



TRA Visions 2014

Project Abstract Template – This template is to be used for submitting an abstract explaining what your idea is all about. It should be no more than a few paragraphs and should be submitted by the 30th of November 2013.

Idea Number: Team code: 3wliu3eW

PILLAR / TRANSPORT MODE	
ROAD ☐	RAIL ☐ MARINE ☒ CROSS MODAL ☐
Project Related to:	☒ RA1: Environment and Energy ☐ RA2: Industry Competitiveness ☐ RA3: Logistics and Mobility Systems and Services ☐ RA4: Safety and Security ☐ RA5: Transport Infrastructures ☐ RA6: Transp. Policy Res./Socio-econ./Human sci. ☐ RA7: Vehicles & Vessels Technologies

Project Abstract:

Floating Power Generation Plant (FPGP):

The FPGP is an installation that will load Liquid Natural Gas (LNG) from shuttle tankers, vaporize it, and use the fuel to generate electric power. This electricity will then be transmitted ashore to land based establishments. The installation will have the capability of moving around as required from one terminal to another as the supply and demand chains fluctuate. This concept eliminates the requirement for shore based LNG storage tanks, re-gasification equipment and power generation machinery, hence allowing the consumer to make savings in construction time and costs. The FPGP will act as an emergency source of power to countries that require a clean and immediate form of energy.

The use of LNG in the maritime sector is increasingly rapidly, with ship owners employing the use of this alternative fuel as a means of complying with the imminent emissions and environmental legislation. LNG is a cheaper and cleaner fuel which helps to reduce a number of emissions, including sulphur and nitrous oxides, as well as carbon dioxide and fine particles. These benefits have caused a surge in the LNG market and this design project aims to exploit such developments through the use of the FPGP.

This installation therefore provides a solution that meets the current needs of the market. It will be used as a form of emergency relief, in cases of onshore accidents that have caused a shortage of electric power, as was the case in the Fukushima nuclear power station disaster in 2011. The team aims to build upon the progress already made in the re-gasification sector of shipping and develop it even further through the design of a FPGP. This is an innovative concept and one which can contribute not only to the maritime sector, but to the energy industry as a whole.

