

Exploring demand-side flexibilities from wastewater treatment facilities in an integrated energy system

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MSP1: Integrated, Electricity, Gas and Water Modelling

ESIPP Research Symposium 2018

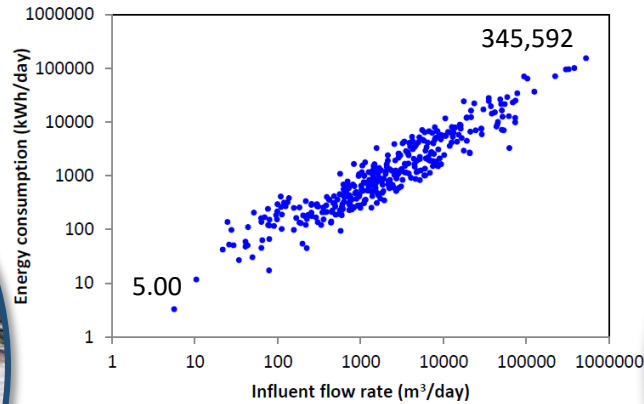
25th of October, 2018



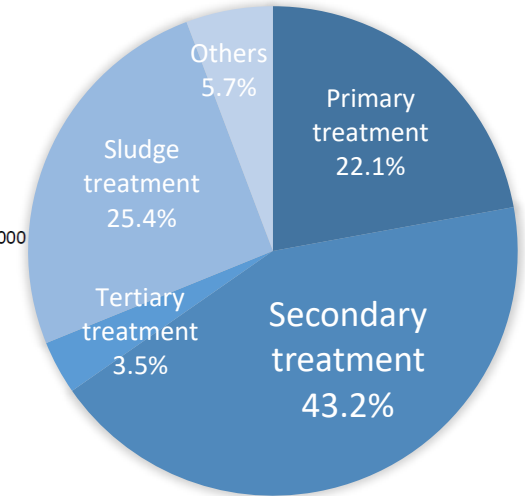
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Motivation and research question



449
Wastewater treatment plants (WWTP) in Ireland with at least secondary treatment



What is the demand response potential for the power system?



Energy system

WWTP operators

Environment

Source: ENERWATER (2015)

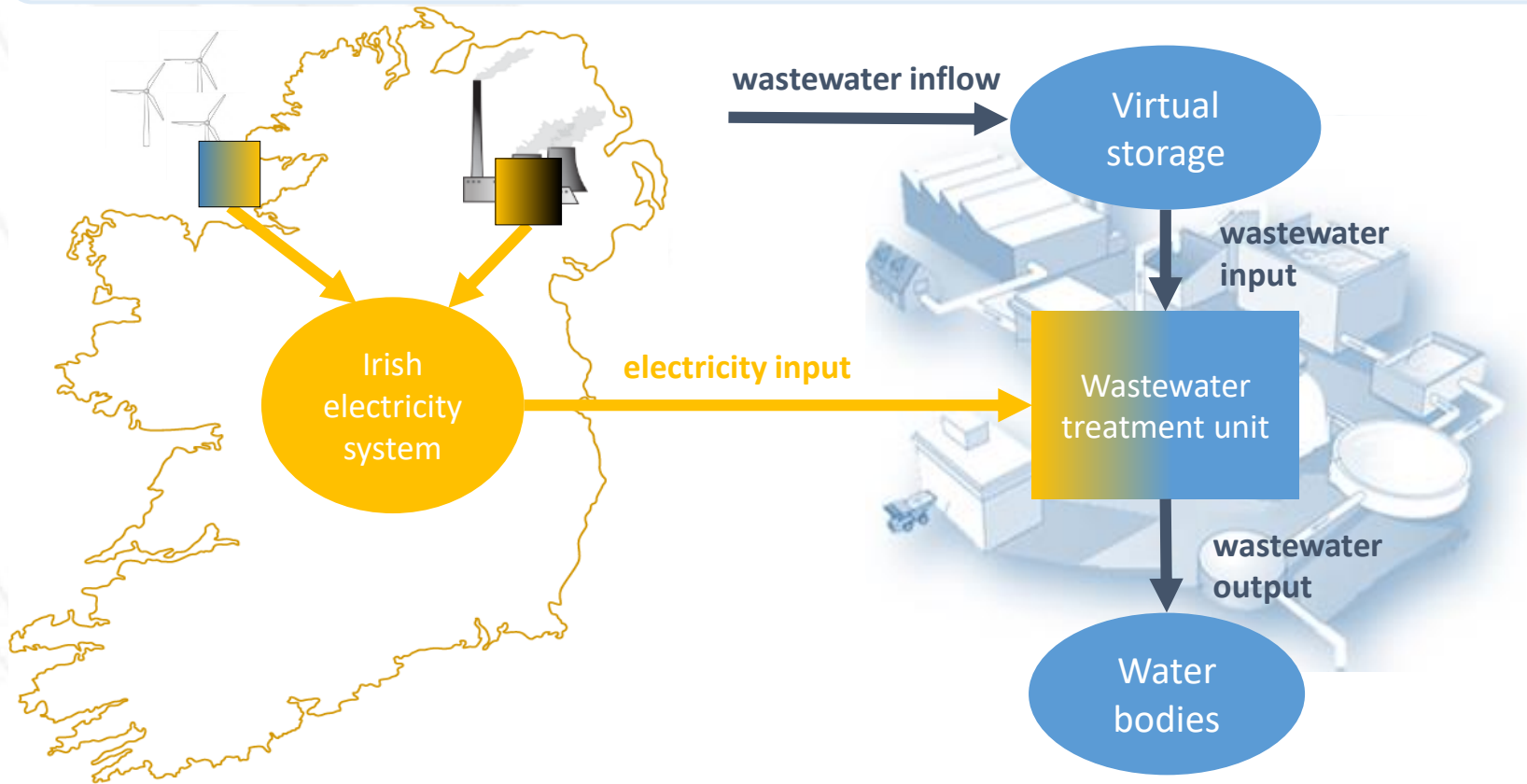
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Energy systems approach

