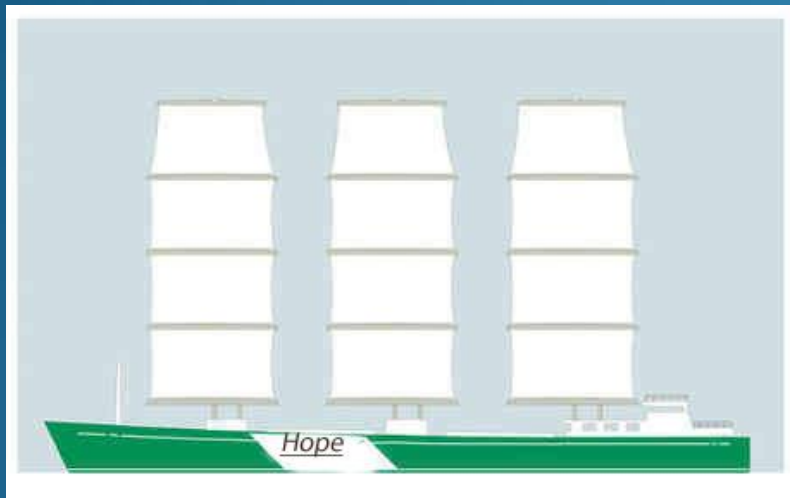


Hope and Alert

Flagships for the Future™

Wind powered carbon neutral auxiliary sailing cargo vessels for the short sea trade



**Navesink Maritime Heritage
Association**

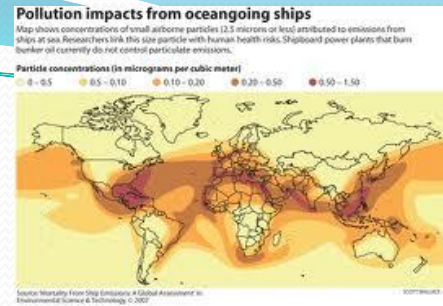
Working Waterways and Short Sea Shipping

Short sea shipping refers to the movement of freight mainly on sea while remaining in the same continent without crossing an ocean. While deep sea shipping refers to maritime activity that crosses oceans. Short sea shipping includes the movements of wet and dry bulk cargoes, containers and passengers around the coast, for example (from Portland, ME to the Port of New York and New Jersey). Typical ship sizes range from 1000dwt to 15000 dwt (tons deadweight-the amount of cargo they carry) with drafts ranging from around 9 ft. to 18 ft. Typical cargoes include grain, fertilizers, steel, coal, salt, stone, scrap and minerals, oil products such as diesel oil, aviation fuel - all in bulk, containers and passengers (ferries are technically short sea ships). Short Sea Shipping on the Canadian and US East coast is mostly by tug and barge.

In Europe, short sea shipping is at the forefront of the EU's transportation policy. It currently accounts for roughly 40% of all freight moved in Europe. In the US, short sea shipping has yet to be utilized to the extent it is in Europe, but there is some development in the area. New York's Port Inland distribution Network, and private companies like Columbia Coastal Transport are examples. The main advantage of this type of shipping is fuel savings, alleviation of highway and rail congestion, decrease of air pollution, and overall cost savings to the shipper and the entire logistics chain. Shipping goods by ship (one 3000dwt vessel is equivalent to between 50-150 trucks) is far more efficient and cost-effective than road transport.

Below are Some Examples of Operations, Vessels, and Routes



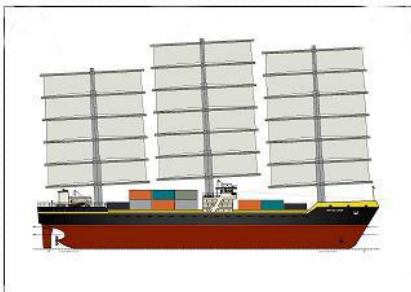


This?

The global maritime industry accounts for 3-5% of global emissions and has yet to be subject to international emissions agreements. Unstable and increasing oil prices, and the economic downturn, make the future of global sea trade increasingly unpredictable. In readiness for long awaited international action to curb Greenhouse gas emissions from ships, through “cap and trade” mechanisms, Sail assist or sailing cargo vessels are future proof coasters that can swiftly be brought to market greatly benefiting Canada and the US in the carbon restrained economy we all face.

Scientists are increasingly pointing to black carbon emissions as an important issue in the acceleration of melting sea and glacial ice, especially in the Arctic region. Because black carbon emissions last only a few weeks in the atmosphere, cutting them today should help slow the pace of this melting. Reducing ship pollution will cut these black carbon emissions, and the benefits will be greatest for ships travelling in the northern latitudes.

Or This?





USEPA Rules for Ocean Going Vessels

Diesel engines on ocean-going vessels such as container ships, tankers, bulk carriers, and cruise ships are significant contributors to air pollution in many of our nation's cities and ports. Their emissions are expected to increase even more in the future, as our trade with other countries increases, and ship emissions will represent a larger share of our national emission inventories.

This page provides general and technical information on EPA's coordinated strategy to address emissions from ocean-going vessels. This strategy includes [EPA's regulations](#) for the largest marine diesel engines as well as the U.S. Government's international efforts to reduce air pollution from ocean-going vessels through the designation of [Emission Control Areas](#) and [new international standards](#) for marine diesel engines. When taken together, the elements of the coordinated strategy are expected to result in significant improvements in U.S. air quality and public health.

There are two types of diesel engines used on ocean-going vessels: main propulsion and auxiliary engines.

The main propulsion engines on most ocean-going vessels are very large "Category 3" marine diesel engines (those with per-cylinder displacement at or above 30 liters). Auxiliary engines on ocean-going vessels typically range in size from small portable generators to locomotive-size engines with power of 4,000 kilowatts or more. Auxiliary engines on U.S.-flagged ocean-going vessels are subject to

[EPA's marine diesel engine standards for engines with per-cylinder displacement up to 30 liters per cylinder](#).

