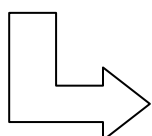
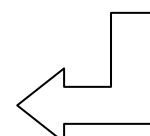


**Our patented naval propulsion system is a combination of time-tested technologies that require no experimentation to prove its reliability environmental efficiency:**

<b>Sea Side</b>	<b>Land Side</b>
Steam-Electric propulsion, utilizing solid fuel with for steam production and steam to produce the needed electrical energy required by the ship.	Waste-to-energy technology for the combustion of refuse derived fuel (RDF) in a specialized boiler, with superheated steam production to feed a steam turbine generator and eventual electricity production.



By replacing coal (or other fossil fuels) with RDF one can produce the steam and electricity required by the ship. In terms of Lower Heating Value, RDF has a value approximately two-thirds that of coal, but come with a tipping fee, not a cost.



International engineering practice dictates that when utilizing RDF as a fuel, the use of a specialized flue gas treatment system, a ash recovery system, precautions in the combustion phase to limit or eliminate the production of dioxins, etc.

To meet these requirements, the boiler and flue gas cleaning system can become quite capital intensive, however since RDF comes free of charge or with a tipping fee, it is economically feasible, whereas on fossil fuels it means a significant increase in capital and operating costs with no economic return.

Applying the best available technology for the flue gas cleaning and RDF combustion, allows our patented system to offer a sensible reduction in air emissions when compared to standard maritime fuel (IFO 380). The two most notable emissions from fossil fuelled ships are NO<sub>x</sub> e SO<sub>x</sub> which are reduced by 98% using the WEST system.

In addition to the reduced air emissions from the maritime side, there are other significant environmental advantages:

- Reduction in the amount of waste disposed of in landfills;
- The subsequent reduction in the methane produce by said landfill from the spontaneous fermentation that occurs naturally in landfills. Methane emissions have a negative impact on the greenhouse effect 21 times greater that CO<sub>2</sub>.

The following table provides a comparison between the air emissions of a RDF fuelled ship and a IFO 380 fuelled ship.

<b>POLLUTANTS</b>	<b>Emissions from Bunker Oil (kg/26h)</b>	<b>Emissions from RDF<sup>1</sup> limits of law (kg/26h)</b>	<b>Emissions from RDF<sup>2</sup> max actually measured (kg/26h)</b>	<b>Reduction (%)</b>
CO <sub>2</sub>	134.112	n.c.	127.976 <sup>3</sup>	-4,6%
CO	69	59	29	-58,3%
NO <sub>x</sub>	1.992	234	159	-92,0%
SO <sub>2</sub>	2.340	59	6	-99,8%
COT	n.c.	12	5,7	n.c.
PTS	160	12	1,0	-99,3%

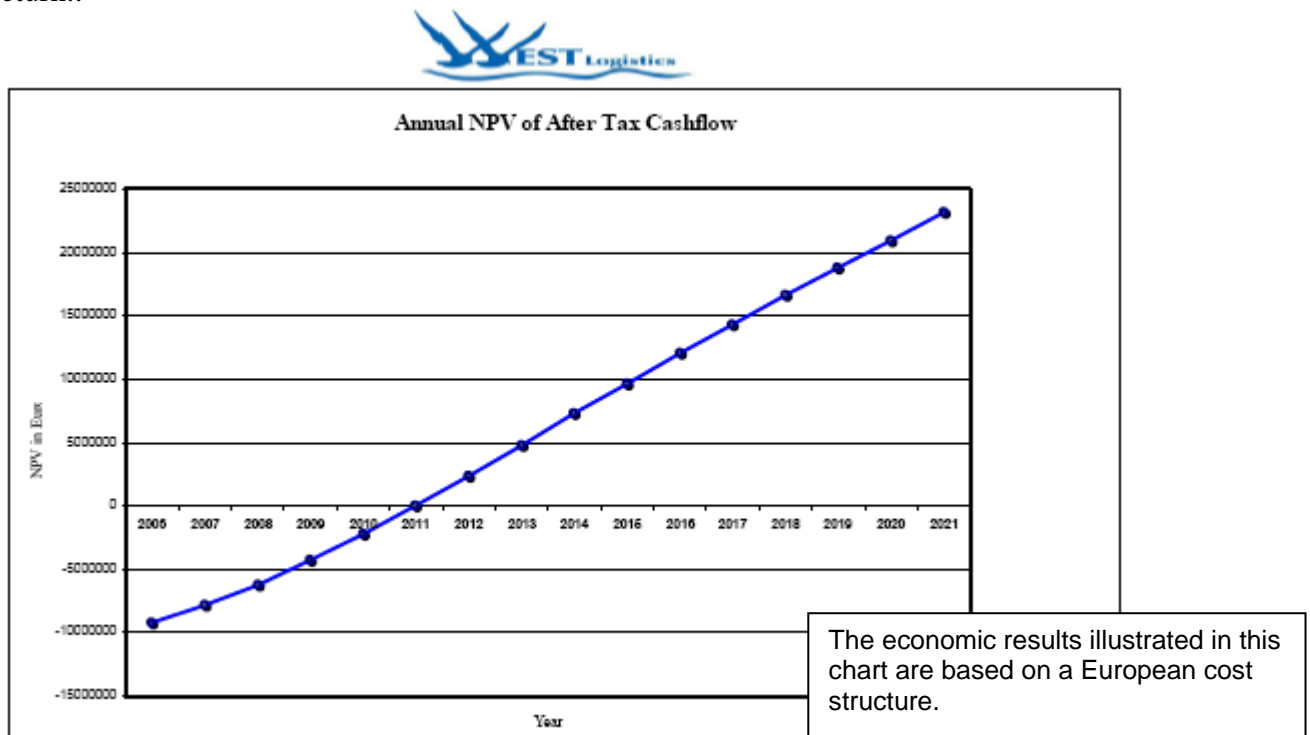
<sup>1</sup> Values calculates based on the limits of law with the exception of CO<sub>2</sub>

<sup>2</sup> Values calculated based upon the max. actual emissions from the Bologna WTE facility.

<sup>3</sup> Values take into consideration a reduction of by 50% as half of the carbon s derived from a renewable source, but not the saving of not land filling the wastes.

The last advantage goes directly to the bottom line for the fleet owner-operator, that being the reduction of the fuel costs to zero and the potential of an additional revenue stream from the tipping fees offered with the RDF.

To provide an idea of the potential revenue from the tipping fees, on an international level in western Europe, RDF is produced and disposed of in landfills at an average cost of 100 €/ton, while waste-to-energy facilities accept the same RDF for only 50€/ton, providing incentive to the waste treatment sector to ensure its supply. Waste-to-energy facilities have been in service for more than 25-years and never has the RDF become a commodity, as the amount of waste produced is always and will always be in the foreseeable future, more than the demand for RDF. This explains why the economic invest required to implement the WEST system has such a rapid return.:



The fleet owner-operator eliminates its fuel costs and adds an additional revenue stream without impacting its existing business.

Considering that:

1. Steam propulsion systems are widely used and have a successful track record;
2. Waste-to-energy facilities that burn RDF exist worldwide and are the accepted technology for recovering non-recyclable wastes;
3. The performance and navigational endurance is guaranteed.

No prototype or experimental phase is required, as we offer the implementation of time tested technologies, whose feasibility to apply to the ships on the river trade has been.

The required modifications can easily be carried out by local shipyards, which are extremely well qualified with such work.

See our website [www.westlogistics.com](http://www.westlogistics.com) and in particular the reserved link where the most recent studies are posted, [www.westlogistics.com/docinfo.asp](http://www.westlogistics.com/docinfo.asp).