"Global Warming Solution"
HELIOHYDROELECTRICTECHNOLOGY
TALKING POINTS

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WHAT IS HELIOHYDROELECTRIC? In its simplest definition, it is the use of salt/seawater and solar energy to create electrical power. There are four methods of HelioHydroElectric.

METHOD ONE: There are numerous locations worldwide which are below sea level. By building a pipeline from the nearest ocean, inland seawater flows downhill, flooding these basins below sea level, and generating electrical power. Many of these areas below sea level are in deserts.

METHOD TWO: By using solar and wind power pumps, seawater can be pumped inland to flood existing dry salt lakes in deserts.

METHOD THREE: There are huge salt/alkaline aquifers deep underground. By using solar and wind power pumps, this salt/alkaline water can be pumped to the surface to flood dry salt lakes in deserts.

METHOD FOUR: By building a dam across a bay, sea water flows into the lake. The evaporation of the water from sunlight makes the density of the seawater heavier, which then flows back to sea with higher salt density, thus creating electrical power.

WHY HELIOHYDROELECTRIC POWER? This is the only technology that can potentially remove carbon dioxide from the atmosphere. Most of the other solutions focus on reducing carbon dioxide emissions. This technology will solve Global Warming.

HOW DOES HELIOHYDROELECTRIC WORK? 1) Flood existing dry salt lakes in deserts with salt/seawater, creating evaporation ponds. 2) Solar energy from the sun falls upon these artificial lakes, creating clouds. 3) These clouds cool the desert with shade, reflecting heat back to outer space. 4) These clouds then travel to nearby mountains, creating rain. 5) The rain falls in mountains creating vegetation. 6) The vegetation grows, absorbing carbon dioxide from the atmosphere, thus reversing "desertification". 7) The additional rainfall puts more water into existing (and sometimes new) hydro dams creating electrical power.[1]

[1] Kettani, M. HelioHydroElectric (HHE) Power Generation Dec 1972. IAEA/INIS

THE VISION: Creating evaporation ponds of salt/seawater in deserts can be done worldwide; including the Western United States, Australia, Western China, Mexico, South Africa, the Middle East and the Sahara. By the author's estimates, 50% of the HelioHydroElectric potential is in the Sahara desert. This is no more visionary than Hoover Dam or the Tennessee Valley Authority was in the 1920s, during the Great Depression in the United States. The difference is the vision is Global.[2] This is a worldwide hydroelectric project utilizing salt water and solar energy.[3]

CASE STUDY, ISRAEL: Israel, Palestine, and Jordan are jointly building two pipelines from the Red Sea to the Dead Sea. One pipeline will go on the Jordan side, the other on the Israel side. As the seawater flows downhill, electrical power is generated. The Dead Sea is going dry. As a result the underground aquifer in the area is lowering, which is increasing the amount of sinkholes in the area. It is hoped that it will lend stability to the local geology. The additional seawater from the Red Sea will increase cloud cover and local rainfall. Please note, Palestine is involved. It is amazing these three are cooperating.[4]

CASE STUDY, EGYPT: The Qattara Depression in Egypt has been extensively studied.[5] The plan is to build pipelines from the Mediterranean Sea to an approximately 5,570 square mile area below sea level inside Egypt, flooding the area with seawater. The solar energy from the sun evaporates the water, creating artificial rain along with electrical power.[6] An added bonus, it will help remove pollution from the Mediterranean Sea. [7]

CASE STUDY, SALTON SEA: This is actually a manmade lake in Southern California, and it is polluted. In fact, this is the only place in the United States where polluted water flows into the country. The additional seawater to the Salton Sea may help clean up the pollution, and add local moisture and rainfall. Furthermore, the electrical power can be used to flood nearby basins with salt water; thus helping to alleviate the drought in California. California only has about one year of fresh water left. The present plan is to use the "desalination method"; which takes seawater, removes the salt, and makes it fresh. The desalination method creates waste and is very expensive. Also, the desalination method does not solve the problem at hand: the serious drought the state is experiencing. HelioHydroElectric can do what the desalination method cannot do. It is unknown if the engineering design work has been proposed.

