NIMLT
Not In My Life Time

STOP THE
Corporate Oceans Homestead Act
WAVE & TIDAL POWER - OFFSHORE LEASES

(WEC) Wave Energy Conversion and TIDAL POWER PLANTS (TPP)

Ocean waves originate when air and water surface temperatures are not the same. The heat of the sun causes air to rise, and the rising air produces wind, which pushes the water into waves. But the particles in a wave do not travel far like the molecules in wind. Instead, wind-stirred water particles begin rotating, nudging the particles ahead of them, which in turn start to revolve and nudge those ahead of them, and so on, sometimes for thousands of miles. Although the particles mostly return to their original positions, the wave travels onward.

Waves are also more concentrated than wind. Although winds reach higher velocities, waves tend to be more powerful because water is 832 times as dense as air.

Earth rotates eastward, and winds come mostly from the west, waves tend to be strongest at latitudes distant from the equator and at the eastern ends of long fetches, such as the western coasts of continents. Waves off Western Europe and the Pacific Northwest can generate a hefty 40 to 60 kilowatts per yard width of wave front. West of Ireland and Scotland, the average wave power rises to 70 kilowatts. But on the east coasts of Asia, Africa, Australia, and the Americas, waves average just 10 to 20 kilowatts per yard.

Because wind is generated by uneven solar heating, wave energy can be considered a concentrated form of solar energy. Incoming solar radiation levels that are on the order of 100 W/m2 are transferred into waves with power levels that can exceed 1,000 kW/m of wave crest length. The transfer of solar energy to waves is greatest in areas with the strongest wind currents (primarily between 30 and 60 degrees latitude), near the equator with persistent trade winds, and in high altitudes because of polar storms.

It's about
ECONOMIES OF SCALE

Electric Power Research Institute (EPRI - established in 1973 as an **independent**, non-profit center for **public interest** energy and environmental research whose members represent over 90 percent of the electricity production in the United States) - an **industry supported think tank** based in Palo Alto, California, in collaboration with the DOE's National Renewable Energy Laboratory (NREL) and energy agencies and utilities from six states, produced a study. The study determined that wave energy conversion may be economically feasible within the territorial waters of the United States.

300 MW plants
(nominally 120 MW plants operating at 40 percent capacity factor)

Wave capacity in kwh vs generating capacity & transmission loss (Inefficiency) over distance

Conceptual designs were performed for five States sites: Waimanalo Beach, Oahu, Hawaii; Old Orchard Beach, Cumberland County, Maine; WellFleet, Cape Cod, Massachusetts; Gardiner, Douglas County, Oregon; and Ocean Beach, San Francisco County, California.

"Wave energy will first become commercially competitive with land-based wind technology at a cumulative production volume of about 10,000 MW in Hawaii and northern California, 20,000 MW in Oregon and about 40,000 MW in Massachusetts," R*oger Bedard, ocean energy project manager.*

It's a cost/benefit trade-off, but
you'll likely be able to see a lot of these facilities from shore.

Waves begin to dissipate energy when the water gets less than 200 meters deep. At 20 meters in depth, a wave might have only one third of the energy it had in deep water, according to a 2006 report from Michael Robinson of the National Renewable Energy Laboratory. Putting wave harvesting systems farther offshore, however, means that you need a longer cable to connect the harvesting system to the power grid.
PG&E to Study Wave Power in Humboldt & Mendocino
Wednesday, February 28, 2007 SAN FRANCISCO, PRNewswire

According to a report released in January, 2005, the total wave power along the coastlines of the U.S. is approximately 2,100 terrawatt hours per year, nearly as much as all of the electricity produced by coal and roughly 10 times the total energy produced by all of the country's hydroelectric plants.

Ten years from now, the U.S. could produce 10 gigawatts of wave power and 3 gigawatts of tidal power, says Roger Bedard, Ocean Energy Program leader for the World Energy Council .

