Love Power Grid Consortium

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Editing and brainstorming requested;

We should build a consortium to trend our energy infrastructures world wide, starting is Southern Massachusetts, from finite to renewable resources. The consortium will own common wind farm infrastructures: power delivery grids, windmill bases, and an engineering department. The consortium will fast track wind and wave energy development through the use of these common subsidized infrastructures. The role of this consortium is to facilitate government

and private company participation in the new offshore wind and wave energy industry. The consortium will buy power from windmill owners and sell power to consumers. We can capitalize the consortium using private and public funding. We will use a creeping capital stock acquisition strategy, which means the consortium will purchase power plants and utility lines as we grow. We will absorb the old energy infrastructures into the new, with little efficiency losses

through what would otherwise turn into an untenable competition.

In the near future the consortium will build and sell sixty thousand Georges Bank Mega Mills (Scannell designed) using war time style production strategies. We will fast track the prototyping of a compressed air and hydrogen infrastructure on a world wide basis. For the fun of it let's do these things lovingly, while helping fishermen and the disabled community.

Framing the question properly

The wrong question: Should we allow Cape Wind Associates to construct a wind farm on Horseshoe Shoal?

The right question: What is the best political, economic, and physical infrastructure design to have in place preceding the upcoming wind and wave energy future?

Lacking a proper frame of reference for designing infrastructure is a major problem for us now. Framing the questions wrong brings a wrong result, a bad design. The question of how to design infrastructure for a new wind energy industry as it is properly framed is more of a "HOW" question, rather than a yes or no proposition. The yes or no issue is impertinent to the complex systems designer. When the "how" question of infrastructure design is answered the yes or no issue becomes moot. In other words we are not saying yes or no to an industrialist but instead answering the more pertinent question of how we would like our infrastructure designed. That being done of course means that the industrial proposals will fit into the system, rationally and in an organized way giving merit to both the private and the public interests.

Unfortunately, the current debate over Cape Wind's Horseshoe Shoal wind farm proposal is like a red herring. We need to busy ourselves and address the more basic systems questions before us.

We need to think in terms of "WE" and not in terms of us and them. This is not a yes or no proposition! If the issue is addressed correctly, and from a systems perspective, we will have solid achievements: And we will be world leaders in a new industry. A systems perspective is this: All pieces of the puzzle fit together, purposefully and cooperatively, to form the whole organism, if you will, such as our bodies as a system.

What are the component pieces of the puzzle with building wind mill and wave mill industry infrastructure? That all depends on our ideology. Should the infrastructures be publicly owned or privately owned? Should the infrastructures be both private and public, which is a consortium?

For a strictly private system, on the publicly owned fishing grounds, such as is proposed for the Horseshoe Shoal, the opportunities are limited in who can participate, so that factor should eliminate the idea quickly in my opinion. This industry needs, if it is to be a success, a broad based approach, and well supported. It is the mission of the United States of America to shift from carbon based energy systems to renewable based energy systems. And also, as every mill needs an artificial reef for the added bonus of seafood and tourism economics, the strictly private infrastructure ownership proposal should be discredited. America should say: We're going to run a business and subsidize that business. Private participation is crucial and could be cultivated in mutually beneficial contracting arrangements. The business model of choice therefore is the consortium. And as an accomplished systems tinkerer, I have designed, or roughed out if you will, the Love Power Grid Consortium, which you could say is both a collaborative and cooperative proposal. The LPGC is designed by myself a fishermen and boatbuilder. It is meant to be inclusive of the social goals we all share, and hence the word love incorporated into the consortium name. The LPGC will be fun to implement: And as well, it is designed to be the bedrock foundation for our crucially needed mechanism which will serve to trend the world away from fosil fuel technologies and over towards the green technologies. My expertise is in fisheries management systems, which fortunately lends itself very well to this project. I have been working on windmill

designs for many years, and have a deep fascination for this technology for some reason. I even have had dreams of wind mills in the future. I hope I can be of service as one of our best idea men. I am hopeful that my work for you, really for us all, will be the most rewarding experience of my life. I consider myself to be an original Cape Cod yankee with all the ingeneuity engendered in that archetype. I believe we can all move forward in a civilized way, with the proper economic model, and with some luck we will all have success and accomplishment. So I ask both the Yes proponents and the No proponents of the Horseshoe Shoal proposal to lend credibility to me, and join me in the construction of what I call a cardboard model of a new and far reaching endeavor.