More information about EPA's programs for smaller marine engines is available on [Diesel Boats and Ships](#) and [Gasoline Boats and Personal Watercraft](#).

Related Topics

- [LocomotiveMarine Rule](#)
- [Diesel Boats and Ships](#)
- [Gasoline Boats & Personal Watercraft](#)
- [EPA Regulations](#)
- [Emission Control Area Designation](#)
- [International Standards](#)
- [Press Releases](#)
- [Guidance and Publications](#)
- [Related Links](#)



How the Vessels and Logistics Proposed in This Presentation are a Small Part of a Larger Concept for a Green New Deal

“We are facing a ‘triple crunch’: a combination of a global financial crisis, accelerating climate change and aberrant fluctuations in energy prices exacerbated by imminent peak oil. It is increasingly clear that these three overlapping events threaten to develop into a “perfect storm” with devastating economic and environmental consequences.”



A Green New Deal

Unless we are prepared to take action now:

A Green New Deal, entails re-regulating finance and taxation plus a huge transformational program aimed at substantially reducing the use of fossil fuels and in the process tackling the unemployment and decline in demand caused by the credit crunch. It involves policies and novel funding mechanisms that will reduce emissions contributing to climate change and allow us to cope better with the coming energy shortages caused by peak oil.

Flagships for The Future



The Future of Working Waterfronts and Waterways

Whatever the effect on costs, it is obvious that environmental performance indicators, the adoption of a green logistics policy and effective green supply chains measures will become important aspects of total supply chain management in the near future. Shippers and transport companies, logistics service providers, and port operators will have to integrate environmental values into their decision making processes. A well-informed emission reduction strategy will have to be developed by the working waterfront community to meet future requirements. <http://www.greenlogisticsconsultants.com>

Durable working waterfront and waterways must include markets for creative entrepreneurs motivated by enlightened self-interest. The future is not something to be feared or fought over – it is something we have to guide creatively and cooperatively. We can work together, live better, and waste less.

Sustainable development is a process of continuous improvement by design, of natural, built, economic and social systems. Sustainable development means *dynamic abundance, not static scarcity*. If we apply our collective ingenuity, creativity, and know-how in a comprehensive planning process, it is possible for our social and environmental goals to be transformed into ecological improvement and economic opportunities. Florida House Institute, Earth Kinship Conference, 2001

Why emission free and carbon neutral 21st Century ships For Small Ports and Short Sea Shipping?

This proposal for two prototype “tall ships” for US/ Canada/ East Coast/Caribbean trade are named **Hope and Alert**. The ships will be 21st Century zero emissions sailing cargo vessels that will use best available technology to produce vessels that will run on wind and a bio-fuel for its auxiliary engine. A large part of its mission will be to “offset” carbon pollution from the oldest dirtiest ships that call on large and small ports, and provide the impetus to replace some of those ships with a fleet of zero emission, modern sailing cargo vessels.

The use of sailing vessels as transportation is nothing new. Many coastal schooners and sailing vessels are still working in the trade between main ports and remote islands and harbors in Africa, Caribbean, South America, Indian Ocean and the Pacific. Yankee Clipper designed and operated by Jeff Allen, a 400 tonner 100’ schooner carried break bulk cargo between the UK and the Caribbean every six weeks in the early 1990’s.

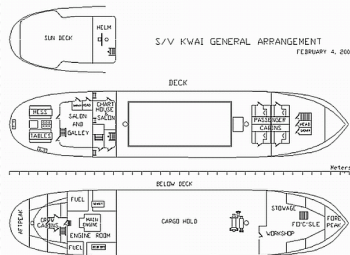


Yankee Clipper

A Snapshot of Who is Operating Now

SV Kwai

<http://sites.google.com/site/sailcargo/>



A powerful sailing ship, driven only by the free energy of the wind, dependent only on nature and the resources she carries aboard is not only a work of art and beauty, she is a proven, economical vehicle of transportation where fuel is expensive and often scarce. Our sails are our the subsidy, and the fuel in our tanks often goes ashore to run island generators, while the ship quietly rides the waves in the timeless tradition of her pedigree.

Trading Opportunities

For centuries these islands were supplied by infrequent ships arriving to sell their cargoes to the local inhabitants. Even in these modern times many of the small islands on our route are still not supplied on a regular basis. With approval and support from the local governments and island councils we provide a comprehensive service. We deliver ordered cargoes from the least expensive sources in Hawaii, and charge a purchasing fee and freight on all goods. We now take back dried seaweed as return cargo to Hawaii and have proposed to carry copra from Washington to Christmas, a much needed service.

Tres Hombres Packet Company

<http://sailtransportnetwork.com/>



<http://www.fairtransport.eu/>, located in Holland, is offering shippers an eco-friendly alternative for their shipments: The modern sail-powered container ship. These vessels are much different than the “sail assist” systems currently on the market. These vessels were not only designed to primarily carry cargo, but were also designed to use sail as the primary means of propulsion.

From Martin Romer of Tres Hombres: “We actually sail cargo and really work on being the first and world biggest transport company with only hybrid-engined sailing Tall ships. We hope to build upto 100 tall ships, engined for the windless periods and for harbour movements (60 – 90% emission reduction)”

On the Boards



Maruta Jaya



The *Maruta Jaya* is a 900-ton motor-assisted cargo sailing vessel. Built in the 1980's in Surabaya, Indonesia, she is 200-feet long, has a draft of 15.5 feet, and carries 13,000 square feet of sail.

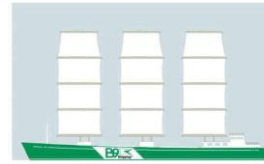
Peter Schenzle is the designer of the *Maruta Jaya*. This sailing freighter was developed by a German-Indonesian research project with a view to transporting goods between Indonesian islands. rig of the three-mast schooner was the brainchild of shipbuilding engineer Schenzle himself, who at that time worked for the Hamburgische Schiffsbauversuchsanstalt (HSVA – Hamburg Institute for Experimental Shipbuilding). Schenzle also designed the rig for the Greenpeace velssel *Rainbow Warrior* and other converted motor vessels.