CASE STUDY, ARIZONA: Lake Mead in Arizona and Nevada is going dry, and the lake is at its lowest level in decades, at almost 150 ft. below capacity .[8] This has created a severe problem with the seven states as part of the Interstate Compact. Solution: flood the several thousand or

[2] A good book to read of the era is Hiltzik, M., Colossus: Making of the American Century.
[3] Nix, M. U.S.Patent Application US20080131830 Use of Renewable Energy. HelioHydroElectric

[4] According to the Global Nature Fund, and World Bank, the project will cost 11.1 to 11.3 U.S. Dollars
[5] Simon,A. Energy Resources. Page 101. 2013 Pergamon
[6] Hafemeister,D. Physics of Societal Issues: Calculations on National Security, Environment,& Energy. Pg 441, 2014.
[7] Wikipedia. Qattara Depression.
[8] National Oceanic Atmospheric Administration

so dry salt lake basins in the Western United States with salt water.[9] Few know this but underneath the American West is a huge salt water aquifer. It is so big you can actually float a submarine from Arizona to Nevada. Fresh water floats on top. This aquifer is theorized to be tied to the ocean, so pumping salt/alkaline water out will never lower it. By using Method 3, this salt/alkaline water can be pumped to the surface to flood basins, like the Booneville Salt Flats in Utah, to create artificial rain in the American West. This puts water into the Rio Grande and Colorado. This is something the Interstate Compact states (NM,AZ,UT,CO,NV,WY,CA) should seriously discuss. To date, the engineering for HelioHydroElectric for the Western states has not been reviewed.

CASE STUDY, AUSTRALIA: Australia is in the middle of a huge record breaking heat. Wildlife is suffering. Western Australia has a large number of dry salt lakes and on occasion, a typhoon will come through and fill up these dry salt lakes with fresh rain water. The desert instantly becomes alive. The idea is to use Method 2 and pump sea water inland and flood these dry lakes, so they have water year round. Australia has one area that is below sea level. The idea is to build a network of pipes throughout Western Australia, pumping seawater to these dry lakes for evaporation. Australia does have underground salt water aquifers that could be tapped using Method 3.[10] Unfortunately the present Australian Prime Minister is a climate change denier.[11] It is unknown if the engineering design work has been proposed.

CASE STUDY, ERITREA AND ETHIOPIA: Located inland, in Ethiopia, is the Afar Basin; and inside is the Danakil Depression.[12] Today, caravans of camels trek to the center to mine rock salt for resell. Ethiopia has had internal social unrest, due to privatization of water sources. Eritrea has had a lot of human rights violations. Both nations have been at war. [13] A large part of the conflict is water. A project like this just might help the two nations achieve peace, while providing additional water and electrical power. It should be noted that this area has significant archeological discoveries. About 2 to 2.5 million years ago during the Pliocene period, ancient species of Homo sapiens lived here, and effort will be needed to protect these sites. (Morin, M., Jaw Fossil Shakes Up Humans Family Tree, Los Angeles Times, TNS, March 5, 2015) It is proposed that two pipelines pipe seawater inland from the Indian Ocean, one for Eritrea and one for Ethiopia. It is unknown if the engineering design has been proposed.

CASE STUDY, DJOUBOTI: In the middle of this tiny nation, is a depression area below sea level, Lake Assal.[14] In fact the ocean is already attempting to cut through the volcanic formations. Over time, this area will naturally become an inland salt lake. Lake Assal is a 350 square mile area and is 500 ft. below sea level. Djibouti can harvest this energy, and power the entire nation via HelioHydroElectric. It is unknown if the engineering design has been proposed.

[9] Wikipedia. Dry Lakes USA
[10] Wikipedia. Dry Lakes Australia
[11] Guardian. What Does … Tony Abbot Really Think About Climate Change. 2014
[12] Wikipedia. Danakil Depression
[13] From conversations with people from the region
[14] Wikipedia. Lake Assal