The potential market for wave energy -- electricity generated by offshore turbines -- is worth a **staggering $1 trillion worldwide**, 'World Energy Council, a nonprofit research orgaization'.

Scientists have calculated that if tidal power were fully exploited,
the earth's rotation would slow, at a rate of about one day per 2,000 years

High-pressure seawater is particularly attractive as a working fluid
since it can produce both electricity and fresh water.

What are some of the main approaches?

Buoys: Finavera and AWS have created wave power systems that rely on buoys that act as hydraulic pumps. Waves push the buoys down, which drives a turbine. When the wave passes, the buoy returns to its normal spot, only to be pushed again by the next wave. Finavera's buoys will stick more than 6 feet out of the water and descend more than 70 feet below the surface. AWS' are completely submerged. The hydraulic fluid inside Finavera's buoy is seawater while AWS' Archimedes Water Swing relies on air.

A full-scale 70 ton buoy from Finavera will be capable of generating 250 kilowatts, enough for 80 homes.

A 100-megawatt array could be squeezed into two to three square miles, said Myke Clark, vice president of policy for Finavera

The company is almost done installing a half-size prototype off the coast of Oregon and hopes to erect four of the 250-kilowatt devices off the Washington coast by 2009. "Alaska is very interested," Clark added. AWS, meanwhile, will install a 250-kilowatt prototype off the Orkneys in Scotland in 2008 and build a field with 500-kilowatt devices in the U.K. by the third quarter of 2009. By 2013, it hopes to have a 100-device field. Device designs from AWS were influenced by a pilot study the company kicked off in Portugal in 2004.

Sea snake: Ocean Power Delivery is testing the Pelamis device 120 meters (about 395 feet) that looks like a segmented snake. When the segments bob up and down, buoys attached at their joints generate hydraulic pressure. The company has built a 2.25MW system off Portugal consisting of three 750-kilowatt Pelamis wave-energy converters and is aiming to built 5MW and 3MW systems off the coasts of England and Scotland in the next few years.

The water column: Wavegen, a division of Voith Siemens Hydro Power Generation, is experimenting with the Limpet, an oscillating water column. Think of a large cement tube submerged in the ocean, but not attached to the bottom. Waves come in; water rushes into the tube from below and cranks a turbine. The company last month won a contract to install a Limpet in Mutriku in northern Spain that will produce 250 to 300 kilowatts when opened in late 2008 or 2009. Wavegen has had a prototype running off Scotland since 2000.

The skate ramp: With the Wave Dragon, wave reflectors more than 100 meters long guide waves up a ramp, where the water dumps into a reservoir. The added pressure forces a turbine at the bottom to turn. The device's developer, a company that is also called Wave Dragon, is building a 7MW prototype off of Wales in 2008 and wants to do a 77MW project in the Celtic Sea by 2010. The Wave Dragon is slack moored, so that it can flow with the power of the ocean. A 20-kilowatt prototype running off Denmark's shore since 2003.

RePower Systems of Germany has created a 5MW offshore turbine. Right now, it is creating a 300MW field in water 82 feet deep and 18 miles off the coast of Belgium. Combined, the six turbines in Belgium will be only 54 megawatts smaller than the largest solar thermal plant in the world, located in California.

STILL

Wind turbines are the fastest growing energy technology

with wind power increasing by 30% per year. The amount of wind energy available increases as the cube of the wind speed. That means that as the wind speed doubles, the amount of electricity produced increases 8 times. As wind speed reach very high levels, the gears automatically disengage in order to protect the turbines. There are different wind turbines engineered for different wind regimes, and newer turbines are relatively large (1 to 2.5 Megawatt capacity). Wind energy potential is rated from 1 (essentially no winds) to 7 (too high to extract). You can find out your wind energy potential by finding your location at http://rredc.nrel.gov/wind/pubs/atlas/

Wind ratings below 3 are not good wind potential areas. There are microclimates for winds, and there may be locations within a level 2 area that can support a wind turbine. **In the past, wind turbines were rather noisy** and there were cases where they posed a significant hazard to birds, particularly raptors. **New turbines have much better sound insulation on their gear boxes, and the rotor speeds are slower** (10 to 30 rpm), thus birds are much less likely to be affected. Wind turbines can be unaesthetic, the siting of them has been blocked for this reason.