Hope and Alert the ships that are the basis of this proposal are derived from the designs of B9 Shipping www.B9shipping.com and [Humphreys Yacht Design](http://www.humphreysyacht.com)

And are used here with their permission

<http://www.youtube.com/watch?v=oZJRDJQOqlc>

B9 Shipping - our history



In 1983 Jeff Allen built the first sail assisted cargo ship of modern times, known as The Atlantic Clipper, she sailed between the UK and the Caribbean. This 400 tonner with a 100 foot steel hull and twin 100 foot masts sailed every six weeks at an average speed of 8.5 knots. She carried break bulk cargo. The use of sails meant an £11,000 reduction in operating costs every trip. During the three years Jeff sailed The Atlantic Clipper he gained unique experience of running sail assisted cargo vessels. The saving in fuel costs, the increased stability afforded by sails and the relative size of the vessel convinced him that sail technology would be a critical factor in servicing smaller markets that require a regular service but are unable to support conventional shipping.

The effects of economies of scale on small island states

The trend to maximize ships' tonnage in the interests of economy has created a shipping vacuum in markets where the movement of smaller cargoes is essential. The shipping industry's trend towards larger ships effectively isolates small island economies from participation in world trade as they cannot support large volumes of either import nor export, nor do they possess the necessary port facilities to accommodate large vessels. As a result, trade relies largely on consolidation and tran-shipment, this is slow, unreliable and expensive.

The Bright Green Shipping Company

In 1994 Jeff Allen and Diane Gilpin developed a prospectus for the Bright Green Shipping Company. Based on the success of the Atlantic Clipper the proposal outlined two 500 GRT ships operating a liner service providing a direct, fast, and regular service between Canada and the Caribbean - servicing existing markets, re-opening traditional ones and stimulating new trading enterprises. No other shipper was able to provide a competitive service on the route since the use of sail reduced costs by up 70%. Publicity surrounding the AIM launch attracted the attention of David Surplus of B9 Energy who had long recognized the potential of harnessing the wind to once again power cargo ships. David and Norman Surplus were already well ahead of the environmental curve in developing B9 Energy wind farms in N. Ireland. Their father had had a long career in merchant shipping and both could see the potential for using sail once again as principle power source for cargo ships. In 1999 B9 Energy collaborated with Diane Gilpin to produce a feasibility study which eventually became B9 Shipping.

Delivering the Low Carbon Future

B9 Shipping is an essential element of transport infrastructure of the low carbon, sustainable future. B9 Ships can deliver:

- Woody biomass for electricity power generation
- Wood pellets for domestic heating systems
- Torrefied wood pellets - bio-coal - for use in steel furnaces and other industrial processes
- Other sustainable bio-fuels
- Captured carbon for sequestration

B9 Shipping The Northern Ireland-based company discloses details about a potential RFP in New York as it looks to launch a sustainable ship in 2012.

Currently, the UK is looking to meet 15 percent of its renewable energy targets by 2020 from biomass. Surplus said his company is primarily focused on the transportation market of biomass, wood chips, and pellets from the Baltic Sea area to England.

"Most of the material we would be shipping is waste from the pulp mills, saw mills, and forest residue," he said.

The first vessel would be able to accommodate 3,000 tons of the material and travel as far as 1,000 miles. To store sufficient fuel onboard, the company plans to liquefy the methane component of the biogas. It is collaborating with project partner Rolls-Royce Motor Cars on the spark ignition engines designed for liquefied natural gas (LNG).

"We're aiming to have our first ship in the water in 2012 to be ready for the first of the biomass power stations coming online in England," he said.

The eco-friendly cargo ship will also come with an approximately 20 percent higher price tag than traditional ships, but is completely free of fossil fuels, he said. It would be financed in 2010 and built in 2011.

Depending on how the first £15 million (\$24.4 million) demonstration ship goes, it could be followed by as many as 50 more, with a price point of about £12 million each. B9 Energy already has established relationships with banks, given its history in the wind sector, Surplus added. In the event of a short supply of biogas, the ship could be refueled with LNG. But to avoid this, the company plans to contract with sister company B9 Organic Energy to make sure anaerobic digestion plants are located near its operational ports. The company is about to close on its first anaerobic digestion project in January, he said.

Surplus said his company is already in discussions with an undisclosed Manhattan company, which is active in waste management, about tapping into some of the organic waste streams in the New York City area. The companies are interested in jointly bidding on a request for proposal in New York early next year to take food waste and convert it to methane. It could initially be for as much as 30,000 tons of waste a year, which would provide enough fuel for four ships, Surplus said. Surplus added that any ships deployed on the U.S. coast could be built in America. The company is currently preparing a supply chain definition and manufacturing plan for discussions with a U.S. shipbuilder, which has "the lean manufacturing capabilities" B9 is looking for to move into mass production, he said.

In addition, he said the company is working on a products tanker/chemical tanker version of the eco-friendly ship to transport bio-fuels such as bio-ethanol and biodiesel. It would be non-transatlantic, he said, and also powered 60 percent by sails and 40 percent by biogas.

Hope and Alert

Flagships For the Future

Hope and Alert will be 500-3000 dwt auxiliary sail cargo vessels that will also be Coast Guard inspected vessels that can carry up to 50 deck passengers, and sleeping quarters for 12 for overnight and longer voyages. They will carry out this mission while reducing emissions to air and water, implementing innovative propulsion technology and alternative fuels. They will also serve as a practical model for sustainable work and passenger boat and ship technology worldwide.

