Scientists and policy makers are calling CLIMATE CHANGE the most important issue of the 21st Century.

The largest contributor to CLIMATE CHANGE is the burning of fossil fuels.

Optimizing the use of ship transport can reduce overall fuel consumption and lower greenhouse gas emissions related to the exchange of freight and commodities. About 30% of the energy used in the U.S. supports transportation needs.

Transportation choices make a difference in both overall fuel consumption and greenhouse gas production.

Waterborne transportation is the most fuel efficient, cost effective, and lowest carbon producing method of moving goods in our global economy.
**TON-MILES PER GALLON** is a useful measure for comparing the efficiency of different modes of transportation. A ton-mile per gallon reflects the amount of fuel required to move one ton of cargo, one mile.

At times, a Laker (one of those Panamax-sized vessels in the Great Lakes, also known as a thousand-footer) can attain nearly 1,000 ton-miles per gallon.

A single ship operating in the Great Lakes can move 2.7 million ton-miles in a single season.

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**For example:**

**One gallon of fuel can move a ton of freight:**
- **631 miles** on a Great Lakes "1,000-footer" ship
- **553 miles** on a railroad car
- **91 miles** on an 18-wheel semi-trailer truck

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**Fuel Efficiency and CO₂ Emissions**

<table>
<thead>
<tr>
<th>Mode</th>
<th>Ton-miles per Gallon¹</th>
<th>Pounds of CO₂ Emitted to Move 1,000 Tons of Bulk Cargo 1,000 Miles¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck</td>
<td>91</td>
<td>242</td>
</tr>
<tr>
<td>Rail</td>
<td>553</td>
<td>46</td>
</tr>
<tr>
<td>GL Carrier</td>
<td>631</td>
<td>38</td>
</tr>
</tbody>
</table>


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**Global Potential**

“Transport by inland waterway is a greatly underused option...it has big advantages: it is kind to the environment, very safe, economical on non-renewable energy resources and helps relieve the pressure on the overcrowded road networks...” - *European Transport Policy for 2010*

**By choosing to transport more cargo by ship, nations can reduce their total greenhouse gas emissions and levels of air pollution.**