

The SEA TERMINALS project designs a dynamic real-time lighting system for port terminals

- The pilot, which was developed by engineering company *Ingeniería de Aplicaciones Energéticas SLU*, will be tested at the Noatum Container Terminal Valencia from September to November
- Estimated energy savings forecasted for this period is 8 times the current consumption levels at Noatum Container Terminal Valencia

30 July 2015.- In the European SEA TERMINALS project, spearheaded by the Valenciaport Foundation and with the participation of the Port Authority of Valencia, Noatum and *Ingeniería de Aplicaciones Energéticas SLU* (EDAE), the latter developed a Dynamic Lighting System that allows container port terminals to better manage and reduce energy consumption of lighting in an intelligent and efficient way. The system, which will be tested at the Noatum Container Terminal Valencia from September to November, will mean savings of up to 8 times the current energy consumption at the terminal for the estimated period.

The **Dynamic Lighting System**, includes LED luminaires and a software that manages the lighting needs and can reduce the lighting levels by a third as long as there are no operational activities going on in the areas overseen by the lighting towers. In addition, the system automatically adapts the lighting conditions during the hours of daybreak and dusk so that there are no abrupt changes to the lighting levels at the container port terminal.

The objectives of this prototype are, on the one hand, to improve the management and reduce energy consumption for lighting at the terminal, (with a subsequent fall in associated greenhouse gas emissions). Furthermore, the system is expected to operate remotely and in real time, adapting the lighting needs using a user-friendly interface that facilitates decision making by terminal staff.

The pilot project is expected to improve the efficiency and the quality of lighting conditions during night-time operations at the port container terminal, minimizing energy consumption. This is made possible by reducing the levels of lighting to adapt them to the operations in question and natural lighting, using operational and service alarms to ensure the real-time functioning of each individual luminaire.

The prototype will be connected to the groundbreaking **Operational Management System**, developed by Noatum, *Amplía Soluciones* and the Valenciaport Foundation, also within the framework of the SEAMS Platform project.



SEAterminals



Co-financed by the European Union
Trans-European Transport Network (TEN-T)

The **SEAMS Platform** prototype will comprehensively monitor the Noatum terminal in Valencia generating real-time key performance indicators (KPIs). This facilitates better operational planning while also improving energy efficiency by reducing fuel and energy consumption as a result of identifying operational bottlenecks. Furthermore, the reductions in greenhouse gas emissions can be quantified depending on whether the equipment is operating in normal operating mode or in ECO mode (limited speed and power).

At the end of November, a public demonstration is scheduled at the Noatum Container Terminal Valencia as well as a presentation of the results of the six pilot tests that were carried out at the terminal (in addition to the Dynamic Illumination System mentioned earlier and the real-time Operational Management System (SEAMS Platform). Noatum will present to the international port industry the three machine prototypes: a **100% electric terminal tractor**, developed by Terberg; a **Reach Stacker and a forklift for empty containers**, both equipped with fuel saving and CO2 emission reduction systems, developed by Hyster; and a new **hybrid generator for RTG cranes** based on super-capacitor storage technology. At the event, attendees will be able to see these eco-efficient systems for themselves in a real-world environment.

SEA TERMINALS Project

The aim of this particular project, which is financed by the European Commission's Ten-T Programme, is to fast-track the transition of the port industry towards more efficient operational models, incorporating the energy variable as a key improvement factor in Port Container Terminals (PCTs).

The guiding principles behind the SEA TERMINALS project come from the lessons learned in the GREENCRANES project, the results of which showed that the efficient management of energy consumption and the use of alternative fuels is viable and generates major benefits at all levels of the PCTs.

The SEA TERMINALS project partners are the Valenciaport Foundation (coordinator), the Port Authority of Valencia; Noatum; *Amplía Soluciones, S.L.*; *Ingeniería de Aplicaciones Energéticas SLU*, (EADAE); Technological Institute of Energy – ITE; NACCO Materials Handling BV; Terberg Benschop B.V.; Italian Ministry of Transport - MIT and Baltic Ports Organization. Also participating in the project as MIT collaborating partners are: the Port Authority of Livorno, Global Service, *Scuola Superiore Sant'Anna* (PERCRO) and OLT Offshore LNG Toscana S.p.A.

For further details:

Marina Sáez Prado – Valenciaport Foundation

Tel. +34 963 939 400

msaez@fundacion.valenciaport.com

