

Interactive comment on “Coupling urban drainage–wastewater systems and electric smart grids during dry periods: a gain/loss framework using the relative economic value with ensemble flow forecasts to predict the switch” by Vianney Courdent et al.

Anonymous Referee #3

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This is an interesting and useful paper investigating how the decision to switch the operational goal of a combined sewer system from flow objectives to energy/cost objectives based on rainfall forecasts should be made.

I can find little to fault the paper. My main query would be that I could find no details or reference as to how the system is operated during the 'optimised' phase apart from relatively vague statements. While the paper is interesting without this, it does limit the understanding / reproducibility. I can see that the omission of this may be due to

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commercial reasons given the authors' affiliations, but it would be useful to explicitly state this.

It would also be useful to understand more details of the calibration of the hydrological model even if just a few short sentences.

While clearly outside the scope of this paper, it would be of great interest to see any results from a real world implementation of the proposed framework should it be implemented!

There are a number of minor corrections needing attention as listed below:

Page (P) 1, Line (L) 10: Last word should be 'forecasts'.

P1 L25: 'forecasted' should be 'forecast'.

P5, L8-9: I think 'Then the used of postprocessing neighbourhood methods is presented ...' would read better as 'Then the postprocessing neighbourhood methods are presented ...'

P6, L15: I think there should be a comma after 'operational efficiency'.

P9, L21: 'miss predicted' should be 'mis-predicted'.

P9, L31: shouldn't have a new line after 'Based on'.

P11, L32: should read '...forecast performs worse than the...'.

P12, L28: 'worsing' should be 'worsening'?

P20 Figure 3 caption: the 2 in km² should be super-script.

P20 Figure 4: the 3 in m³/h should be super-script if possible.

P22 Figure 7 a and b: legend entry 'Aerial' should be 'Areal'.

P22 Figure 7 caption: 'treat' should be 'threat'.

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Finally a very minor point, but the authors switch between the US-English spelling 'optimize' and the UK-English 'optimise' which should be easy make consistent.

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