You can compare your energy profile to statewide and countrywide consumption patterns that have been documented by the Department of Energy, and which can be found at: http://www.eia.doe.gov/neic//historic/historic.htm

Get a good estimate of your potential solar radiation by finding your location on maps at http://rredc.nrel.gov/solar/old ata/nsrdb/redbook/atlas

Offshore devices would require **navigation hazard warning devices** such as lights, sound signals, radar reflectors, and contrasting day marker painting. Coast Guard requirements only require that day markers be visible for 1 nautical mile (1.8 km).

The international endorsement of Exclusive Economic Zones of coastal States has led to the progressive occupation of the ocean space up to 200 miles offshore. We have to look at the oceans and seas in a similar way as we currently look at territorial spaces: and that is in terms of ownership, rights of use and marine spatial planning and zoning.

None of the devices currently being developed would harvest a large portion of the wave energy, which would leave a relatively calm surface behind the devices. It is estimated that with current projections, a large wave energy facility with a maximum density of devices would cause the reduction in waves to be on the order of 10 to 15%, and this impact would rapidly dissipate within a few kilometers, but leave a slight lessening of waves in the overall vicinity. It is estimated that this will translate to a 5% decrease in wave height at shore.

Little information is available on the impact on sediment transport or on biological communities from a reduction in wave height offshore.

Desalination:
Desalination is spoken of in terms of preparedness as a requirement of the future to safeguard against drought conditions. What stipulation in the array lease agreements addresses array expansion, power availability for desalination - Neither profit mechanisms nor any studies should exploit the next fad of "Ocean Pure Water". Where & What amount of water can be taken from the ocean... water for grapes - vineyards use. Additional real estate can be added to coastal cities. Floating docks, and even work/storage facilities.

High-pressure seawater is particularly attractive as a working fluid since it can produce both electricity and fresh water.

The optimal location for harvesting wave energy is in water about 164 to 328 ft deep. There, waves retain nearly all the power they've gathered while crossing the ocean, but the sea bottom is near enough that anchoring wave-power equipment is easier and cheaper than in deeper waters. Energetech's HYDRA is designed for use in water about 98 to 328 ft deep.

With proper sitingconversion of ocean wave energy to electricity
is believed to be one of the most **environmentally benign**
ways to generate electricity

Offshore wave energy offers a way to minimize the
'Not in my backyard' (NIMBY) issues that plague
many energy infrastructure projects

Wave energy is more predictable and consistent than solar and wind energy,
offering a better *earning a capacity payment*

Many developing countries in South America or Africa are the best locations in world due to wave patterns generated by the trade winds, but some places in Europe and the upper United States are viable too (Valentine 2006). Since the best spots are not in the U.S., Valentine feels wave power generation will be led by private companies and not Federal research money because of the limited area for placing them. For example, Alaskan coast is a good place to put them, but there are not that many people living there to justify placement. In 2005, The U.S. Department of Energy dropped is ocean energy program (Gartner 2005).

Wave power was delivered to the electrical grid for first time in August 2004. The electricity was generated by a full-scale, pre-production Pelamis prototype in Orkney, Scotland by Ocean Power Delivery Corporation.

Hydro-kinetics:
Multiple ways to tap the energy of the ocean include: **it's tides, thermal features, ocean currents, & salinity**. Wave energy is the most promising & closest to commercial production. Waves, and power potential, are higher on the West Coast than the East Coast (US).

