

IST – LNEC Joint doctoral Initiative**Dissertation Proposal**

TITLE: Modelling a wastewater treatment plant into a water, energy and nutrients factory

Short Description

With wastewater being increasingly recognised as a valued source of renewable resources, wastewater treatment facilities are being urged to be viewed as Renewable Resource Recovery Facilities that produce clean water, recover energy and generate nutrients.

Using a Portuguese Wastewater Treatment Plant (WWTP) as case-study, dynamic modelling, e.g. by GPS-X, of the existing and potential processes and unit operations will be implemented, simulated and optimised as to drive the WWTP into a water, energy and nutrients factory.

Keywords: wastewater treatment, dynamic modelling, resource recovery, water reuse, energy recovery, nutrients recovery

Supervisors

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Planned start date: January 2017	Doctoral Program: Civil Engineering, IST
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