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Date: January 12, 2026

Subject: Request for Status Decision from Starwood Digital Ventures
DNREC Notice No. CCE20250425

Because of its size, its unprecedented need for electric power, its potential to pollute water and air, and its potential to create levels of noise that would have deleterious effects on both humans and native wildlife in surrounding areas, the proposed Starwood Data Center in New Castle cannot reasonably be classed as Light Industry. It needs to be rezoned as Heavy Industry (HI) and thus would be a prohibited use in the Coastal Zone since there is not an existing HI facility on the parcels proposed for development. Barring that, it must undergo a thorough review to determine if it is an appropriate candidate for a permit under the CZA.

THE APPLICATION

In its permit application, Starwood has claimed (and the Land Use Department apparently agrees) that, because data centers previously built in the Coastal Zone (presumably the DaSTOR, LLC facilities in Wilmington and New Castle) were classed as Light Industry, their proposed center must also be designated Light Industry. The Starwood data center differs from these existing centers in so many ways that they cannot reasonably be placed under the same classification.

There are a few details in the application that need to be addressed.

Noise Levels The level of 70 dB(A) is consistent with that expected from one diesel generator of the size used here. Each time the number of generators is doubled, the perceived noise will be increased by 3 dB(A). If generators under testing and maintenance in groups of four, the perceived noise level will be 76 dB(A).. During an emergency at the fully built facility, when there are 400 3KW generators running, the noise level will be close to 97 dB(A) (Sound levels for dB(A) decrease by 6 each time the distance is doubled.)

A major source of noise at many data centers is noise from fans used in the cooling system(s). Without knowing the details of the proposed cooling system, we don't know if it is a relevant issue.

Contamination of Water During Use It is known that electronic components used in data centers are likely to contain PFAS. In many cooling systems, PFAS, including relatively new compounds, are being added to the coolant. Without knowing the details of the proposed cooling system, we cannot comment further on this issue.

Leakage of Contaminated Water The applicants say they are considering the use of circulating cooling systems with glycols. It is known that use of ethylene glycol can lead to the

formation of corrosive acids which can damage and cause leaks in metal systems monitoring and treatment are needed to address this problem.¹

The electronic components used in data centers are known to have high levels of PFAS.² We cannot comment further on the possibility of contamination of water with PFAS and/or other toxic materials being leaked to the environment without knowing more about the system that

Use and Storage of Hazardous Chemicals There will be approximately 2.6 million gallons of diesel fuel on site. Storage in double-walled belly tanks will help minimize massive escape of the diesel under all but catastrophic conditions. Spillage of diesel during filling operations is always a possible hazard.

Emissions from Operation of Diesel Engines. Diesel engines are known to be a particularly “dirty” source of energy. This remains true even of the Tier 4 units proposed for use here.

The first table shows results with high levels of pollutants emitted for 20 hours during one day. Will it really be possible to properly test all the units in some equivalent of 20 hours per year, particularly when the machines are older and may be required\ to undergo actual measurements of their emissions?

The second table shows projected emissions for a “worst-case” scenario in which the machines undergo testing and maintenance for a total of 500 hours in a year. We do not understand the reasons for including this table. All of the information we have found from the EPA concerning this issue states that maintenance and testing for fleets of diesel generators is limited to 100 hours per year.³

The pollutants emitted in 100 hours of use (whether for testing or emergency use) by all these generators place a heavy burden on an area which already is exposed to air pollution from the refinery. Under actual emergency conditions there will be no limits on the use of the generators. Some analysis of the cumulative effect of this level of air pollution on people living in this area seems to be necessary to protect these communities.

Another concern is the number of generators listed for the project. The number listed (500) represents a 25 percent excess over the number needed to fully supply the required power (1.2 GW) during any actual emergency situations. Such situations are currently quite rare in

¹ Zheng, Lei, Neville, Anne, Gledhill, Andrew, and David Johnston. "Investigation Into The Corrosion Behaviour Of Stainless Steel 316L In Hydraulic Fluids For Subsea Applications." Paper presented at the CORROSION 2008, New Orleans, Louisiana, March 2008.

² <https://onepetro.org/NACECORR/proceedings-abstract/CORR08/CORR08/NACE-08236/118819>

³ <https://www.epa.gov/system/files/documents/2025-05/response-to-duke-energy.pdf>

Delaware, averaging only about one hour annually.⁴ Diesel engines are widely acknowledged to be very sturdy with long working lives. While one or two spares might be reasonable

DISCUSSION

This Project Doesn't Qualify as Light Industry The physical size and use of resources for this facility are not readily comparable to anything else in Delaware. As described in the application, it would actually be 11 hyperscale data centers on one campus. Each of these centers would, on average, be more than 18 times the size of the DaSTOR center at 3 Boulden Circle in New Castle.

Under current law, light industry is a use that should fit into Business Park zoning. At 6.1 million square feet, this facility is more than 30 times the size of the largest warehouse generally acceptable for this zoning. It is also unlikely that any business park would want a tenant that needed five electrical substations surrounding it. The noise from testing diesel generators, even if they were tested as few as four at a time, would be unacceptable in most commercial areas. The very presence of the generators with their massive tanks of diesel and their potential to release toxic pollution when running and, to some extent, when they are just sitting there, all make this project inconsistent with Light Industry zoning.

