Response to reviewer and editor for WES-2023-56

The wind farm pressure field

(October 22, 2023)

The new comments mention five points. Responses are below.

1. No Plot

I understand your suggestion about the plot from Table 1, but I had thought about this choice before I submitted the paper and had good reasons for not doing that. First there are five dependent variables in the Table; four that vary weakly (max deficit, Gamma, delta P and dipole strength (A)) and one (max displacement) that varies by many orders of magnitude. The first four would each require their own plot scale. The max displacement variable follows a simple power law line that shows nicely on a log-log plot but is also neatly summarized by one sentence in the paper (line 118-119). This sentence is much more compact that a plot.   The advantage of the Table is that it provides precise model-derived values (to three significant figures) that other researchers can use to check my work. Plots cannot be read that precisely.

2. Industrial RL models (Line 256)

I was happy to follow the reviewer's suggestion to add the Industrial RL paragraph, but I am certainly not promoting such models. If the reader has mis-interpreted my intent, it may be due my poor wording in Line 256. I have rewritten this sentence to make it clearer.

3. Blocking vs Blockage (line 44)

OK. I added a comment about this terminology in Line 44.

4. Wake recovery (line 22)

I added the word "farm" in line 22. I went back to the generic term "modify", even though the pressure effect is mostly to slow the wake recovery.

5. Wrong figure number (line 152-153)

I fixed the wrong figure number in line 152-153. Thanks for catching that.