We don't want the infrastructure to be just a publicly owned utility because such a complex semi-for-profit enterprise can't be organized and orchestrated in a vacuum. We need a broader base of participation for such a humongous undertaking.

Are public different component pieces than what a private wind farm owner would be using to create his system? Yes. Why: Because the private wind farm owner has a different but nonetheless related missions than does the greater public good. Hopefully we can create an economic structure in which private and public interests can serve together symbiotically. This is the mission of the Love Power Grid Consortium concept.

Again let's go over where we are at right now. What is the problem? Our issues are broad, and we can't pretend this is all about just one wind farm. What we have now is a massive philosophical or foundational infrastructure systems design problem going in. We need to answer that problem with a solution going into the future of the industry, rather than later on. It is a very tough job. Let us first warn ourselves that if the question is framed incorrectly as a "SHOULD WE ALLOW THAT?" …. "YES or NO?", then

we'll get a yes or no answer. The reason the question is wrong is this: Sombody's personal proposal to use public ground for a privately owned wind farm is not a platform to build public policy from. And its not a platform from which to build our futures infrastructure on either. What it is is a catalyst for our actions. So if we ask the wrong questions we are certain to get a wrongheaded system, such as the system fisheries got when all of those questions were framed incorrectly. History has shown the societal and environmental impacts of fisheries mistakes in system design. What happened in that instance was this: The fisheries questions asked back in the late 1970's and 1980's were asked from the wrong vantage point, which was from the personal feelings of fishermen and their plight in an ever failing ecosystem. This led us astray, just as the private wind farm proposal issues are now leading us astray, in that the questions are wrong, and we are spending our time dithering with them. Since these fisheries and windmill issues are two closely related public resource issues, here is a comparison: In that fisheries case the problem was wrongly framed as a "WHAT DO THE FISHERMEN WANT TO DO?" question. We should have instead properly put the issue as a public resource question to ourselves. A "WHAT IS THE BEST POLICY FOR THE PUBLIC ASSETS OF FISH STOCKS AND HABITAT?" question would have given results that would probably have led to a Market Quota System public resource policy. And now it's so hard to change fisheries policy due to the commercial fishing industries entrenchment in a flawed system.

What is the problem(s)?

We are not using a model of good economic repute to base our wind energy future on. We are getting side tracked by a red herring. The center of the issue over our wind

energy future needs to be about what infrastructure we will choose and why. A major bottle neck that we have now, although it's not spoken of, is that there is a competition between green energy and carbon based energy. We need a plan to eliminate that problem, and it has to be a plan that other nations could copy, when they join the Love Power Grid Consortium. Problem number one: There is no economic program of utility capital transformation: And we do need a systemized one, to put wind energy on the fast growth track. We need to build green infrastructures,while at the same time providing a safety net for the existing capital held in what I call the dinosaur utility stock. Do we or don't we need that? I say we do. What I'm getting at is a merger program. The LPGC can absorb the both the dinosaur utilities and the working electric grid easements too. Don't see it as nationalization of industry. If anything see it as our newly renovated energy system. I envision that we can overlap green energy over the existing infrastructure all the while not shocking its asset base. Our time line is short to do this, so a consortium model is the way to go. As it is true that only the government can pave the way and take actions which could be seen as similar to eminent domain takings of private property. My feeling on this though is that the utility stock holders are seeing the writing on the wall, as it were. I would think the utilities would be happy to participate in the future, and in the consortium. This to my mind, after much reflection, is the only way to go. Also consider our performance as an international model: And of course consider the high stakes. This issue is world wide. The environmental consequences of inaction are ominous at best. We need to move quickly now, in my opinion, in the year 2005, else a drain of assets will ensue from the purchase of the expensive imported petroleum based fuels. I really think that the situation is reminiscent of Attila the Hun's payment plan for

Rome. In other words: If we keep on paying out in expensive imported fuels, we will not have enough capital to invest in a new form of infrastructure. "You can pays me now, or you can pays me later:" It's our choice.