CASE STUDY, IRAN: It has not rained for nearly a year in Iran. The nation is deeply concerned, and HelioHydroElectric is being discussed by the highest levels of government. The author has requested that Secretary of State John Kerry discuss this as part of the present negotiations with Iran and the United States. The author contends that if Iran is to build these HelioHydroElectric projects, they will need help from the United States. Iran has four major basins in the Southern part of the nation that could be flooded using Method 2. Three of the basins are approximately 1,500 ft. high in altitude, one is approximately 3,000 ft. This will require huge amounts of solar and wind energy to pump this volume of seawater uphill. There is an area, however, below sea level in Iran: the Caspian Sea. The Caspian Sea is going dry. By building a huge pipeline from the Indian Ocean to the Caspian Sea, electrical power would be generated, perhaps enough to pump seawater uphill to the four dry basins. (One basin borders Afghanistan). Iran has strict environmental laws, so construction of these HelioHydroElectric projects will need to comply. This may not be such an impossible task. Underneath Iran are large aquifers. By connecting these aquifers with tunnels, it may be possible to create a flow of seawater inland to the Caspian Sea.[15] Flooding the Caspian Sea will also create additional cloud cover and rainfall for Southern Asia. The Ural Sea is now officially dry.[16] This may actually create enough rainfall to put water in the Ural Sea. An alternative route for flooding the Caspian Sea is via Chechnya in Russia. The author would like to negotiate an "oil for solar" trade agreement between Washington State and Iran. Detail studies have not been done, however, Iran is definitely taking an interest in HelioHydroElectric technology.[17]

CASE STUDY, CHINA: Western China is again, in a drought. So much so, there has been an ethnic conflict; the author would say over lack of water. China is aware and is looking at a mega project to pipe water from Southern China, where water is plentiful, to Western China, where there is in a drought. Granted, this is the diversion of fresh water. The import of large amounts of river water into Western China will have a major impact on the climate. It is known as the China South to North Water Diversion Project. The evaporation of so much irrigation water should increase vegetation in the region.

OTHER LOCATONS: By no means is this an inclusive list of all potential locations. There use to be an ancient river system in Western Egypt, Libya, Tunisia, Algeria, Niger, Mali, South Africa, Mexico and even Saudi Arabia[18]. There use to be numerous lakes in the Sahara desert.[19] Geologists have found whale bones in the middle of the Sahara. A pod of whales got stranded when the land went dry. It is known as the Wadi Al-Hitan. These areas, however, can be again flooded, to stimulate the economy of many of these desert nations. There will be impacts as the land subsides, due to the weight of the water and salt. There will be earthquakes.[20] The

[15] Wikipedia. Caspian Sea
[16] Wikipedia. Ural Sea
[17] Based on conversations by the author with Iranian citizens.
[18] Dawhat Salwah, Saudi Arabia
[19] Lamb, H. Climatic History and the Future, Evidence of Past Weather and Climate. 1985
[20] Wikipedia. Land Subsidence

author does not believe that all potential sites have been inventoried, but can be done.[21] There is hope.

WHAT ABOUT THE SALT? Over a period of centuries HelioHydroElectric will remove salt, pollution and radiation from the ocean. By trapping the pollution and radiation geologically, the ocean will become cleaner and less acidic. The acidity of the ocean has reached dangerous levels due to climate change; this puts our coral reefs, and the balance of the oceans ecosystem, in jeopardy. According to the U.S. Geologic Survey, the ocean has nearly 321,003,271 million cubic miles of salt water in it. The ocean contains approximately 96% of the world's water. There is estimated to be 332,519,000 cubic miles of water worldwide. 2% is locked up by glaciers and ice caps. Only 1% of the world's water is fresh. By salt content, the salt density in the ocean varies depending on location. According to the Office of Naval Research, "the average ocean salinity is 35ppt (ppt=parts per thousand)…This number varies by 32 and 37ppt". So there is a lot of salt in the ocean. With development of HelioHydroElectric, this salt will be pumped inland, forming natural geologic salt formations, thus entombing radiation and pollution geologically. These HelioHydroElectric projects will eventually "silt" up with salt, but it will take centuries. Still the volume of these dry lakes is huge, and can accumulate huge amounts of salt. Method 4 could be used to flush salt brine back to the ocean, thus extending the life span of evaporation ponds. According to Palomar College, "some scientist estimate that the oceans contain as much as 50 quadrillion tons of dissolved solids. If the salt in the sea could be removed and spread evenly over the Earth's land surface it would form a layer more than 500 ft. thick, about the height of a 40 story building".

