Trinnial Review - California Regional Water Quality Control Board Colorado River Basin Region.pdf.

5.0 A FEW WORDS ABOUT MY WORK and the PROPOSAL:

My proposal for the restoration of the Salton Sea – terminal Lake here in California - involves an architectural plan which incorporates several breakthrough technologies in the energy industry which I have invented and modified to incorporate local conditions of the Salton Sea area with the final product – the self-sustained long-term solution for the restoration of the Salton Sea. It might be considered a project of the century costing only about \$15 billion and generating at least \$500,000,000 in revenue per year just from clean renewable energy – in addition to revenue from other activities including tourism.

Here I will just summarize the subjects of my breakthrough methodologies:

- I am the inventor of the new system for harnessing geothermal energy (a completely closed-loop system) which is not limited to geothermal reservoirs.
- I am also the inventor of the new system for drilling deeper and wider wellbores.
- I am also the inventor of the new system for harnessing solar energy (thermo-optical solar system) having the "power unite" with pistons, which is at least several times more efficient than Photo Voltaic (PV) systems.
- I am also the inventor of the new system of cross-country pipelines for importing seawater or other fluids, having the "in-line pump" as segments of the pipeline for uphill routes, and having the "in-line generator" as segments of the pipeline for downhill routes with the "Delta Power Plant" at the last section.
- I am also the inventor of the new system for using the pipeline as a foundation for solar panels which eliminates expenses for purchasing or leasing huge sections of land, which is an expensive requirement for conventional solar facilities on an industrial scale. My system decentralizes the conventional centralized systems.



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- I am also the inventor of the new system for the desalinization of salty water using solar and/or geothermal energy to generate electricity and having potable water as a free byproduct, and concentrated brine to be used to produce Lithium.
- After the accident offshore of Louisiana in the Gulf of Mexico on April 20, 2010, and a failure of the "Blow Out Preventer" (BOP) in the Macondo well, it became a challenge how to stop uncontrollable bursts of crude oil in the Gulf of Mexico and prevent disasters of epic proportions. Out of over 3,000 proposals and many universities and laboratories participating, my proposal for controlling dysfunctional "Blow out Preventer" was used to stop uncontrollable bursts of crude oil. By July 15, 2010, the Macondo well was successfully sealed, if only temporarily, for the first time in 87 days. That was only 34 days after my submission. The implementation of the control valve on top of the dysfunctional BOP was televised on CNN.
- I graduated from the School of Architecture, University Cyril and Methodius, Skopje, North Macedonia, in 1982, and immigrated to the United States in 1983, as a student at the Frank Lloyd Wright School of Architecture, Taliesin West in Arizona, and Taliesin East in Wisconsin. The University Cyril and Methodius – School of Architecture consists of nine semesters, around 38 exams, plus graduate work which takes an additional 5-6 months. I am proud to say that my graduate work scored 10 out of 10, which is rarely given.

My mission is global – which is licensing technologies worldwide to capable companies/contractors with means. The Salton Sea project is a small part of it, but it is an important part. It is imperative to save the Salton Sea and our environment despite unreasonable opposition. I am providing a solution and the "know-how" to the desperate situation.

Here is the video of my presentation in front of members of the CEC. It is about 60 minutes. I am grateful for such an opportunity from the CEC although the material is substantial, and I needed more than 60 minutes. Here is the link: <u>https://energy.zoom.us/rec/share/d4tAFmZFYEoqg4_VQzKgnbEbbjsTG-o8xeJX9KRklp4uLlvOr7dCOz-9zrcMW-tW.JZXVajNyKAb3E9Of.</u>

Also, I am including links, and a summary of my proposal for the restoration of the Salton Sea, divided into five segments for easier understanding. Each of the segments (phases) is essential for the final product – the self-sustained Salton Sea.



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The subject at the Stanford Geothermal Workshop (SGW 2023) was 'Geothermal' and was limited time for presentations, therefore, I did not submit two papers explaining how to harness solar and hydropower in more detail.

Here below are links to my papers from the Stanford Geothermal Workshop (SGW 2023) where I made three presentations on February 7, 2023, each lasting 30 minutes including Q & A. Although 90 minutes was a short time for a substantial material, I am thankful for such an opportunity.

Papers - Segment (I) - Harnessing Energy and Water in the Salton Sea.

Click here to see.

Papers - Segment (II) - Harnessing Geothermal Energy in the Salton Sea Area.

Click here to see

Papers - Segment (III) - System for Drilling Deeper and Wider Wellbores.

Click here to see.

PowerPoint Presentation - Slides – are bigger files. I am including links to them below.

The slides are summaries of the papers and are easy to review after the papers are read. In the text of the papers, I referred to certain illustrations (See Fig. so and so), which are in a separate segment. In the PPT files, the illustrations are smaller, and on the right side of the slide, there is a short description (summary - power points).

I have included all files on my website <u>www.GeothermalWorldwide.com</u> => OUR TECHNOLOGY => Presentation at Stanford University.