The Ships will:

- be 500-3000 dwt, fossil fuel free sailing cargo ships with a bio-fuel auxiliary engine
- will be Jones Act compliant, built locally from recycled materials, and manned by US crews
- will provide vital emission free carbon neutral trading link for short sea shipping
- will be a laboratory for innovation and competitiveness
- will be commercially competitive with conventional oil powered vessels
- will operate on reliable schedules and offer attractive freight rates.
- will serve as an educational tool and real world example of sustainable design for the shipping industry, students, teachers and the public
- will minimize the impact of operations on the natural environment.
- will showcase how green building design and environmentally friendly procedures can be utilized on a cargo and passenger vessel while still maintaining operating efficiency and reliability.

The following are examples of the innovative features of the green vessels:

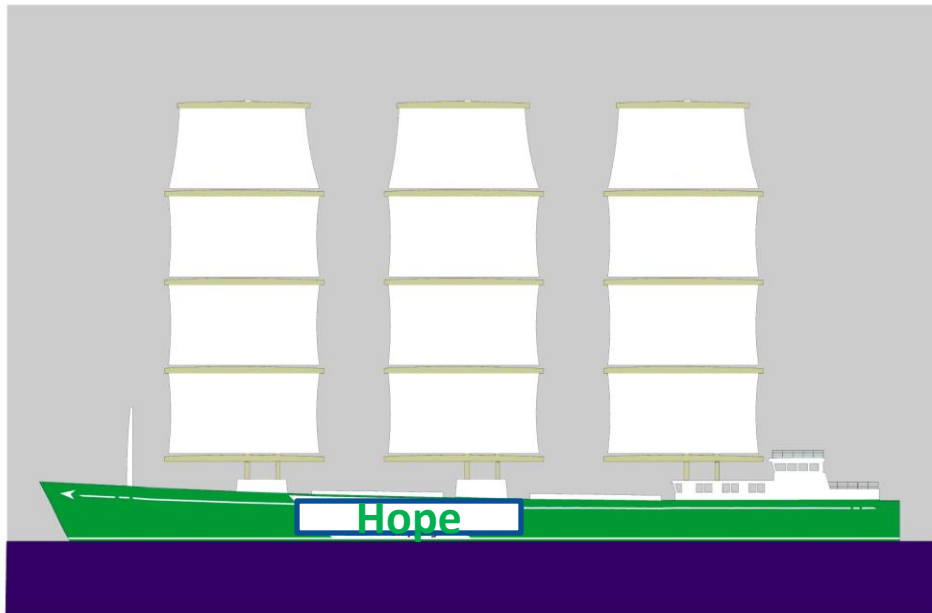
- will be designed to use Leadership in Energy and Environmental Design (LEED™) process for all applicable systems.
- computerized soft sail primary propulsion system.
- Recycles steel, up-cycled wood, recycled plastics.
- bio-fuel powered hybrid diesel-electric propulsion system and a power plant designed for the future addition of fuel cells.
- Large battery banks for zero emission operations - charged at dock or underway.
- Generator and engine waste heat recovery.
- Excellent thermal insulation system.
- Low volatile organic coatings.
- Highly efficient interior and exterior lighting systems.
- Water efficiency and zero wastewater discharge.
- Energy management and control system.

First Steps

Feasibility Study

- ✓ Identification of an appropriate and established route to demonstrate the practicability of a zero emission ship moving a variety of cargos from Eastern Canada to the Caribbean.
- ✓ Development of a Transport Chain Analysis to provide a basis for measuring CO2 emissions generated during the transport process to identify where emission reducing transport technologies could best be employed.
- ✓ Development of a specification for the zero emission ship, based on the proven design.
- ✓ Identification of a proven ship building technology that will keep construction costs to a minimum
- ✓ Development of preliminary designs for the hull and sail plan for a zero emission ship
- ✓ Exploration of opportunities to use recycled materials in the construction of the vessel
- ✓ Examination of the technical implications of using electric/bio gas/biodiesel power propulsion
- ✓ Examination of potential cargoes that could be carried on the chosen route
- ✓ Assessment of the commercial implications of running such a ship on the identified route

Hope and Alert, the flagships for the future, are powered by a combination of proven technologies – conventional soft sails and bio-fuel marine engines. Sails power has been used almost since humans took to the water. This is nearly failure proof system. With the addition of computerized control systems for hoisting, lowering, and furling sails under-way adds an additional layer of safety and performance, and a smaller crew. Linked with a bio-fuel electric hybrid system the vessel has redundant propulsion systems. Siemens and other companies have designed small ship diesel-electric systems and such a system will be adapted to the special needs of the project. Rolls Royce and others have developed engines that can easily be converted to methane or LNG. The flexibility and exceptional environmental performance of this design is coupled with high reliability and proven technology.



**Prototype of 3000 dwt sailing cargo vessel
based on B9 Shipping design**

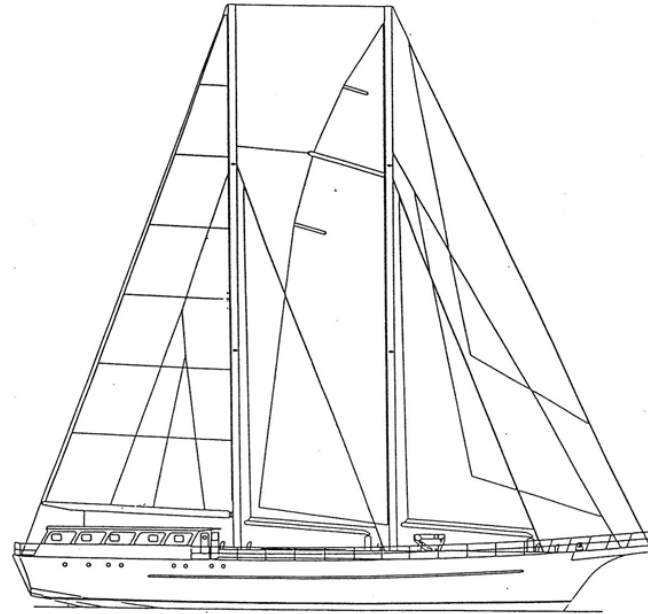


**Prototype of Vessel with Capacity
For 16 Containers, a Refrigerated
Hold Forward and After Cabins
For 12 Passengers plus Crew**