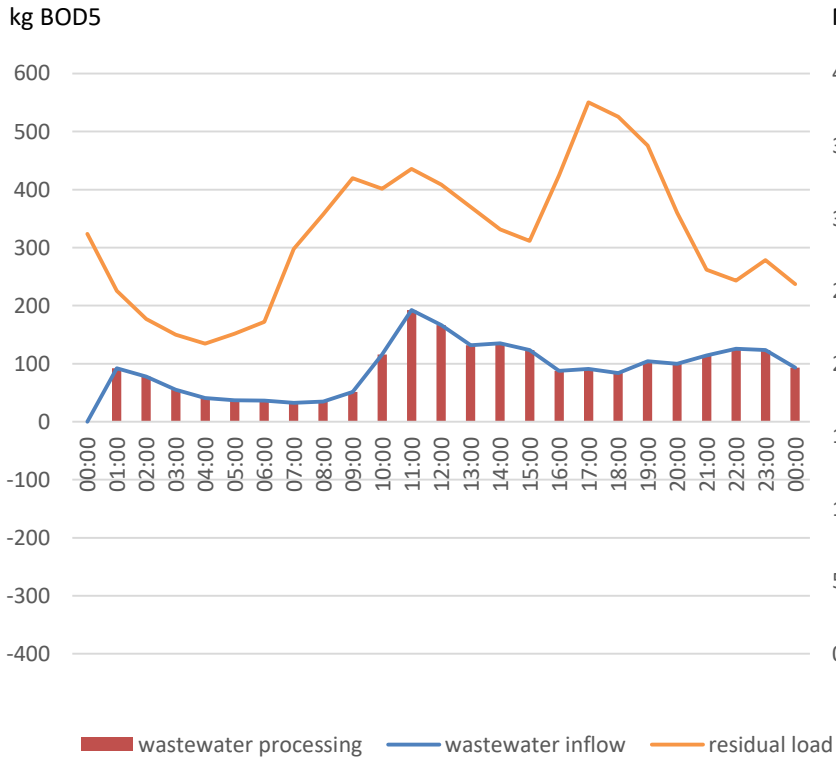
Modelling in Backbone

Data-driven energy systems model

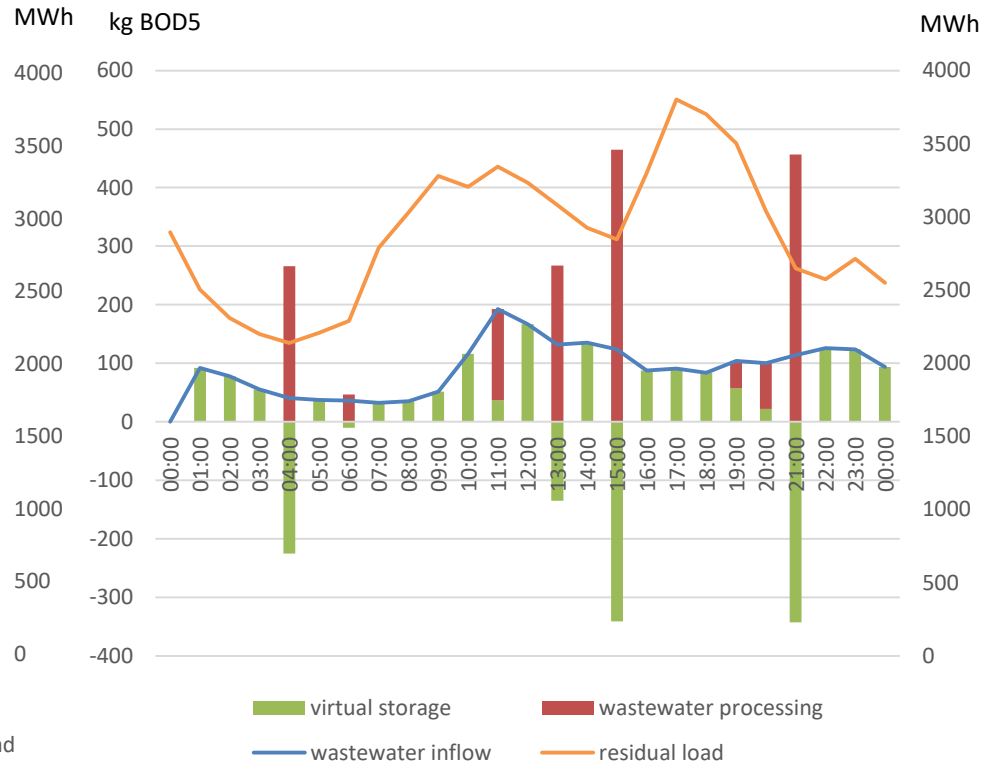


Results

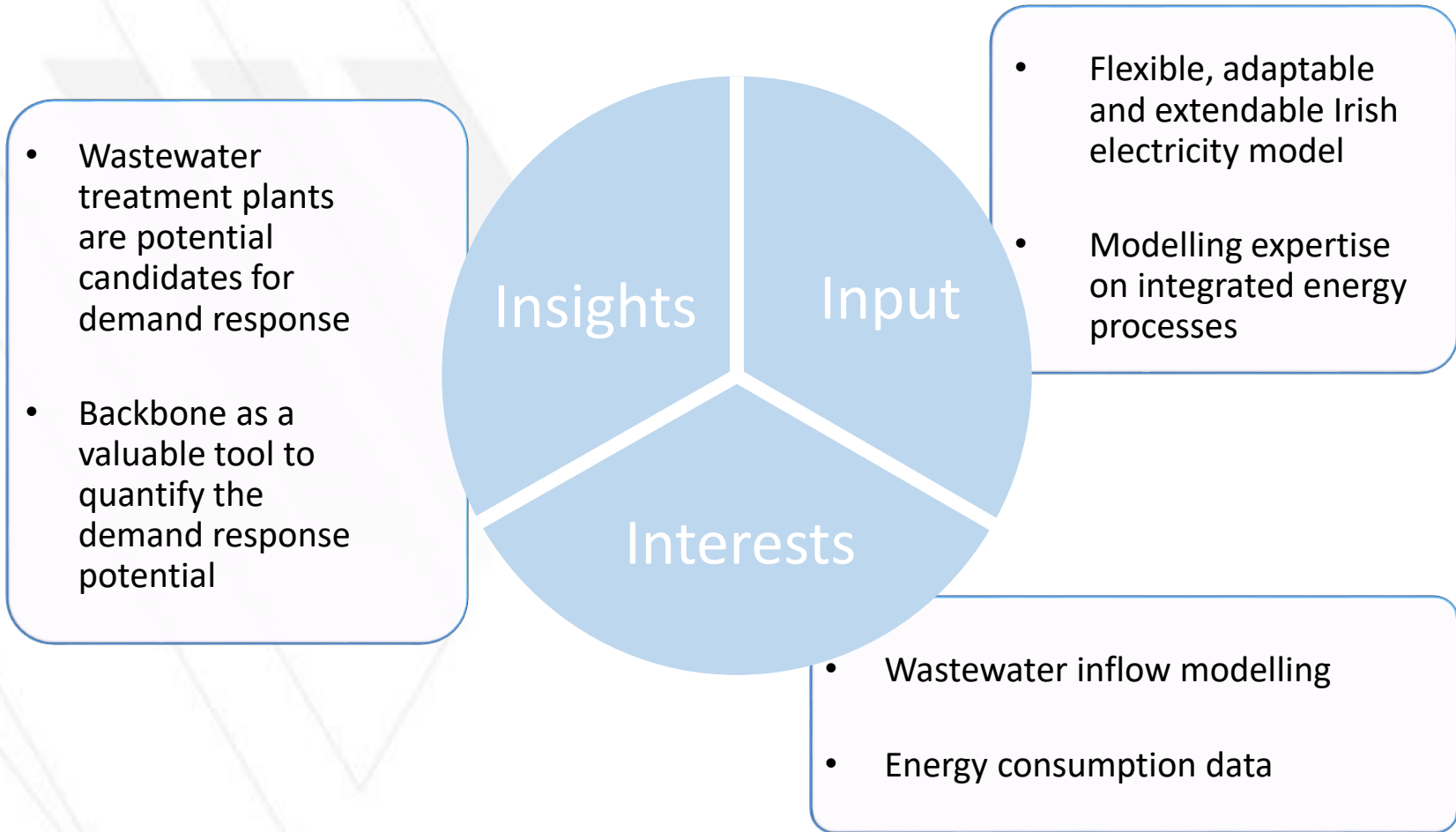
WWTP without virtual storage



WWTP with virtual storage



Contribution



Thank you very much!

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