WaveConnect is PG&E's latest investment in innovative renewable energy technologies that address climate change. Pacific Gas and Electric Company delivers the cleanest energy of any large utility in the nation. PGE currently obtains 12% of its energy from qualifying renewable sources under California's Renewable Portfolio Standard (RPS), including solar, wind, biomass, geothermal, and small hydroelectric. More than 50% of the electricity that PG&E delivers to its customers comes from generating resources that emit no or low carbon dioxide, the primary contributor to global warming. PG&E News Department, 1-415-973-5930
http://www.pge.com

More wave power generators are being tested off the coasts of Hawaii, Scotland, England, and Australia. And in England, the government has plans for the **Wave Hub** project. Ten miles off the Cornish coast, it aims to connect four units to the national power grid.

Storms have wrecked pioneering wave generators in Norway, Britain and Oregon and badly damaged a European Union experiment in the Azores Islands of Portugal.

In Oregon: Wave heights average about 11½ feet in the winter, enough to generate sufficient electricity per yard of wave-crest length to power about 38 homes.

The Reedsport site: Good wave action, an appropriate undersea terrain, the presence of existing marine access, & terrestrial electric transmission lines that facilitate the creation of a test center.

Oregon Stae University, in addition, has the highest-power energy systems laboratory of any university in the nation, a proximity to the Reedsport site, one of the leading research programs on ocean energy in the country, the unique capabilities of the university's O. H. Hinsdale Wave Research Laboratory, including a 340-foot-long wave flume & the world's largest tsunami wave basin.

Some systems are very complex, and more vulnerable than others to the vagaries of severe ocean conditions. One of the most promising "direct drive" systems being studied at OSU is essentially a buoy about 12 feet wide and 12 feet tall, rolling up and down in the ocean swells could produce 250 kilowatts per unit – a modest-sized network of about 200 such buoys could power the business district of downtown Portland. And the winter, the period of highest wave energy electrical production, also coincides with peak electricity demands in the Pacific Northwest. *Adapted from OSU materials.*

*The Annapolis Tidal Generating Station, the first and only modern tidal power plant in North America, is located in the Bay of Fundy, Nova Scotia. Using the largest straflo turbine in the world, it produces more than 30 million kW hours per year-enough to power 4000 homes. Incoming and outgoing tides are used to generate electricity by building a dam across a bay or estuary. The incoming tide is allowed to fill up a basin, the floodgates are closed behind it, topping off the water in the basin. When the ocean level outside the basin has fallen, the water is released back to the sea through conventional hydroelectric turbines which then generate

electricity. The electricity is then transmitted back into the grid and distributed to the end user. Suitable sites for tidal power plants situated around the world can be found in: France, the United Kingdom, Russia, Canada, and the United States.

In France, where the largest tidal power plant in the world is located in the estuary of La Rance, France, generating 240 MW and utilizes double effect generation, both the incoming and outgoing tides are used and has been in operation for three decades, the dam controls the tidal waters, fish can pass freely from the sea to the basin and back without injury to the fish.
http://inventors.about.com/library/inventors/bltidalplants.htm

http://www.iere.org
Institute for Environmental Research and Education
PO Box 2449 Vashon, WA 98070 206-463-7430

Ocean Renewable Power plans a much larger turbine array in the Gulf Stream off the Florida coast. Unlike tidal flows, an ocean current is constant and can host enough turbines to power a few hundred thousand homes, says company CEO Chris Sauer.

Mr. Foerd Ames, with Ocean Wave Energy Company:
"The environmental impact of the barrages on the tides along the coastlines, the inter-tidal zones, and sedimentation (understanding its biological function and effects on marine life) have yet to be studied at length. Negative environmental impact is not specific to just OWEC®. Perhaps a sobering outlook, but a de facto philosophy is that any human activity or construct changes the hitherto pristine environment in which it exists. Within ocean environs, onshore, near-shore littoral zones comprise biodiverse processes that are best left undisturbed. OWEC® deployment is intended for offshore application where such perturbation would be minimized. Offshore systems placement, whether OWEC® or other, also has intrinsic effect which may comprise negative or beneficial attributes. Within the context of wide scale WEC deployment... prudent thought considers, for example, barnacle and seaweed encrustation that would engender habitat change and subsequent marine life redistribution, sunlight blocking of upper layers, aeration cycle (H2O, O2, CO2) manipulation, and other considerable factors. It could be that the change is actually positive with careful monitoring and control but, generally, my point is that we need to exercise a careful approach."

