



Cricket Valley | Start-Up and Air Quality

Cricket Valley Energy Center (CVEC), a fully permitted power plant in Dover, NY, has completed a robust and in-depth permitting process that ensures a high standard of safety and service for the people of Dover and the surrounding communities. As construction of the 1,100-megawatt power plant nears completion, preparations are now underway to transition the site into operations on or before the guaranteed completion dates in early 2020. To ensure residents are informed about the start-up process for the plant, CVEC developed this question and answer sheet to describe the process and what to expect.

The start-up process at CVEC is similar to that which is conducted at other combined cycle natural gas power plants and is conducted under the standards and oversight of the US Environmental Protection Agency (EPA) and the NYS Department of Environmental Conservation (DEC).

Q. What happens during the start-up process?

A: While the plant is much bigger than a home furnace, the start-up process is very similar. At CVEC, there are three units, each of which will go through an identical, independent, start-up process. The initial start-up, also referred to as First Fire, occurs at very low load and helps remove any water or dust collected in the system during construction. A water vapor plume will be noticeable for the first hour or two as the water is heated, turned to steam and exhausted through the stack. The plume will be dark for the first few minutes as the unit starts for the very

first time. It will then turn white, similar to the color of a cumulus cloud, as the water in the system turns to water vapor. During startup or normal operation in cold weather, a similar white exhaust plume will be visible due to the steam vapor condensing. Following First Fire, the turbine load will be increased to produce adequate steam flow to clean the steam piping, also referred to as Steam Blows. The Steam Blows at CVEC will occur in a closed system and nothing will be exhausted into the atmosphere.

Steam Blows will occur for a four- or five-day period to ensure the system is ready for operation. CVEC will then take the unit offline for up to 10 days to install the remaining components that control emissions and will then bring the unit back online permanently.

The start-up of the three units will be conducted separately, with about one month between each.

Q. Why are some components that control emissions installed later in the process?

A: To avoid damaging the catalyst, a component used to further reduce emissions, the manufacturer requires the catalyst to be installed following Steam Blows. Even at First Fire, before the catalyst is installed, emissions will be at very low levels, due to the plant construction using the Best Available Control Technologies (BACT) and a Lowest Achievable Emissions Rate (LAER). The catalyst will be active immediately after the steam blows.

Q. How will air quality be preserved?

A: There is a detailed structure in place to ensure CVEC does not exceed EPA standards to protect human health and the environment, including a continuous emissions monitoring system (CEMS),

which is part of the CVEC facility design. Each of the three stacks is equipped with sensors that collect real time emissions information that is reported to the EPA and DEC on a quarterly basis. The CEMS equipment is provisionally certified by a third party, and after the DEC review and approval process, the CEMS is fully certified. Certification of the CEMS is the DEC's acknowledgment that the equipment is reading accurate emissions information.

Even during the start-up process, when some levels will be slightly higher than during normal operations, emission levels will remain within federal Ambient Air Quality Standards (AAQS) and will be measured by the CEMS to ensure compliance.

In addition, DEC plans to be on site to witness start-up and emissions testing.

For more information:

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