Wind energy at sea will be expensive in the near term. This is due to the large capital costs of building the Georges Bank Mega-Mills or GB mills for short. Additionally we must consider: The high cost of power transmission grid systems; The new land and sea installations; The absorption of older energy infrastructures and last but not least; Our engineering challenges. But at least the real estate at sea is available, and that's where the wind is….Right? So we're lucky. We have free realestate to work with. We should count our blessings. Another blessing is that the fashioning of new infrastructure systems is great fun and entertaining work for us. We love that stuff: But remember and know with certainty: We can do it, together. If we're not going to do it together, we're not going to do it at all. It's just to big. The earth will spin off its axis and we'll burn in the sun. In any event we need some urgency about us. So lets brainstorm this. We can not squabble for ten years. We need to find a leader. Many leaders in policy are available and I just one of those many. So I'm saying lets get into it and go with the program: The Love Power Grid consortium is our future. Let me explain Love to you. Love in the context of the LPGC means a few things, and it isn't meant as a silly joke. First, I'm designing this new and comprehensive energy system, and therefore this construction will have some of my art in it. Statecraft is an art, fishing is an art, and fisheries management is an art. Green energy systems are an art form too. I have spent the last few years of my life at Baybridge Clubhouse, which is the place of a thousand daily victories for people with mental illnesses and other related problems. This time at Baybridge has flavored all

my thinking in manifold serendipitous ways. My plan, indulge me please, is to take two percent off the top of our consortiums wind energy sales and put that money into societal services systems. These systems are now an area of expertise for me, and I can navigate society in the right direction on these systems. That two percent off the top could go towards programs and housing for our many citizens who have not been as fortunate in some areas as the many. I'm a systems type guy in my thinking because I have prayed for that and tried to polish that gift. As well as, or in addition to, the societal services systems, fisheries system or wind energy infrastructures, and the list goes on. I do complex systems R&D. I have a voting system, a recycling system and even a system designed to put the tobacco problem to bed for the whole world. There is another tone the word Love gives to the Love Power Grid System. And that is this. The world only has two things in common. Those two things are Love and the Sea. Humans have Love and we have the Sea. Little else ties us so tightly together. If the consortium gains status as a world consortium, then we have the perfect choice of names. It may start as a mustard seed, but please let us start it up with love. Search your heart to accept this inclusional fact, and embrace it. Don't be embarrassed about it. It is the only thing that will save us now. Our earth is a planet of love, and that is what you will be living up to when you support the Love Power Grid Consortium.

Ok, Ready? There is more wind at sea than on land, which is not necessarily such a big problem, even though we may think it is. Conceptualizing the wind and wave energy installations seems to be difficult for us now. Have no fear, it's a good thing. If you think of it: Sea based wind farms can be planted at sea with a lot less hassle than on land. And they can be very large in tonnage. That's not so easy on land. There is more wind at sea

