

## ***Interactive comment on “A simple methodology to detect and quantify wind power ramps” by Bedassa R. Cheneka et al.***

### **Anonymous Referee #2**

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This manuscript presents a simple methodology for detecting wind power ramps using a wavelet transform. The narrative is written in a concise manner, with a proper literature review and a fair discussion of other ramp detection methods. There are, however, issues regarding how ramps are defined and whether the training data is sufficient to justify the conclusions reached. The manuscript suffers from a lack of further (or deeper) analysis into ramps of more interest—those of shorter duration.

More specifically, the following issues should be addressed prior to acceptance for publication:

1. The authors use terms such as "rapid", "significant", "relatively short time", "short-duration", and "longer duration" without quantifying what these terms mean in providing context for their ambiguous use of the term "ramp."

2. It is unclear what definition, if any, the Belgian transmission system operator uses to identify a ramp event.

3. Are the 10-day training periods sufficient? Are these periods representative of ramp event distributions and the weather responsible for ramps in this part of the world? It is somewhat unclear what is meant by "one calendar year of values"—I assume these were the data used to generate the distributions in Figure 7.

4. I am not sure what the value of the longer-duration ramp events (median value 8.5 hours) would be for a generation facility of this size. Of greater interest to most utilities are ramp events that occur on truly short time scales, such as those analyzed in the cited papers (e.g. a 20% or more change in output over a period of an hour). There certainly appears to be a high frequency of these events as illustrated in Figure 7, but little discussion. How predictable would these be with this method? Would there be false alarms?

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Discussion paper