And Salter's Edinburgh Duck, continues to be the machine against which all others are measured. The Duck's curved cam-like body can stop 90% of wave motion and can convert 90% of that to electricity….

WAVE Energy Farms will nearly always be visible
from every coastal home, hotel & motel, B & B, scenic drive, & the bluffs,
the Skunk Depot, & every east / west road and street with a view to the horizon.

A statute mile is 5,280 feet in length, a nautical mile is 6,076... feet in length.
A Nautical Mile is 1/60th of a degree (69miles) of latitude, or one minute = 1.15 miles.
There are four common measures of distance used on charts:

Nautical miles are used on ocean and coastal waters.
Statute miles are used for inland areas (Intracoastal Waterway and Great Lakes).
Yards are often used to define distances of a mile or less.
Meters are being seen increasingly on U.S. charts and are used almost exclusively on Canadian and other charts of the world

7 nautical miles = 8 statute miles (approximately) to convert from statute to nautical miles a factor of 1.15 is generally used, even though it is not precise.

(5,280 feet X 1.15) = 6,072 feet (4.1 feet less than 1 nautical mile). You could add 4.1 feet for each statute mile to be converted. So the new formula would be: {(5280 feet x 1.15)+ 4.1 feet} divided by 6,076.1 feet = 1 nautical mile (18% LONGER MILE).

To convert from nautical to statute miles: (6076.1 divided by 1.15) = 5,283 feet (3.5 feet more than 1 statute mile). A table (such as Bowditch's Table 20) will be more precise.

A nautical mile is the angular distance of 1 minute of arc on the earth's surface. As these differ slightly (6108' at pole c.f. 6046' at equator) 6080 was adopted (this being it's approximate value in the English Channel). In 1929 the International Hydrographic Conference in Monaco defined the international nautical mile as exactly 1,852 meters, about 6,076.12 feet.

As a result of the curvature of the earth, there is a maximum distance at which an object of a given height can be seen before it disappears beneath the horizon

Height in feet	Distance in statute miles	Height in feet	Distance in statute miles	Height in feet	Distance in statute miles
5	2.96	70	11.07	250	20.92
10	4.18	75	11.46	300	22.91
15	5.12	80	11.83	350	21.75
20	5.92	85	12.20	400	26.46
25	6.61	90	12.55	450	28.06
30	7.25	95	12.80	500	29.58
35	7.83	100	13.23	550	31.02
40	8.37	110	13.87	600	32.40
45	8.87	120	14.49	650	33.73
50	9.35	130	15.08	700	35.00
55	9.81	140	15.65	800	37.42
60	10.25	150	16.20	900	39.69
65	10.67	200	18.71	1,000	41.83

Let's say you are on the water in a friend's **sport fishing boat** and your height of eye is 9 feet above the surface of the water, or riding a horse on the beach:

1.17 times the square root of your height of eye = Distance to the horizon in nautical miles
1.17 times the square root of 9 = Distance to the horizon in nautical miles.
1.17 x 3 = 3.51 nautical miles & 3.51 nautical miles / 1.15 = 4 statute miles.

Whale watching tour boats offer heated views from 50 feet above the water. The average clear weather visibility on the Mendocino Coast is 10-25 miles from the bluffs.

WAVE Energy Farms are scaled on the order of 2 to 3 square miles of ocean surface
Circuitous and varying heights of bluff tops, ridges, coastal towns, and Highway One, imply impacts of views from trails, homes, B & B's and guest lodgings on the Mendocino Coast.