too, and we shall find ourselves reaching skyward, over 1600 feet over sea level just to tap its energy. So it just seems to be a no brainer. Put the mills at sea. Sea based wind farms can be planned as the primary use of the sea, and fishing will be only enhanced biologically by the mills. Seafood will be landed in great tonnage. Our fishing infrastructures need a refit too and the Market Quota System can do that, while employing fishermen and disabled and disadvantaged citizens. Seabirds, if Denmark is any indication will increase in population, thanks to the increased food produced by the mills artificial reef structures. The LPGC idea is the best idea especially if we decide to put our mills at sea. The LPGC will plan the mills, and site the mills for optimum MPA production. An MPA is a Marine Protected Area. That doesn't mean you can't catch fish there, it's just a zoning at sea type of thing. Using great barges and ships and specialized base installers the sea will start to thrive again. The GB windmills base system looks like a sixty foot in diameter standpipe. Coming from this tube will be the stays, just like a sail boat mast has stays. The base will have many of these stays, and this is for good reason. We need the stays to stabilize the base, and we also need the stays to accomplish a holdfast for the tire reef web netting that will be attached to them. The consortium will own these massive base systems, complete with their built in artificial reefs. Windmill owners will own their wind mill sticks, or masts, and of course the actual mill itself. So in combination form, as the GB mills provide us with power, we too will have the benefits of the reefs, and hence a lovely dual income or cash flow. I feel we will get wind energy in the form of compressed air and hydrogen, and not in the direct form of electricity. But we will also get fish and seafood. Using my Georges Bank Mill design, the "stick tube" will be anchored in using 32 heavy cables. These cables will have tires

attached in a net fashion. The tires will be repairable, as a fishing net, something of a system in itself, and one in which I have given many hours of study to. Every mill will have a well engineered and purposeful artificial reef, and the reef system will be owned by the consortium. The Market Quota System, which is a fisheries system, will dovetail with the LPGC contractually, as a way of handling those financials.

Xxxxxxxxxxxxxxxxx The Georges Bank Mega- Mill zzzzzzzzzzzzzzzzzzzzzzzzzzzz

What we don't need are dinkey little mills like the ones proposed by Cape Wind for Horse Shoe Shoal. Let's leap frog over the current state of technology and build with more ambition. The two parts of the GB mill that will not be owned by the consortium will be the "stick" and the actual wind mill blade assembly itself. The stick is the thing that holds the windmill up, but it's not the base. The stick goes inside of the base, which is that big steel tube. In the case of my GB mill the stick will move up high for lighter winds and down low, into the tube, for high wind storm damage control. It will hunker down. Ninety nine percent of the time the mills will be standing tall with the highest blade tip about sixteen hundred feet above the ocean floor. Optimally, the mills should go in water that is from about eighty feet deep at a minimum, to probably about two hundred feet. I propose sixty thousand GB mills for Georges Bank and Nantucket shoals and vicinity. A GB mill in the shallow eighty feet of water will need to have a shaft below the sea bed level, so that the stick can be raised or lowered as needed. The wind needs to be gotten to, and the cheapest way is for the mill to reach high for it. When it blows crazy mad, the mill stick can retract down into the tube. The GB mill has at least five other mechanisms to hunker down and protect its equipment against wind damage. Just as in the days of the square rigger we will "Crack it On", which means we will set

our sails. When the machinery can't take the stress, it will adjust itself. The blades flex, I call them feather blades, and they are made of a steel and wood composite. Covering the feather blades is a Teflon coated collision matt. The collision matt material will take air in order to pop off the ice. Very clever these Chinese. The blades also rake back and away from the direct force of a high wind, and retract inward towards the hub. Also the blades will have a variable pitch adjustment, which is common in the marine propeller industry. All this is needed to set sail for wind energy. If the GB mill were not so designed then the design would have to be necessarily able to withstand hurricane force winds, as are the stick like turbine blades proposed and now in use worldwide. Dad used to say to me, "the world's wrong and you're right, right?", and of course I would agree. Anyway, thank God we are all different. These current designs, as proposed for Horse Shoe Shoal therefore impractical in attaining a transformation of wind power to kinetic energy. They can't "Crack it On". You have to set sufficient sail to capture the wind. Any mill designed to stand up to a hurricane without adjustment is not of sufficient sail area to gain the advantage of the winds force against it.

