I agree with the comments of the first reviewer.

The subject of this paper is relevant and the simplification of the wind farm flow model is essential for control purposes.

Nevertheless the presentation of this development is confusing and misses several crucial points and details that are necessary to understand it.

In particular the description of the flow model and the Kalman filter design need to be deeply revised.

1) Fig 1) is supposed to show the combination of “multiple sub-models” but only two modules appear. Pset, Pout and uinl are not defined.
2) How eq. (4) is obtained from eq (3)?
3) As I understand from eq. (4), the state of the model is the union of the delays and the equilibrium points, the input is the power and the output is the present wind speed at rotor.
    a. The equilibrium (or linearization) points should be constant, so they cannot be a part of state (actually, they should be a set of values of all the state components)
    b. The power seems to be mostly an output, so why it is defined as an input?
    c. “u” denotes at same time: the wind speed, the model output in eqs (5) and (7), and the model input in (6).
    d. In the eq. (6) and (7) is u(n) the same variable? If yes, I don’t understand the link between eqs (4) and (6).
4) The structure of the Kalman Filter is a little bit weird. As the starting system is non-linear and it is linearized (with a frequency that is not indicated) around the operating point, it seems to be an Extend Kalman Filter (in that case the equilibrium point can be dynamic, see point 3a). Nevertheless, the EKF use a the non-linear model for the prediction, when here the linear model is used, which is typical of Kalman (non-extend) Filter.
5) Ymeas, the measurement used for the Kalman filter, should be the model output (so wind speed at rotor). So why Cu is not equal to Cmeas?
6) In eq. (10) y should be yhat and x should be xhat.