PowerPoint Presentation - Slides - Segment (I) - Harnessing Energy and Water in the Salton Sea. <u>Click here to download</u>.

PowerPoint Presentation - Slides - Segment (II) - Harnessing Geothermal Energy in the Salton Sea Area. <u>Click here to download</u>.

PowerPoint Presentation - Slides - Segment (III) - System for Drilling Deeper and Wider Wellbores. <u>Click here to download</u>.

For more information and for those two additional segments about harnessing **solar** and **hydropower** please visit the page <u>PRESENTATION AT EL CENTRO</u>." It is just above the link "Presentation at Stanford University".

Here are all five links from my website to be handy. Here are Segments I-V.

The segment about Harnessing Hydro Power is presented here as Segment II.



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The segment about Harnessing Solar Energy is presented here as Segment III.

The segment about Harnessing Geothermal Energy is presented here as Segment IV. And

The segment about System for Drilling Deeper and Wider Wellbores is presented here as Segment V.

Here are the links:

Harnessing Energy and Water in The Salton Sea (**Segment I**) (System for Importing Seawater). <u>6+(I) Importing Seawater - May, 2019.pdf</u>.

Harnessing Energy and Water in The Salton Sea (**Segment II**) (Harnessing Hydro Power). <u>6+(II) Harnessing Hydro Power - May, 2019 - Copy - Copy.pdf</u>.

Harnessing Energy and Water in the Salton Sea (**Segment. III**) (System for Harnessing Solar Energy). <u>6+(III) Harnessing Solar Energy - Addendum - July 1,</u> <u>2022 - Copy - Copy.pdf</u>.

Harnessing Geothermal Energy with the Self Contained In-Ground Geothermal Generator and Self Contained In-Ground Geothermal Heat Exchanger (**Segment IV**) Harnessing Geothermal Energy in The Salton Sea Area. <u>6+(IV) - Harnessing Geothermal Energy.pdf</u>.

Harnessing Energy and Water in The Salton Sea (**Segment V**) (System for Drilling Deeper and Wider Wellbores). 6+(V) Drilling Deeper & Wider Wellbore .pdf.

The architectural plan is a comprehensive design. In order to be understood it needs to be studied as a whole by people preferably with an engineering background. Also, it is an art.

5.1 Summary of the summary of my proposal:

The architectural plan successfully restores and refills the Salton Sea to the water level of the 1950s and the '60s and reestablishes huge wildlife sanctuaries despite a reduced inflow of water from the Colorado River.

By redirecting the New River and Alamo River back to Mexico before it gets polluted with fertilizers and pesticides, it provides an option for filling up the Laguna Salada – a dry Lake in Mexico - and reestablishing flaw in the Gulf of California (Sea of Cortez). Everyone should love that. In return, through negotiation by the 'International Boundary and Water Commission' (IBWC) and their counterparts in Mexico, through a treaty to negotiate a corridor with a



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service road for a pipeline for importing seawater into the central section of the Salton Sea. Since such a solution is of great interest to us (USA) and to Mexico, the negotiation should not be a difficult task. We could exchange at least the same amount of water, although, through negotiation, we could have an opportunity to get 1,000,000 acre-feet of seawater and to keep a certain amount from the Colorado River. Also, it would be an opportunity to negotiate 100 years deal with an option to renew the deal after 100 years. This solution would save us about \$100,000,000 per year that otherwise we would need to pay for importing 1,000,000 acre-feet of seawater. I elaborated on it in more detail in original papers submitted in 2018 following the Request for Information (RFI) issued by the State in 2017.

Also, it is important to mention, that I, as the author of the Architectural Plan and the inventor of a new system for the desalinization of salty water using geothermal and/or solar energy, should be included as a part of the team of the IBWC as a contributing consultant during a negotiation with Mexico because my presence would improve our leverage because by using my system (methodology) Mexico can provide potable water for nearby city Mexicali that needs potable water and concentrated brine that can be used to produce lithium. Both elements in demand. The same system that I am proposing for the Salton Sea.

Also, an essential part of my proposal is that by dividing the Salton Sea into three sections, we would need water from the Colorado River only for farmlands and for balancing the evaporation of the North Lake and South Lake. That is in harmony with the reduced inflow of water from the Colorado River as required by the Quantification Settlement Agreement (QSA) and possible additional reductions in the future because of drought.

Also, it is important to mention, that an essential factor of my proposal is utilizing a dike around the desired area allocated for the extraction of lithium to provide dry land and prevent the destruction of the Salton Sea as would be the case with the current course of action.

Also, it is important to mention that the implementation of my proposal for the restoration of the Salton Sea would cost about \$15,000,000,000. It can be completed in about 5-6 years and would generate at least \$500,000,000 in revenue per year from clean renewable energy - out of the blue – literally. The revenue numbers in my papers are conservative. A more realistic revenue estimate would be about \$1,000,000,000 per year. That is in addition to achieving a clean environment, a substantial amount of potable water, lithium, tourism, and other activities that generate revenue.

I would be glad to answer any questions.



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Sincerely,

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