Xxxxxxxxxxx Be not afraid. //////zzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzz

We are going to build some sixty thousand mills on Georges Bank and Nantucket shoals. We will justify this by our current oil prices, and the environmental world wide necessity of some one taking the lead role for the industry. And that's us Cape Codders. I wear a feather in my pony tail. The reason I put the feather in so I would remember to work on the GB mill blade design. My mission was to copy mother natures own wise design. I do feel as though I have a good design for the blades. Essentially the blades are 350 foot

feathers. Examine a feather. Hold it in the wind with your thumb and pinky finger. Feel the power of the wind on just this tiny scale. Push the feather and feel it flex. Know then that there is power in the wind. Have confidence that we can tap it. Have confidence that we can transform it into forms we can use. The wind is free, they say. As a fishermen that was no consolation. So let's go, and let's get going. We're only limited by our own ingenuity and capital commitment.

zzzzzzzzzzzzzzzzzzzLet's use the best economic model right from the startzzzzzzzzzz

We do not want to copy the horribly ineffective fisheries models insofar as public resource management is concerned. Those models, which we now use, wrecked public resource assets and gave the left-overs to private interests. In other words, let's take industry with a grain of salt. There are many bad models out there that we could choose for wind farms. One of them, which is our existing centralized utility system, suited to large power plants, would be a bad choice for multiple mill operations. Windmills can be individually owned, if the infrastructure supports are common. We do need and currently don't have a handle on an economic model of infrastructure system design that can accept wind mill investment from towns and small businessmen. I think I know something that would slow our new wind and wave industry down quite a bit, especially in the long run: And that is if by default, through a lack in leadership, we allowed this new wind and wave energy industry to be headed by a few large power plant owners. I see a major problem in the publics' misguided perception that this industry needs to be a thing catered to large utility operations. Again, this problem is caused by the current framework of the policy questions.

zzzzzzzzzzzzzFishery System Mistakes….Let's not copy them.zzzzzzzzzzzzzzzzzzzzzz Fisheries have stagnated for years as public resource management sinks to the new low of giving away multi million dollar public resource assets (fishing rights for free) to private concerns. Wind mill site locations could follow this same failed program, unless we find a better way. I'm saying there is a much better way.

This is the problem in a nutshell: Wind energy on public ground offshore really does need to have an open access and equal opportunity based infrastructure going into the future. By default if we do not select a reasonable vehicle, the large scale utility special interests will write their own contracts to use public ground for private gain independent of the public good. I understand this basic problem as a good thing. It is always better to know you need to design a system, rather than watching infrastructure system design happen to you. What is the profound reality of the windmill issue on Cape Cod? Is it whether we build a windmill farm on Horseshoe Shoal or not? I would like to think not. The real meat of the issue, as I see it, is the future of our infrastructure for this industry. What are our intentions? Do we intend to sit back and be led by the hand by only the private capital based industrialists? Or would we like to draw the contract for the future, enabling both businesses large and small, and governments, large and small, to participate in the building of a new working energy system.

What is the cause(s) of the problem?

The green lobby has not had success in transforming its sentiments into energy producing hardware. Now's the time. There are few wind mills on the east coast. We have the wind here, but there are blockages and regulatory uncertainties, to wind energy. Are they real or imaginary? Is there resistance to green energy from the existing traditional carbon based companies? You may think there would be. There is a lack of subsidy, a general lack of cohesion on public resource rights issues, and no popular consensus as to infrastructure policy direction. There is a major problem for windmill developers due to the governments' regulatory uncertainty. Private companies, such as Cape Wind Associates can't plan, and you can tell that the Mike Gordon is tearing his hair out in frustration, as he attends so many meetings. The Love Power Grid Consortium can solve all of these problems. We can make private and public interests happy because the consortium is both private and public. It is a hybrid company. A consortium is a vehicle of business called upon usually for massive projects where only a cooperative effort will suffice.