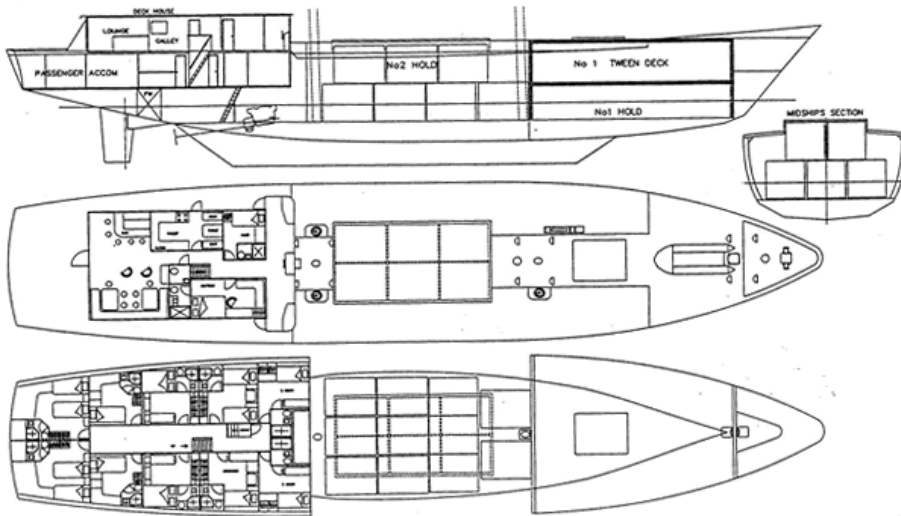
Alert



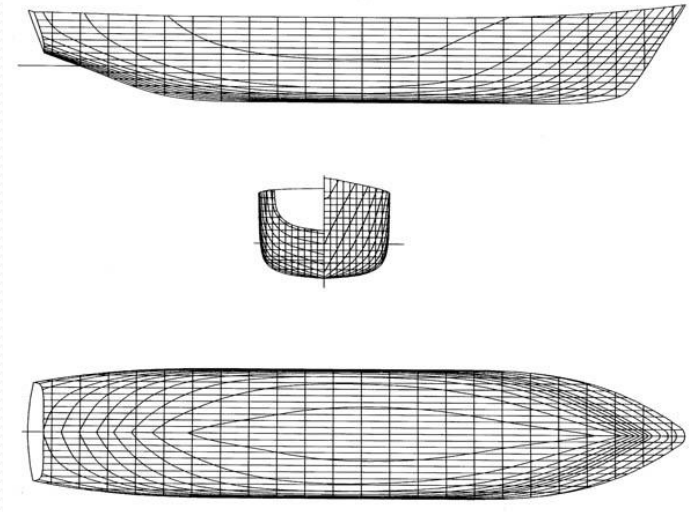
Clipper Cargos



Sail plan

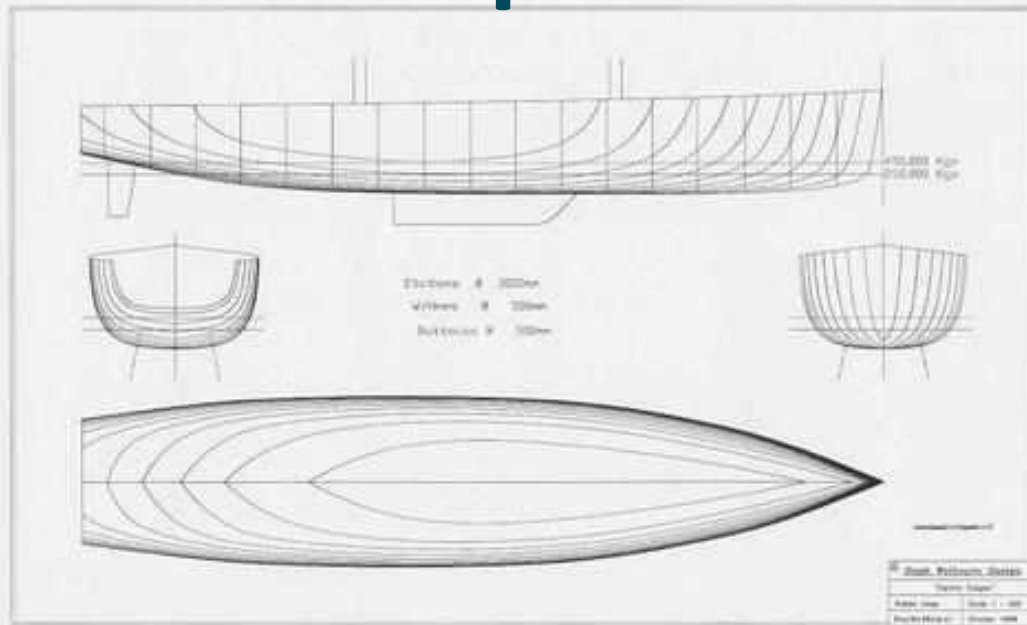


Deck Plan

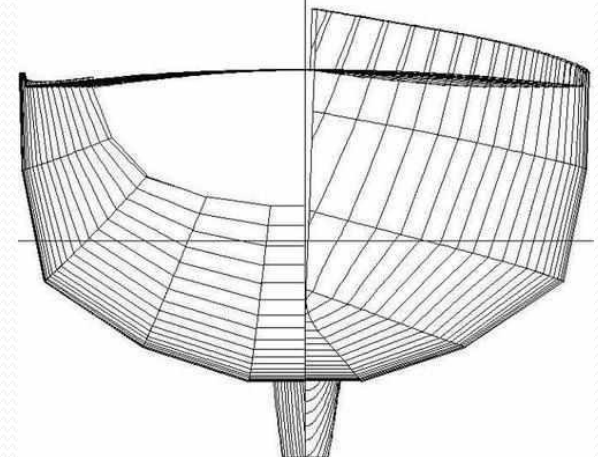
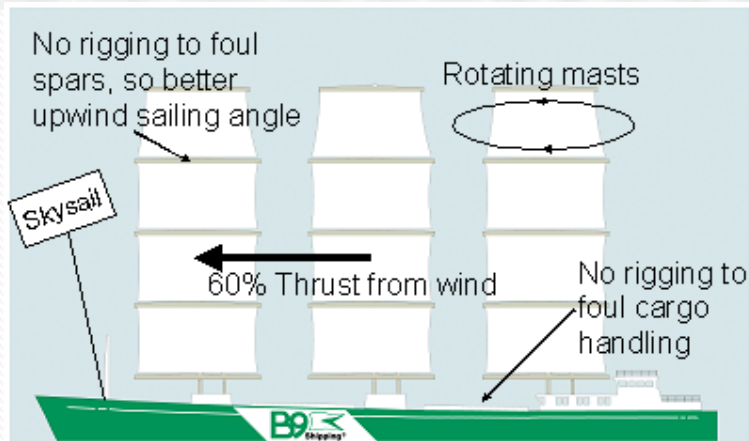


Lines Drawings

Hope



The free standing and free rotating Dyna-rig system, originally designed in the 1960's by Wilhelm Prolls, has been chosen as the sailing rig



B9 shipping Ltd is developing the design of a 3,000 dwt coastal sailing vessel that is fitted with a spark ignition main engine designed to burn bio-methane. About 60% of the thrust will come from soft sails utilising the offshore wind resource (zero carbon emissions) and 40% will come from the engine (carbon neutral).

Products and Services

Hope and Alert will provide coastal shipping services with zero emission/carbon neutral ships. They will be part of a company that will own, or partner with companies that own, warehouses, containers, trailers and Other types of intermodal equipment to serve shippers in ports from Central America and the Caribbean to St. John's NB

Services Offered:

- Fixed-day, sailings to most markets
- Competitive transit times
- Green Logistics Services
- Fair Trade Goods including but not limited to coffee, cocoa, rice, cotton, sugar, rum
- cooperatively made products (from the Caribbean and Central America)
- Pelletized biomass (from Maine, Canada, and the South Eastern US to New York/New Jersey)
- Paper pulp (from Maine and the South Eastern US to NY/NJ for export)
- Electronic scrap (from the Caribbean and Central America to Puerto Rico) for recycling
- Refrigerated cargo shipping for perishables (fair trade bananas and organic and specialty farm products)
- Palletized lumber and steel
- Sale of Carbon Credits



Possible Ports of Call



River Terminal



Newark Bay



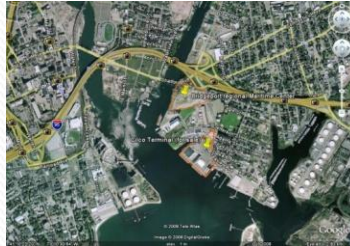
Arthur Kill



Upper Bay



Oceanside