POTENTIAL FOR RARE METAL MINING: This salt also has another bonus; as there are rare metals in these salts that can be mined via electrolysis or magnetic separation. (Bardi, U., Extracting Minerals from Sea Water, Sustainability, April 2010) According to Stanford University, seawater contains Magnesium 1272 ppm, Strontium 13 ppm, Copper .09 ppm, Selenium .004 ppm, Gallium .0005 ppm, Gold .000008 ppm. (ppm=parts per million). Some of these rare metals go for $400,000 a pound. There is a huge economic potential, helping to finance HelioHydroElectric.

WHY NOT NUCLEAR POWER? Solar and wind technology can be made quicker and cheaper. Nuclear power plants bring physical and environmental dangers.[22] The author doesn't think we have the energy density from nuclear power to even do it. Bringing in nuclear power to pump seawater inland for nations like Somalia, Libya, Syria, Egypt, and Eritrea may not be ideal; these are war zones. It was once discussed to use nuclear weapons to build the Qattara Project.[23] The proposal was rejected. Using nuclear power for pumping seawater for HelioHydroElectric is a No Go.

[21] Scientific American, Battling Drought: The Science of Water Management. 2012

[22] Phil Niklaus wrote articles exposing the danger of a nuclear meltdown in the Albuquerque Journal 1975

[23]Wikipedia. Qattara Depression

HOW DOES SOLAR AND WIND POWER WATER PUMPS WORK? In the 1800s, in the American West, wind turbines were very common, pumping water to the surface. Today, advancements in technology have brought about more efficient wind turbines. The use of solar energy is a new potential. One method is to use solar photovoltaic cells to generate electrical power for a DC powered pump. Another method is to heat a heat transfer fluid, like hot oils, and then drive a steam turbine. New is solar thermal technology, where a mass is melted to a hot liquid, then at night, the heated mass (such as melted salt) makes steam for a turbine. These would work for Method 2 and 3. Method 1 is unique in that areas below sea level are flooded with seawater. As seawater flows downhill, it creates electrical power. Thus from Method 1, electrical power then can be used to pump more seawater uphill; flooding areas above sea level for evaporation. It is unknown the exact amount of electrical or mechanical power needed to pump this large volume of salt water, but the number is huge.[24] Solar and wind water pumping technology is well worked out.

HOW DOES WEATHER WORK? Think of weather as being your refrigerator, except the sun is the electricity. Your refrigerator has two ends; it has a hot end, and a cold end. When the thermostat is turned up, the refrigerator gets colder inside. The condenser coil outside gets hotter. The refrigerator is throwing heat out. This is why Boston air gets colder in the winter and California gets hotter. The additional heat from the sun squeezes the air, much like a refrigerator. When hot moisture laden air is squeezed, like a compressor, the heat leaves and the moisture steams. When air is expanded, the air gets colder. This is the reason for the extremes of temperatures, and why weather is getting wilder. There is more heat from the sun being trapped. With HelioHydroElectric there is a Micro Climate impact, where once rain water starts, the rain water circulates locally.[25] For example, there is a morning fog that creates moisture for plants. There is a Macro Climate impact where rain water escapes to the rest of the world. Rain water will circulate locally, thus creating more vegetation.

BRIEF GEOLOGIC TIMELINE OF CLIMATE CHANGE: The Earth has gone through several major extinctions, caused by an ever-changing climate. It is believed the Earth has been entirely frozen once, if not multiple times. This is known as the Snow Ball Earth Hypothesis.[26] The most recent one was about 600 million years ago. It is believed volcanic eruptions emitted carbon dioxide into the Earth's oceans and atmosphere, warming the planet; taking it out of this Snow Ball state. [27] It is believed this is what triggered the Cambrian Explosion, resulting in multicellular life. In the past 2 million years, Earth has undergone many glacial and interglacial periods. The main factor behind these global changes is believed to be "orbital forcing".[28] There are changes in the Earth's axial tilt and orbital eccentricity around the sun, which have forced climatic changes throughout Earth's history. This is a cycle and can be correlated to major changes in Earth's climate. We have been able to use ice cores to look back on how the climate

