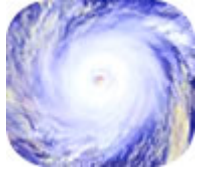


## Blue Energy Market Drivers

**Global warming** - Carbon Dioxide emissions are projected to grow by 69% by 2020 and to double by the year 2050 unless new policies are put in place to reduce them. Intergovernmental Panel on Climate Change reports this would result in an average global temperature increase of 3.5 degrees Centigrade by the middle of the next century. A 60 to 80% cut in greenhouse gas emissions will ultimately be needed to stabilize atmospheric concentrations of the gasses and avert serious climate disruptions. This will require a massive global transition to renewable energy sources and large improvements in energy efficiency.



**Transportation** - Builders of large bridge infrastructure recognize the advantages of a sustainable transportation solution as the lucrative energy stream offsets the need for instituting onerous user tolls for new bridges. The tops of the machinery rooms are continuous and support a four lane roadbed for vehicular traffic, either along the top of the tidal fence, or stackable lanes within the structure.



**Declining Demand for Nuclear Power** - The public is evermore wary of nuclear weapons proliferation spawned from unregulated nuclear power programs. Chernobyl, Three Mile Island, and recent nuclear accidents in Japan have brought the world's attention to the dangers of nuclear power. A widespread resolve is developing for the rapid phase out of nuclear facilities in western and central Europe and in North America. In the last decade, nuclear power has gone from being the world's fastest-growing energy source to its second slowest.



**Declining Coal Use** - Coals share of world energy is down to 23%, roughly where it was in 1860. China has more than halved its coal subsidy rates since 1984, a move which contributed to a 5.2% drop in domestic coal consumption in 1998. Belgium, France, Japan, Spain, and the United Kingdom have collectively halved coal use since slashing or ending coal supports over the last fifteen years. With growing legal liability and possibility of severe emissions penalties for coal production as outlined in Kyoto Protocol, the reign of "King Coal" may soon be brought to a timely end in the early part of the new millennium.



**Dwindling Supply of Peak Oil Reserves** - Approximately 80% of the oil produced today comes from fields discovered before 1973, most of which are in decline. A recent analysis of data on world oil resources estimates that roughly one trillion barrels of oil remain to be extracted from the earth. With an estimated 800 million barrels already extracted and present levels of consumption, this data suggests that world oil production could peak between 2000 and 2010, and then begin a decline throughout the remainder of the century, accompanied by increasingly higher prices.



**Increased Opposition to Hydro Electric Dams** - Hydroelectricity is well established in North America, but has limited potential for further development worldwide due to environmental impacts. Fifty percent of the natural gas burned today comes from wells drilled in the last three years. The relatively new phenomenon of breaching is gaining in popularity, as the ecological devastation of large scale dams is being felt in widespread extinction of fish species. The economic costs of renewing fish stocks or erecting fish ladders are often more costly than removing the dams altogether.



**Increasing Demand for Renewable Energy Sources** - To counter the effects of global warming from the combustion of fossil fuels, a rapid shift towards renewable energy development is now underway. Economic projections indicate that this trend will continue to accelerate rapidly. Wind and solar power developments have been leading the way with annual capacity increases of 25.7% and 16.8% respectively between 1990 and 1997, and are still growing markets today.



**Deregulation of Energy Markets** - For the first time in many decades energy consumers in countries around the world are being given a choice of who supplies their electric power and how that power is generated. Similar to the restructuring of the telecommunications industry in the mid- 1980's, the introduction of competition in power markets is giving customers more options, one of which is to purchase electricity from renewable sources.