Bridgeport



New Haven



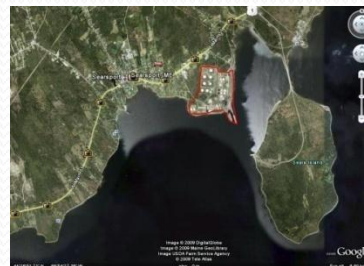
New London



Providence



Portland



Searsport

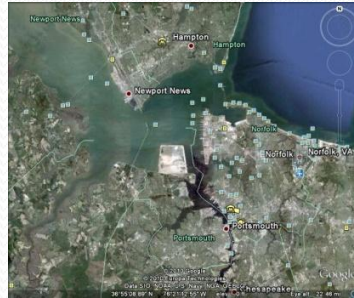


Port of St. John

Additional Ports of Call



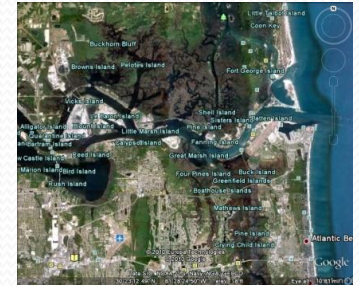
Wilmington, DE



Norfolk/Newport News,
VA



Charleston SC



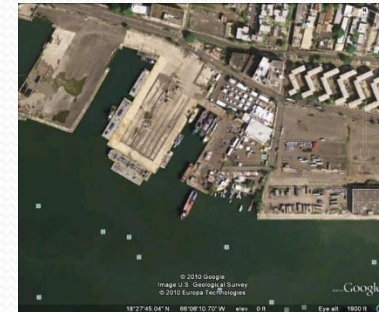
Jacksonville, FL



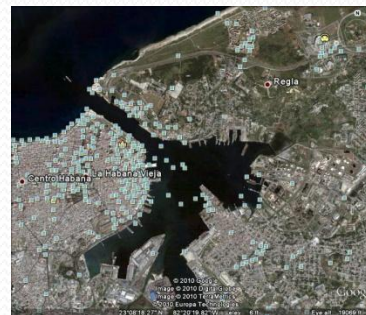
Ft. Lauderdale, FL



Santo Domingo, DR



San Juan, PR



Havana Cuba

But can they compete?

Sea transport is not only the most cost-effective transport method, but is also the least expensive in terms of carbon emissions.

As consumers become increasingly environmentally selective, shipping companies and the ports they serve, are recognizing that they need to optimize their supply chains not only in terms of the traditional levers of cost and service level, but also in terms of carbon emissions.

A recently completed project for a shipper in Asia saw a significant switch from road transport to sea transport. The result was a 9% reduction in supply chain costs and a 28% reduction in carbon emissions

Moving goods along the coast in small ships is a model that has had a renaissance as a result of some EU, US, and Canadian government programs, congested roadways, and at or near capacity railroads. As fuel prices inevitably climb, as carbon trading becomes more available, and as more government and private financing for infrastructure including ports and ship building become available, it is likely that the demand for coastal shipping will increase. With the appropriate strategic partnerships and with terminals, and shipping assets in place – the prototypes, Hope and Alert will be the vanguard of businesses able to take advantage of the changes about to occur in the shipping industry and will emerge as the market leader in providing a zero emission/carbon neutral shipping alternative.