Intrusive Noise Levels The high noise levels from the diesel generators would create significant problems in their proposed locations. Noise levels close to the facility could be above 90 dB(A). In addition to audible sound, diesel generators are known to generate significant levels of infrasound (frequency levels below about 10 Hz), which may travel further than audible sound based on the nature of the terrain it is traveling through. While it is not perceived as audible sound, it is detected by humans and animals and may result in stress that causes, headaches, nervousness and even panic disorders and decreases the ability to concentrate on normal activities. Long-term exposure is correlated with higher prevalence of cardiovascular disease.⁵ On a short-term basis, high levels of infrasound This could make working or recreating outside much less pleasant than it currently is and could result in sensitive individuals being unable to maintain healthy sleep patterns.⁶

The application doesn't mention infrasound, although diesel generators are known to produce it. The level that would be produced on running these generators needs to be determined.

Noise (both audible and infrasound) from the Generators has the potential to discourage residents in nearby neighborhoods from enjoying their yards or walking/biking in the area. They may also need to shut their windows at night (and turn on air conditioners in warm weather) to get a good night of sleep. Audible sound also has the potential to drive birds and other animals from the nearby wetlands and woods. Bats, including the endangered tri-color

⁴ **Greg Giesen**, Greg Giesen, "How bad are power outages in Delaware? Here's where one study ranks the First State" Delaware News Journal, August 17, 2025

⁵ <https://www.wired.com/story/the-trump-administrations-data-center-push-could-open-the-door-for-new-forever-chemicals/>⁵ <https://onepetro.org/NACECORR/proceedings-abstract/CORR08/CORR08/NACE-08236/118819>

⁶ R. Chaban, et al, Negative Effect of High-Level Infrasound on Human Myocardial Contractility: In-Vitro Controlled Experiment, Noise Health. 2021 Jun 30;23(109):57–66. doi:

bats, are likely to leave when the sound levels at night are high enough to interfere with their tracking prey by echolocation. At the same time, all the animals are likely to be stressed by infrasound from the generators.

Controlling Runoff from Impervious Surfaces The huge area covered by buildings and other impervious surfaces will result in a massive amount of runoff. It is not at all clear that typical ways of handling stormwater, such as berms, temporary retention above or below ground or permanent water ponds can properly handle the huge amount of water from our increasingly heavy downpours.

Overflow of any ponds could end up in wetlands and raise the water level in ways that would be detrimental to them. There is also the possibility that runoff would be contaminated from the spillage of diesel or leakage of PFAS-contaminated water which would further degrade the quality of nearby wetlands. The fact that Red Lion Creek is subject to tidal action raises serious concerns about having significant areas of woodlands and wetlands flooded with water containing toxic and/or carcinogenic materials. Stormwater handling for this facility brings some unique problems. It's not clear that existing practices will suffice

Air Pollution The amounts of toxic air pollutants released per hour of running the diesel generator is staggering. If more testing is required, or if the generators are needed in an emergency, the problem is exacerbated.

It is problems like those listed above -- driving native fauna away with noise, storage of huge amounts of chemicals in fragile areas and creating the potential for serious pollution of air and water -- that led Governor Peterson to begin work on the Coastal Zone Act. The very kinds of problems that the Starwood project will bring are those that caused new Heavy Industry facilities to be banned from the Coastal Zone.

Heavy Use of Two Resources in Short Supply The amount of water that would be used in this facility is of concern. Much of Delaware's surface water is contaminated to levels that make unsafe to drink less than ideal in supporting native aqueous fauna. Much of our ground undersupply water is also contaminated enough to require extensive and expensive treatment to bring it to a safe level for household use. The application says that Veolia has confirmed that it has sufficient water to supply the Starwood facility, but one wonders if that would remain true if we returned to the situation we had in the mid-1990s with several years of drought.

The 1.2 GW electric power needed by Starwood is far greater than that needed by most heavy industry. It is, in fact, greater than the amount used in the state currently. We don't know where it will come from. Getting it into the facility will compound existing supply problems because our electric transportation and delivery system is already too congested, making prices higher and delaying connections of new sources.

Virginia is now famous (or infamous) for the serious issues that have arisen since these huge facilities began operating. Illinois, Texas and Arizona are also facing backlash from residents outraged about high electric prices and/or water supplies.

Local governments everywhere are recognizing that very few of the data centers now being proposed can reasonably be called Light Industry. When Athens-Clarke County in Georgia received its first application, county officials decided that it would be classed as Heavy Manufacturing. Only data centers using under 2.5 MW can be classed as by right.⁷

Kosciusko County (IA) amended its ordinance in February 2025 to categorize data centers as an “exceptional use” even in Heavy Industrial districts. It previously had no special category for them.⁸

Delaware needs to learn from these communities across the country that are being overwhelmed by monstrous hyperscale data centers. Along with other appropriate guardrails, they need to be zoned as Heavy Industry.

⁷ <https://flagpole.com/news/city-dope/2025/12/17/athens-clarke-county-planners-propose-regulations-for-data-centers/>

⁸ <https://eri.iu.edu/resources/fact-sheets/data-centers.html>