WAVE Energy is not an alternative energy: It's entire maintenance schedule operations and infrastructure support are heavily petroleum based (solvents, evasive technologies, anti-fouling agents, boats, trucks, underwater construction and installation, dredging, helicopters. The (WECs) Wave Energy Conversion Devices, are usually built by companies in other countries, using materials, energy, and procurement procedures (mining, etc) outside the EPA standards, State RPS, and with no accountability in terms of carbon footprint.

Green House Gasses (GHG) and California **R**enewable **P**ortfolio **S**tandards (RPS)
Carbon footprints - carbon offsets - carbon trading units: W*e are partnered with various organizations who are able to calculate the Co2 emissions from all events and productions, so that we can plant trees around the world to offset emissions, therefore being Carbon Neutral.*

Carbon footprint: The total set of greenhouse gas emissions caused by an individual or organization, event or product. It should be expressed in carbon dioxide equivalent (CO2e). A more recent standard from the International Organization for Standardization, ISO 14064, also provides guidance on corporate footprint calculation and emissions reporting. Download copies of the GHG Protocol and ISO protocol visit:
http://www.ghgprotocol.org http://www.iso.org

solar panels are low maintenance once installed, and risk free
WAVE Energy may be considered free as the sunshine, but conversion to electricity costs. 20 years ago Mendocino County was Solar Capital of the World.

The United States did not ratify Kyoto, and the federal government does not currently regulate carbon dioxide (CO2) or other Kyoto GHGs as climate change-related pollutants. Having ratified the Montreal Protocol, the US does regulate ozone depleting GHGs, such as Chlorofluorocarbons (CFCs), which are internationally being phased out entirely. To compensate for the lack of national CO2 regulation, several states have initiated their own regulatory processes, alone or in conjunction with others.

Carbon Sequestration: Oceans are natural CO2 sinks, and represent the largest active carbon sink on Earth. This role as a sink for CO2 is driven by two processes, the **solubility pump** and the **biological pump**. The former is primarily a function of differential CO2 solubility in seawater and the thermohaline circulation, while the latter is the sum of a series of biological processes that **transport carbon** (in organic and inorganic forms) from the surface euphotic zone to the ocean's interior. A small fraction of the organic carbon transported by the biological pump to the seafloor is buried in anoxic conditions (sea water depleted of oxygen, generally found in areas with restricted water exchange) under sediments and ultimately forms fossil fuels such as oil and natural gas.

At the present time, approximately one third of anthropogenic emissions (processes, objects, or materials that are derived from human activities) are estimated to be entering the ocean. The solubility pump is the primary mechanism driving this, with the biological pump playing a negligible role. This stems from the limitation of the biological pump by ambient light and nutrients required by the phytoplankton that ultimately drive it. However, ocean acidification by invading anthropogenic CO2 may affect the biological pump by negatively impacting calcifying organisms such as coccolithophores, foraminiferans and pteropods. Climate change may also affect the biological pump in the future by warming and stratifying the surface ocean, thus reducing the supply of limiting nutrients to surface waters.

Carbon sequestration refers to the **capture and long-term storage of carbon** in forests and soils or in the oceans. The oceans have been farmed for food, for industry, for dumping, for shipping, for incineration, disposal of war products, radioactive materials (ships - wastes - reactors - medical - sludge), Now the oceans are being fertilized (Fe fertilization - likely to affect phytoplankton community composition, which controls food web structure, and ultimately, the flux of carbon from the euphotic zone). Nitrogen is being added by large scale urea dumping by Japan, & China. In the west plans are for direct injection of waste CO2 into the deep ocean (where carbon dioxide would be stripped from the flue gases of fuel burning power plants, pressurized, and released at deep-sea depths of >2000 - 3000 m where it would remain for centuries). A band-aid good for 200 years, scientists have estimated that the acceleration of the natural cycles by inducing and enhancing the growth of carbon-fixing plants in the surface ocean, or by speeding up the natural, surface-to-deep water transfer of dissolved CO2 by directly injecting it into the deep ocean, will not actually emulate natural ocean cycles.