With experienced partners, the support of Port Authorities, adequate preparation and old-fashioned business acumen, it is likely that by 2015 Hope and Alert and their “offspring” will be the leading short sea and coastal shipping operation in the Caribbean, the mid Atlantic, New England, and Maritime Canada. Auxiliary sail cargo vessels will be more than a niche business; they will be a new, seamless way of moving a variety of goods, on time, at a fair price, with a lower environmental footprint than trucks or trains or traditional diesel powered freighters and/or tugs and barges.

Estimated Expenses and Income

Cargo: Wood pellets from Searsport ME to the Port of NY/NJ

3000	DWT vessel
2500	Cargo Tons
400	Nautical Miles
8	Average Speed (knots)
2	Days. One way trip time
1	Day. Loading and unloading (at each port)
110	Hrs. Round trip time
1.5	Round trips per week
20	Storm Days per year
10	Other annual dry dock days per year
10	Other unscheduled down time per year
325	Days at sea per year
68	Round trips per year
85,000	Tons per year



Estimated Expenses

Fixed Costs Vessel Operation:

\$25 million	Cost of B9 Ship prototype (subsequent vessels estimated at \$12 million)
\$ 1.5	Total Annualized Capital cost (7% for 20 years)
\$ -	Crew cost per year
\$ -	Cost of Merchant Marine Cadets
\$ -	Maintenance/repairs (first year) the cost will go up as vessel ages
\$ -	Insurance/legal
\$ -	Misc.
\$ -	Total annual fixed costs
\$ -	Total fixed costs per round trip
\$ -	Total fixed cost per ton

Variable Costs Vessel Operation:

10 gph	Fuel consumption (based on 60% sail power)
\$3.50	Based on biodiesel
110	Sailing hours round trip

Variable Cost Vessel Operation continued:

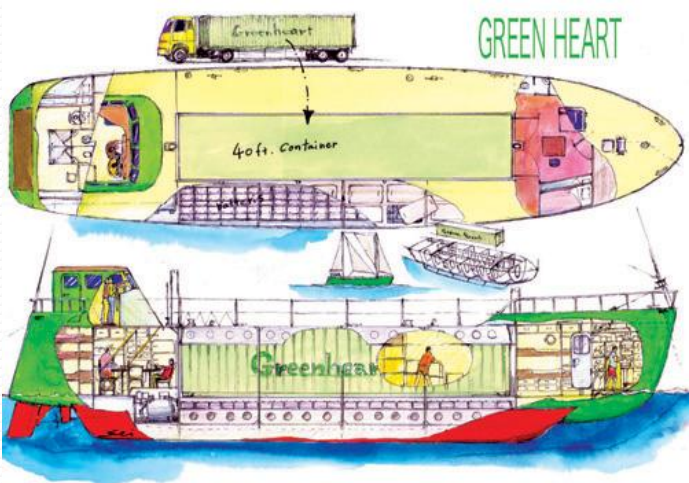
\$3500	Fuel cost round trip
\$4000	Docking and pilots per trip (if needed)

\$44,500	Total Vessel Cost per round trip
\$ 30	Total cost per ton

Landside fees and costs:

-	Drayage
-	Warehousing
-	Stevedoring
-	Office/Management

\$2,500,000 **Total Estimated Expenses per year**





Income:

\$2,800,000	income shipment of wood pellets (based on \$33 per ton by barge from Searsport/Portland to NY/NJ)
\$ 800,000	General cargo from NY/NJ to Portland ME
\$ \$78 – 150,000	from sale of Carbon Credits (based on 16 metric tons/day @ \$15-29 a ton on Chicago Carbon Exchange)
\$(1.3 million)	If cap and trade = to EU in place in US
\$ 150,000	Additional income from charter, education, Merchant Marine Cadets etc.

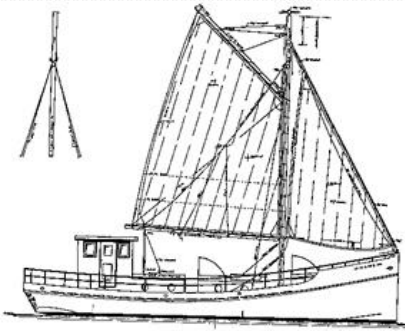
\$3.7 -4.9 million

Estimated Total Annual Income Range

“We are expecting some sort of scheme to emerge from Copenhagen but in the mean time we are also negotiating some private arrangements to sell carbon credits to other shipping companies on a one to one basis through a carbon trading house in London. As a net seller of credits we could earn up to \$1,300 US per sea day which would cover the raw cost of our anticipated biogas consumption. Of more value is the potential introduction of a Marine Renewables Obligation for compliance with the new Renewable Energy Directive. We stand to earn up to \$6,000 US per sea day from trading these certificates. We should be able to extract more value from trading the environmental benefits of the project than by shipping cargo! Strange but true.” David Surplus B9 Shipping 11/15/09

Shorter Sea Shipping

HARVEST



HARVEST proposes to build a seasonal or year-round transient floating farmers and fishermen's market fleet that visits public docks in many New York Harbor waterfront communities selling fresh produce, seafood, and other local products right off the boat.