[24] Good Source of Information is Solar Thermal Magazine
[25] www.freedictionary.com
[26] Wikipedia. Snow Ball Earth Hypothesis
[27] Algae Industry Magazine
[28] Encyclopedia Britannica

has changed through time. Carbon dioxide is trapped in bubbles in the ice record. This gives us the ability to see how the concentration of carbon dioxide in our atmosphere has changed throughout time. Between interglacial and glacial periods, there is a difference of about 100ppm (ppm=parts per million). Due to human influence, however, the concentration in our atmosphere has been driven up by 200ppm since the last glacial period. Carbon dioxide concentration was stable for some time, and then started to rapidly rise in the early 19th century, around the time of the Industrial Revolution.[29] There are a lot of causes as to why climate change happens; dust in the atmosphere, radiation from other stars, ozone, volcanoes, meteorites, hydrogen clouds from outer space, sun's variability, the ocean's currents, and the earth's orbital variations. Today we live in an interglacial period. Mankind's contribution is now a major factor.

IMPACT ON MANKIND FROM OCEAN LEVEL CHANGE: Throughout geologic time the ocean's levels have risen and fallen. In fact, the Mediterranean Sea, Black Sea, and Persian Gulf were dry land in geologic time. It is theorized that the advancement of glaciers help mankind discover fire. There are entire ancient cities flooded off coasts that were flooded by rising sea levels. The rising and lowering of the sea levels has had major impact upon mankind's development. Over geologic time ocean levels do rise and fall. [30] [31] [32] [33] [34] [35]

IMPACT OF HELIOHYDROELECTRIC ON OCEAN LEVELS: With HelioHydroElectric development it will put more rain water on land, refilling underground aquifers. Additional water will be locked up in plants. More snow will fall on mountains, making the glaciers larger. It will put more fresh water into surrounding rivers and lakes during the warmer seasons. There will be more snow on the Arctic, restoring the ice shelf. There will be more fresh water flowing into the oceans, helping to balance the acidity. By the author's estimate, there must be close to 100,000 locations worldwide where HelioHydroElectric can successful. The exact number is unknown. The additional fresh rain water would put more fresh water from rivers into the ocean, thus helping to reverse acidification. By using guess-a-math it is estimated that if 500,000 square miles of surface land area was flooded with salt water, it would put at least 10 cubic miles per day of fresh rainfall in desert regions, potentially vegetating close to maybe 500,000 to one million square miles of desert land area. To accurately determine the exact amount and location, however, this would require a computer simulation. Several computer models of the world climate have been developed, which can be utilized.[36] The net result is HelioHydroElectric will help lower the sea level.

[29] British Antarctic Survey. Ice Cores and Climate Change.CO2 and CH4 over last 1,000 years.
[30] Ryan & Pitman. Noah's Flood: The New Scientific Discoveries About the Event that Change History
[31] Yanko-Hombach.Black Sea Flood Question of 5800 BC
[32] Hamblin. Has the Garden of Eden Been Located at Last? Saudi Archeology
[33] Wikipedia. Control of Fire by Early Humans
[34] A interesting discussion of underwater ancient cities is at Underwater Archeology Magazine
[35] A good discussion of ocean levels is in Lamb, H. Climatic History and the Future. 1985. Page 342.
[36] World Meteorological Organization

WHAT ABOUT VOLCANOES? If it was not for volcanoes, the Earth's atmosphere would not exist. Volcanoes put gases into the atmosphere, including dust and carbon dioxide.[37] They do, also, release aerosols into the stratosphere which lower temperature. Aerosols, however, are removed after a few years; carbon dioxide sticks around for much longer. Mankind can't do much about controlling the release of gases from volcanoes. However, this is a fact. HelioHydroElectric can remove carbon dioxide from manmade sources like coal power plants or automobiles. HelioHydroElectric can also remove carbon dioxide from natural sources like volcanoes.

HISTORY REPEATS ITSELF: HelioHydroElectric is no more visionary that Tennessee Valley Authority was in the 1930s. A little history. The United States was in a deep depression, caused by the excess of the 1920s. Tennessee was so bare that it looked like New Mexico. Rivers flowed with mud. Poverty was rampant. Roosevelt was elected, and via public financing, i.e. Revenue Bonds, he ordered the construction of huge hydroelectric projects nationwide. This led to the creation of Public Power, which drove Private Power companies insane. The difference being the Private Power companies are owned by stock holders, while the Public Power companies are owned by the rate payer. Whatever, the development of hydropower in the 1930s brought the nation out of a severe economic depression. Contrary to popular opinion, it was not World War II; it was the development of a new cheap energy source that pulled the nation out. Solar energy follows much of the same economics of hydropower. Back in the 1930s the Oklahoma Dust bowl was so severe that it snowed dirt in Washington DC.[38] Today we call it the Sahara Desert, that is our dust bowl of the century.[39] Just as we solved the dust bowl of Oklahoma, we can solve the dust bowl called the Sahara desert.