At this point in our wind energy history we are as behind now as we were when Sputnik was launched, or so it may seem. Cape Cod had more windmills one hundred and fifty years earlier than we do now. Nevertheless, people are feeling a newfound urgency as the gasoline, fuel oil, natural gas, and coal prices keep going up. The public wants to do something substantial about energy problems. At prices between two dollars and fifty cents to three dollars for a gallon of gas at the pump, the public will concretely address energy issues in the near term future. But let's not act in haste.

What are the possible solutions to the problem?

Standard fare proposals include bleeding our selves to death on a continued path of fossil fuel purchase. Using hydrogen as a fuel is a popular listing. Geothermal energy is a hopeful resource for power, and I have always wondered why this idea is not implemented. Wind power seems like a good bet right now. I also like wave power.

What is the best possible solution to the problem?

The consortium model is generally chosen to handle big projects. It is a hybridized form of a company which melts public enterprise and private enterprise together in a partnership. A consortium approach will allow for wind energy industrialization at great speed, because it will allow all hands to pull in one direction. Wind is a source of power that has great magnitude. The German square rigged ship **Prussen** built in the year 1900, measuring four hundred and twenty five feet, could capture six thousand horsepower from the wind to drive its fully laden hull through the water at eighteen knots. Think of that power. Now think of the consortium. The consortium as a company can hold both private and public assets. Under the circumstances that the public owns the wind energy grounds, or fishing grounds, how would it be wise to proceed with separations between the two asset bases? The two should be mixed to a degree and also separated to another degree. The economic divisions of public and private assets, yet with the combination and corralling of them to pull in one direction, is an art. We need that art and skill in wind power, and in proper fisheries management. So taking a page from that book, looking at the Market Quota System of fisheries management as a model, we can move into a bright wind energy future. Current stand alone private systems will

stagnate and privatize development of technology, as we have seen in failed fisheries systems.

What are some opportunities with a consortium?

As a fisherman, one opportunity jumps right out at me. Mills at sea will become **artificial reefs.** For this reason I really hate the Horseshoe Shoal location. This is ground that gets swept and scoured by wave action and will not support a first class artificial reef. Why should we construct mills that don't double as productive reefs? We should not. There is really no good reason, assuming a public private partnership, to follow that sort of a course of action. Doing so would be public policy rubbish of the finest order, because the gift of the additional wealth of a reef, added to the wind power gift is tremendously valuable. The consortium allows the base systems to be built and owned by the public/private company, the consortium. The consortium would either take a percentage of the wind power from the mill owners or buy the power. A private company such as Cape Wind would not consider enhancing the mill to reef status, given the additional cost and no return on investment, unless there were good reason to do so. These large Georges Bank Mill bases, if properly designed for the purpose will allow for great strides in fisheries production and will also employ many more people in their construction. This can be very much gainfull employment **for fishermen** and other workers. Reefs not only congregate fish they produce them from natural habitat infrastructure, if I may say so. Fish don't hang around unless they are eating generally. The structures can be fitted for reefs in that the mast stays can contain tire reef netting. Each mill will be on the map as a fishing hot spot. This is now a **tourism issue**.

Bouys around the mill base can accommodate boats of commercial and pleasure fishermen. **The Market Quota System and the Mills** allows that fish caught in reef zones can be taxed by the pound at a higher rate, if that is what we want. So doing would be a milestone in fisheries management ethics, and an economic milestone for science. Using the Market Quota System the fish can be taxed as well in order to proceed with even more building of reefs, as in farm economics a part of the harvest monies go toward the farm operation. Another way to describe the Market Quota System is to call it the Sea Farm System.

Locations to kill that third bird, environomicly of course, with one stone (the first is wind power, the second is the reef) would mean that mills be put in places South and East of Nantucket and East of Cape Cod. Allowing large and dense packed mills in these zones will bring the multi million dollar advantage to the table of **settling beach erosion** down to a minimum. Reefs will produce vegetation which will slough off during storms. This materiel when it mixes in the boiling surf will cause a pea soup effect which dampens erosion. Sea dampening effects of the mills fitted with heavy duty tire reefs will save hundreds of millions of dollars in lost real estate. Sea levels are rising.