HARVEST's mission is to support sustainable local agriculture and inspire and facilitate healthy eating, as well as to preserve and share the maritime heritage that was once an essential element of the Hudson Valley, Long Island, and Northern New Jersey



HARVEST



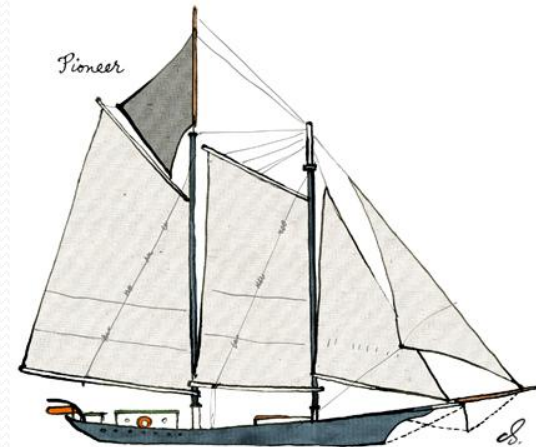
Historically, thousands of vessels plied the waters to and from cities on the Harbor and the farming areas of New Jersey and the Hudson Valley delivering fresh local farm produce, fish and shellfish, and passengers to ports along the way. The Hudson River and the Harbor was once a bustling highway linking even the smallest communities into a web of regularly scheduled routes. Farmers, dairymen, and oystermen relied on this vibrant and diverse fleet of vessels to bring their goods to market and to receive supplies. The schooners, sloops, and steam boats provided a unique way of life for early inhabitants. For those who worked the inland waters of the Northeast, the romance of the sea was a common element in their lives.



Today, the water highways still exist and need to be reinvigorated. Maintaining maritime trade routes is more than just a celebration of tradition. In a post carbon future, sustainable shipping businesses like HARVEST will be a necessity, not a speculative luxury. In the event of a regional disaster water-based community links can serve as vital infrastructure to the NY/NJ Harbor region.

HARVEST

HARVEST will facilitate the delivery of locally grown agricultural products, local seafood, pelletized biomass, and artisan products or all types to and from New York and New Jersey farming and fishing communities.



HARVEST will be a short sea shipping business that delivers local produce and seafood throughout the New York/New Jersey Harbor. HARVEST will be both a 501 C 3 and “for benefit” company based on the FarmBoat concept in Seattle and the Island Market Boat in Maine. The Urban Assembly New York Harbor School, maritime academy students, interns, and volunteers will be part of the crew and will learn about the logistics of coordinating and transporting cargo between local ports and communities.

<http://www.farmboat.org/>

<http://www.maineboats.com/online/harbor-features/market-boat>

Next Steps:

- Set up an L3C corporation to begin to raise capital for the construction and operations of the vessels
- Enter into a licensing agreement with B9 Shipping UK to produce the vessels in the United States.
- Develop written and web based materials, develop a government and public relations plan.
- Prepare materials and present proposal at relevant conferences and meetings.
- Work with the EPA and State Environmental Agencies to “adopt” the zero emission/carbon neutral model as a way of driving compliance with air quality standards.
- Explore the market for carbon offsets and carbon credits available to the maritime shipping industry.
- Secure financing for the construction of the two vessels
- Contract with a naval architect to make sure that the ships comply with US Coast Guard regulations.
- Contract with a green supply chain/logistics consultant or expert from academia to develop a Transport Chain Analysis
- Identify a ship yard(s) to build the vessels and set an aggressive schedule for completion and commissioning of the vessels
- Develop a marketing plan to determine if the services provided for this type of ship on the routes intended will be of interest to Fair Trade goods brokers (coffee, cocoa, sugar, cotton, and goods made in cooperatives in the Caribbean and Central America), biomass (wood pellet) consolidators or manufacturers, large “green minded” retailers like Walmart and UPS
- Develop routes and logistics for the types of cargo most efficiently carried in this type of vessel Meet with and make decisions about a relationship with private and public port operators, 3PL’s, warehousing and drayage companies, and large retailers and shippers
- Work with NOAA weather service to determine best sailing routes during different times of the year
- Explore opportunities to use recycled and “certified” green materials in the construction of the vessel
- Work with Siemens and other suppliers on the technical implications of using hybrid electric power propulsion
- Explore computerized sail handling technology like that used by Windstar Cruises for their vessels.
- Meet with the Port Authorities, state and federal agencies, Port advocates, steamship companies, logistics companies, and other port businesses and agencies to actively participate in and support the building, and deployment of zero emission ships to reinforce their commitment to a cleaner, more compliant Harbors.
- Meet with merchant marine unions
- Identify and work with the business, educational, and environmental partners for the ambassadorial and education mission.
- Begin to develop the sail training and research component with regional maritime academies, the Harbor School NYC), and academic institutions using existing regional sailing vessels i
- Explore partnership opportunities with the U. S. Merchant Marine Academy to implement its alternative power project and a cadet sail training program.

For additional Information:

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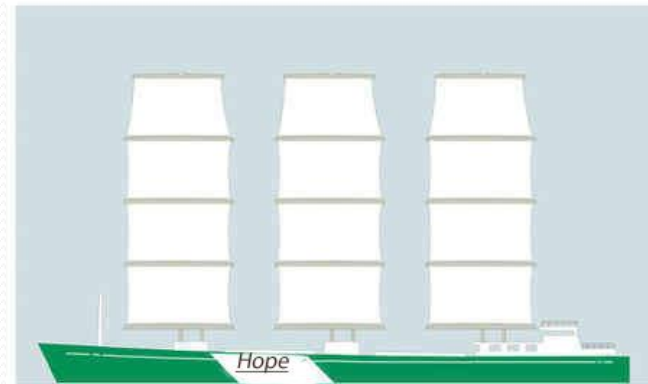
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To see an interesting video of B9 Shipping's plan link to:

<http://www.youtube.com/watch?v=oZJRDJQOqlc>

Additional Links:

Tres Hombres: <http://eco-freight.com/>

Maruta Jaya: <http://emagazine.credit-suisse.com/app/article/index.cfm?fuseaction=OpenArticle&aoid=242852&lang=EN>,

<http://www.transitionrig.com/windships.htm>, <http://www.symaltesefalcon.com/index2.asp>,

<http://www.sueddeutsche.de/auto/grossegler-zurueck-in-die-zukunft-1.584119>,

<http://www.akademik.unsri.ac.id/download/journal/files/waset/v1-2-14-19.pdf>,

<http://www.timesonline.co.uk/tol/news/environment/article4380921.ece>