GLOBAL WARMING AND THE ISLAMIC STATE: The author contends that the major root cause of the Islamic State is Global Warming. It is directly related to the lack of rain water. The drought in the region is the major reason for these conflicts. The author has been told that this is official state policy of Iran. Syria is indeed in an intense drought. Farmers have been driven off their land, and are invading their weaker neighbors, forcibly obtaining their lands and water. Note how the word "war" and "wa(te)r" are related. (Borenstein, S. Climate Change, Drought Cited for Role in Syria's War. Associated Press, March 3, 2015). The fact is there are too many people for the carrying capacity of the land. We have an entire region with a matrix of warring groups; with so many groups we cannot keep track of them all. This entire region is committing mass suicide over one thing: lack of water. Solution: make it rain.

RAIN AND CONTAIN: The author contends that a "military solution" to the Islamic State isn't feasible. Military action, however, can help contain and support humanitarian aid for those who are affected. In short, military action will only contain, not eliminate the Islamic State. If the root cause of the Islamic State is the drought caused by Global Warming, then the solution is to attack the root cause. The author has requested that President Obama order the Army Corps of

[37] Environmental Geology. Annual Volcanic Carbon Dioxide Emissions

[38] Wikipedia. Dust Bowl

[39] Numerous history books exist on the Economic Depression Era. Ref: TVA: New Deal to a New Century.

Engineers to review HelioHydroElectric as a military strategy. It's not coincidental that most HelioHydroElectric projects are also in war zones. Judging from the recent remarks from the Joint Chief of Staff, the author believes they are taking this serious. There should NOT be a Declaration of War on the Islamic State. Instead do a Declaration of War on Global Warming. The Islamic State is purely a symptom of Global Warming.

IMPACT ON MILITARY SPENDING: By redirecting this War on the Islamic State to instead a War on Global Warming, this will have major implications on military spending. F-35 jet fighters are totally ineffective against Global Warming hurricanes. It is predicted by the Joint Chief of Staff that increasingly humanitarian aid from Global Warming disaster will consume more and more of military time and budget. This means that instead of spending money on a new "stealth bomber", the military should develop a new bomber that has a new mission: dropping humanitarian aid on those areas affected by Global Warming. It means that more money will have to be allocated to the Army Corps of Engineers. It means more money spent on the airlift command, to transport solar equipment inland to pump seawater. The author believes "terrorism" is an act of desperation done by desperate people. The real war should be directed at the cause of war. HelioHydroElectric has that potential to eliminate severe poverty and attack the root cause of terrorism. HelioHydroElectric would employ an entire planet, just like Hoover Dam did in the 1930s for a nation. This would pull everyone together to a common goal. We need to redirect more military aid away from "nation vs. nation" and instead direct it to the real national security threat: Global Warming.[40]

THIS WILL REQUIRE INTERNATIONAL COOPERATION. There is no way the United States alone can do this. Bluntly we will need Russian help, along with China and Europe. This situation in Ukraine is so distracting. Ukraine is civilized compared to the Islamic State. Crimea has had a long history of involvement with Russia, dating back to the Roman times. Ukraine is to Moscow what New York is to Florida. It is cold in Moscow, warm in Ukraine. There is hope for a diplomatic solution, as said, Ballots not Bombs. But there is one other reason for being optimistic about Ukraine: IT RAINS IN UKRAINE. It does not rain in Syria. Somehow water tends to calm people down. This conflict with Russia is like setting fire in our house. Russia did help build the Aswan Dam in Egypt.[41] Russia can help build the Qattara. Russia and the United States did cooperate during WWII. History can again repeat itself.[42] We are going to need international cooperation.