Utility capital transformation could be an avenue for the consortium. The consortium could absorb the Mirant Canal plant first and then the Nantucket Electric Grids and the Somerset Plants. Also the consortium could acquire transmission lines through a stock trade or stock merge deal. If wind energy is predominant in the region, especially using compressed air then older technologies may see the light and want to bail

out of their old asset holdings and transform into the new. Compressed air can be piped under roads as are other utilities. The specialized high tension wire corridors could be used for additional roadways, wind mill sites, or other common use specific to the need, ie bike path compressed air pipe lines. The easiest way to ship compressed air would probably be to use the utility lines in existence. Neighborhood air connections would probably look like the thick cablevision cables on the poles, with the service coming into a home being one inch or so. There is a case for decentralized electric utility generation and hybrid systems such as air combined with gas, coal or oil would help us get off the fossil fuel kick.

Who will build the 60,000 Georges Bank Mega Mills?

Currently there are two famous shipyards with less work than they are used to. Bath Iron Works and the Electric Boat yard at Groton can construct the hub mechanisms. This work could also be done at the Fore River yard in Weymouth if it were available. Windmill blades can be built in multiple facilities. Stick or masts can be built in multiple locations. The GB Mill has a double stick that retracts in heavy weather and extends up into higher velocity wind in nicer weather. Did I say the wind wasn't nice? I'm sorry. Compressors for the mills can be built by our American motor manufacturers. Air lines can be purchased and laid and base system components bought and constructed by the consortium itself. Of course this may seem grandiose, but actually in scale, it is within the economic parameters of our energy demand situation.

Regulatory issues will be easier if handled through the authority of a consortium. The consortium can make mistakes, as new companies do, without the flyspecking involvement of legislative actions. Having a central vehicle, which is both private and

public in nature, will allow for deals to be made as in business. Contracting will be quicker than going to the government to hash things out ad infinitem. The consortium as a quasi for profit company can set fees for use of public ground as would a landlord. The fees can be based on a percentage of power output by each mill, and that fee can be used to ramp up and expedite infrastructure. The consortium will own the realestate, the base systems which double as artificial reefs for fisheries, and the power grids of either electricity or compressed air. **Private companies**, many smaller than you may think, will run wind mills and wave mills. Their job will be to run and maintain their machinery. The wind mill owner will plug into the Love Power Grid's system and make money, then paying the infrastructure service provider. Windmill owners and operators will not agonize with the government at great length and pain: But instead will contract with the consortium for common needs and pay a percentage of the power generated. **Cape Wind can fit into the consortium** as can a small company with only a few mills or town wanting to invest in the wind energy industry. But a consortium could not fit into the private for profit structure of Cape Wind. The consortium wants the infrastructure. Why? It is because it is in the national interest to produce wind energy in great quantity. That is why we need local state and federal involvement. A consortium based asset holding of the infrastructure of grids and base systems creates a level playing field for competitive industry. Also owning the old power plants may be controvercial, but at this point I believe in looking into that. Beyond the ability to own and grow this common infrastructure, the consortium probably wants to leave those profits to strictly a private venture.

Compressed air v. Electric Grid

Generation of electricity by wind is not practical insofar as it is not easily shippable. Cable running from Georges Bank to the energy corridor between Washington DC and Boston will result in too much line drop. High pressure air lines (4000 psi) made of steel are cheaper and the advantage of having the compressed air in reserve is a major factor, because that power can be sold at peak demand times. Our having electricity only when the wind blows is patently absurd on a large scale. Electricity when the wind blows does not fit with the current program of landside grid and generation systems. In fact it does not fit at all well and will cause a chaos if tried on scale commensurate with the LPGC systems. The reason I have proposed sixty thousand Georges Bank Mega Mills in part is to display that when we ramp up production we will be faced with a major problem if our energy is strictly in electrical form.