Perhaps the State of California could trade in carbon emission markets anchored in the benthic layer off the north coast where the redwood forests (forests are the other major natural carbon sink) meet the sea, instead of taking money from the schools for budget shortfalls.

Biomass Generation Fuels World Hunger 041508 Thomas DiFiore

... for thirty years, a 365 square mile area around the Farallon islands (27 miles outside the golden gate) served as the nation's primary nuclear waste dumping ground... this area is now the Farallon islands national marine sanctuary... from 1945 to 1970, when nuclear dumping at sea was prohibited, an estimated 47,500 barrels of radioactive debris from nuclear labs such as Lawrence Livermore Labs were dumped in the area...

...ships irradiated in the bikini atoll nuclear bomb tests of the 1940's and '50's were sunk off the islands (including the aircraft carrier Independence), along with numerous undocumented materials... the extent of contamination in the area has not yet been fully investigated though side scan sonar from the late 90's identified close to 60,000 barrels scattered across the sea floor around the islands and near the edge of the continental shelf....

Under the Kyoto Green House Gas Emissions
And ISO 14064 (2005) Protocol
URANIUM is an Alternative Energy
Uranium does not produce smoke or carbon dioxide.
Voluntary Carbon Markets vs Regulated Carbon Markets

Far more information at:
Astral Arts Mendocino
Learning Center Links
www.astral-arts.com
ADVOCATE FOR WILD HEALTHY OCEANS!

Coastal areas are crucial to supporting life on our planet and comprise 20 percent of the Earth's surface yet host a significant portion of the entire human population. About 50 percent of human populations live within 200 km of the coast (UN 2002a). The average human population density in coastal areas is about 80 persons per square km, twice the global average (UNEP 2002a). More than 70 percent of the world's megacities (greater than 8 million inhabitants) are located in coastal areas (IOC 1999).

Coastal ecosystems are highly productive and diverse: they yield 90 percent of global fisheries and produce about 25 percent of global biological productivity and of 13,200 known species of marine fish, almost 80 percent are coastal. Yet coastal ecosystems are responsible for cleaning and chemically re-processing the ever-increasing flow of artificial fertilizers and other side products of modern economic activities.

Voters in Fort Bragg approved a ballot measure entitled Measure C, codified as Ordinance 790, at the General Election on November 5, 1996 prohibiting on- and offshore oil and gas exploration, development, related infrastructure and/or production in the City of Fort Bragg.

"Existing harbor facilities are not adequate to serve oil and gas exploration projects. A report funded by the Coastal Energy Impact Program (CEIP) concluded that Noyo Harbor does not meet the requirements of an all-weather harbor and dock facility necessary for the siting of an onshore energy support base for an offshore Outer Continental Shelf oil and gas development. Construction of a breakwater would be necessary before a service base could be installed. In addition, the depth limit for channel dredging within Noyo Harbor makes the site not feasible for supply boat trips, although smaller crew boats could be accommodated."

• As of March 31, 2008, the California Solar Initiative has applications equaling 249.3 MW of new solar, including 40.7 MW added in the first quarter of 2008. Projects have twelve months to complete installation.
• The program has 33.4 MW of installed projects, including 14.2 MW completed in the first quarter of 2008.
• The active applications in the California Solar Initiative are worth an estimated $649 million of solar incentive payments.
• In the first fifteen months, the program has received over 10,000 applications for solar incentives -- 9,817 (and 249.3 MW) of which are still active applications. There were over 2,200 applications in the first quarter of 2008.
• Residential applications (8,786 active applications) make up 89% of all applications.
• The total capacity of non-residential applications (207.3 MW) makes up 83% of the capacity of the applicant pool.

Solar installations in 2008 are expected to be at least 100 MW, which would exceed installations in 2007. The State of California installed 59 MW in 2006 and 81 MW in 2007. Plus the California Energy Commission's (CEC) New Solar Homes Partnership (NSHP) which funds solar installations on new home construction & the dozens of small solar programs administered by the state's 40+ municipal utilities.