COST OF CONSTRUCTION? We do not have the industrial capacity to build such a huge worldwide hydroelectric project. It simply does not make "cents" to burn coal to make the large number of solar pumps and pipelines to build it. It can be done if we adopt "breeder" concepts, where solar energy is used to make solar energy equipment. It could be done. Method 1 would be the first choice. Use the energy from Method 1 to power the factories to make the equipment for Method 2 and Method 3. The first projects to be built would finance industrial

[40] A good source of information is the Center for Defense Information, Washington DC
[41] Wikipedia. Aswan Dam
[42] Wikipedia. History WWII Ukraine

parks, which then would make the equipment for other HelioHydroElectric projects. We can phase this in.

BIOFUELS: HelioHydroElectric technology has another gift, algae. These salt lakes grow algae, which can be converted to biodiesel fuels. The airline industry has formed a consortium to explore making airline fuels from biological sources.[43] Contrary to the propaganda, the intent is NOT to use food source plants like soybeans. The effort is to use salt water, polluted water, brown lands (i.e. converted garbage dumps, previous coal strip mines and deserts) to grow these biofuel crops. There is active research and development work to use salt water. Biofuels is a field that is creative and exciting.

WHY DOES NOONE KNOW OF HELIOHYDROELECTRIC? It could be deliberate. A partial answer may be this. Years ago the inventor of the biodiesel fuel formula, Expedito Parente, came to visit the author in Seattle. He is the patented inventor of the chemical process to convert algae and other biofeed stock to be diesel fuel.[44] In 1980, the biodiesel conversion patent was stamped Classified. This explained a lot. When the author was at the New Mexico Solar Institute at NMSU, the author can attest to the negative attitudes of the then Reagan Administration towards growing algae for fuel in the New Mexico desert using underground salt waters. These HelioHydroElectric projects will grow huge amounts of algae making enough biodiesel fuel to replace the need for mineral oil altogether. This is a huge energy source that would largely decrease the need for fossil fuels. Most foreign military arms sells are financed one way or the other via oil and fossil fuel revenues. Bluntly, vested interest does not want it discussed. Governor Jay Inslee, Congressman Adam Smith, President Obama and Hillary Clinton and Senator Patty Murray are aware, but so far have not been public. Suspect the reason is to buy time for the analysis to be done. So, let's talk about it.

NEXT STEP? Write a book. There is not very much information available about the topic. Google the term HelioHydroElectric. This is known solar engineering. We propose hiring 10 university student internships, and write the book within 10 weeks. Since we don't believe in intellectual slave labor, pay each of these interns $1,000 a week, and share 1% of the royalties. This crew should be heavy on the technical side, geology, climatology, mechanical engineering, planning/architecture, civil engineering, economics, and since this involves military strategy, military science, economics and foreign relations. Hopefully this book will stimulate university research of the topic. If well researched, referenced with footnotes, and well written, this could be on the New York Times best seller list. The author cost the project to about $400,000 to $500,000 dollars, but the return on sells could be more. Writing a book is one sure way to educate the public.

AFTERTHOUGHTS: Without water, we would not exist. Within a few years, the global population will near ten billion people. The carrying capacity for the planet is being overtaxed.

[43] Algal Biomass Organization, formed 2008
[44] Interview: Expedito Parente. dc.itamaraty.gov.br

With the development of HelioHydroElecctric we have the potential of putting a stop to this "perpetual warfare" on planet Earth. We can rise above this.

We were placed on this planet to protect and cherish Planet Earth. It is our duty and obligation to do so. Speak up, let people know of this option,VOTE. Get people in political office, and major corporations, to support rapid development of HelioHydroElectric.

We hereby call for introduction in the U.S. Congress:
The HelioHydroElectric Development Act.

WHO IS MARTIN NIX? Martin Nix is founding secretary for Solar Washington, a not for profit organization dedicated to developing solar technology in Washington state. He is the patented inventor of ten patents in solar technology, including solar cooking, and solar smelter technology. He attended the School of Regional Planning and Architecture at UNM, and attended the School of Engineering at NMSU. He is a graduate of UNM, North Seattle Community College and Seattle Central Community College. B.U.S., A.A.S., C.A.

WHO IS CHERYL DUKE? Cheryl Duke is a recent college graduate from Florida State University, where she earned her B.S. in Geological Sciences with a minor in Mathematics. While attending she focused on hydrogeology and geochemistry. She worked as an intern and lab technician for almost two years at the Florida Geological Survey. B.S.