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June 15, 2017

Mr. Mark H. Rees
Town Administrator
Town of Fairhaven
40 Center Street
Fairhaven, MA 02719

Dear Mr. Rees:

On Monday we received your letter of June 7th regarding the extended downtime for the North wind turbine. I can assure you that we are as (or likely more) frustrated with the response time and the reoccurrence of the issue that caused the original converter failure. The following reviews what has occurred and provides the very latest update regarding the anticipated restart of the North turbine.

As you know, there was a contained fire in the converter of the North turbine on April 6th. This occurred after several days of troubleshooting the causes for blown fuses, which led to replacing two contactors in the converter. When the technicians restarted the North turbine after the repair work, a fire occurred severely damaging the converter. Fortunately, since repairs were being conducted, the technicians were on site observing the restart and the fire was quickly contained.

While the project has spare converters in inventory, those had been switched out by the previous operator so there was uncertainty about the status of the converters and they could not be tested in the field to confirm reliability.

The converters are manufactured by AMSC. We already had our previous operator send one to AMSC's repair shop in Wisconsin for review and repair if needed. After the incident in the North turbine, we immediately contacted AMSC regarding the status of that converter and learned that our former operator had not followed up with paperwork with AMSC so AMSC had not investigated any issues with the converter at the repair shop. Of course, the investigation and repair were immediately authorized and we also reminded AMSC that last year we had upgraded the converters in all of the turbines with new hardware and software, so that any repairs needed to incorporate those items. When we previously performed the upgrade, it took 4.5 months for AMSC to provide the hardware from the time of the purchase order until it was shipped so we were concerned about substantial delays.

Upon examination by AMSC, it was determined that the converter in Wisconsin needed the upgraded hardware as well as another component. All of this had to be built and shipped from Romania. (We've had some serious discussions with AMSC about their lack of spare parts at their repair shop in Wisconsin.) Parts were shipped late in the week of April 24 but did not

arrive in Wisconsin until May 8th due to being stuck in customs. AMSC completed its repairs and testing and shipped the converter to Boston on Friday, May 12th and it arrived the following Monday.

That week was spent installing the converter and it was expected to be ready to go on line by the end of the week. On May 17, our office alerted Pat Fowle, Fairhaven Board of Health, of the planned restart and Sumul Shah wrote to Bob Espindola (cc to you) regarding the expected restart. Unfortunately, during the restart on May 19th, the converter again experienced an electrical surge, damaging the converter and meaning that the North turbine could not operate.

Needless to say, we started the whole process over again with increased urgency expressed to AMSC which agreed to send likely parts to its Wisconsin repair shop even before one of our other spare converters arrived for inspection. (Given this problem and the lead time for repairs, we have sent two spare converters to AMSC for review and the MWRA which also has a Sinovel wind turbine decided to send its spare converter to AMSC for review and upgrade.)

On Monday, AMSC informed us that our first converter would be ready to be shipped back from Wisconsin to Boston this coming Friday and our plan was to reinstall the converter commencing Monday. Unfortunately, within the last two hours, while AMSC confirmed it has the parts, AMSC has also pushed back the shipping date until next Tuesday, June 20th. The converter is now scheduled to be sent overnight to Boston to arrive on Wednesday and our operator will immediately commence the reinstall which we anticipate will take a couple of days.

To prevent another issue on restart, our operator has been reviewing the situation with AMSC, including all appropriate switch settings, and expects to be in contact with AMSC during the reinstall and restart process.

I hope this addresses your inquiry, the steps we have taken to be responsive regarding the repair (including pushing AMSC to be more responsive) and the anticipated restart of the North turbine. We are hoping to report a successful restart late next week or early the following week and will certainly plan to let you know one way or the other.

Please let us know if you have any additional questions.

Sincerely,
Fairhaven Wind LLC
by its manager,
Palmer Management Corporation



Gordon L. Deane
President

