

ORDINANCE TO AMEND AND REORDAIN "THE CODE OF THE COUNTY OF FLUVANNA, VIRGINIA" BY AMENDING § 22-17-16 TO AUTHORIZE THE BOARD OF SUPERVISORS TO GRANT A WAIVER OR MODIFICATION TO THE CHIMNEY HEIGHT REQUIREMENT WHEN ISSUING A SPECIAL USE PERMIT FOR A POWER PRODUCTION PLANT

BE IT ORDAINED by the Board of Supervisors of Fluvanna County:

- (1) *That the Code of the County of Fluvanna, Virginia is amended by amending § 22-17-16 as follows:*

CHAPTER 22 ZONING

ARTICLE 17. – GENERAL PROVISIONS

Sec. 22-17-16 – Special use permit for power production plants.

- (A)(3)(b) The height of any chimney shall not exceed the lesser of 145 feet above ground level or the height determined by "good engineering practice" as determined by the State Air Pollution Control Board or the Department of Environmental Quality pursuant to applicable regulations addressing stack heights. **In issuing a special use permit for a power production plant, the Board of Supervisors may grant a waiver or modification to this requirement.**

- (2) *That the Ordinance shall be effective upon adoption.*

Sec. 22-17-16. - Special use permit for power production plants.

- (A) A power production plant may be constructed pursuant to Section 22-4-2.2 and Section 22-17-4 of this chapter, upon showing by the applicant of the following:
- (1) The proposed location for the power plant is supported by a clear dependence upon the confluence of utilities necessary for the operation of the power production plant and the transmission of the electricity the plant generates;
 - (2) The proposed power plant will not be of substantial detriment to adjacent property and the general character of the district will not be changed as a result of its operation. This shall be accomplished, in part, by meeting the following minimum criteria:
 - (a) The proposed site shall be a minimum of 300 acres and allow for at least eighty-seven (87%) of the property to be left as open space;
 - (b) The proposed site features natural vegetation or topographical features that provide for ample perimeter screening and buffering to minimize any visual or other impacts on adjacent property;
 - (c) The proposed location has adequate access to the road system and shall not create or exacerbate traffic congestion;
 - (3) In addition to meeting the minimum site-related criteria listed in subsection (A)(2)(a), (b) and (c) above, the design of the proposed electrical power production plant shall be subject in all respects to the provisions of this chapter except as listed in subsections (A)(3)(a) through (e), below. These exceptions shall be deemed to be compatible with the general character of the district and provide further protection of adjacent property from potential adverse impacts:
 - (a) The height of any buildings or structures shall not exceed the lesser of 145 feet above ground level or the height of the tallest chimney as determined by paragraph (b) below;
 - (b) The height of any chimney shall not exceed the lesser of 145 feet above ground level or the height determined by "good engineering practice" as determined by the State Air Pollution Control Board or the Department of Environmental Quality pursuant to applicable regulations addressing stack heights;
 - (c) The amount of impervious surface coverage shall be thirteen percent (13%) or less, provided that storm water detention ponds or reservoirs shall be considered pervious surface(s);
 - (d) Any buildings or structures over twelve feet (12') in height shall be located a minimum of 300 feet distant from adjoining property lines or edge of road rights-of-way;
 - (e) There shall be a minimum of 300-foot wide vegetated buffer around the development which, in all other respects, conforms to the County landscaping requirements to be reviewed and approved along with the other requirements of a site development plan;

- (4) In addition to obtaining zoning approval from Fluvanna County, the proposed power plant also will obtain and maintain valid permits as required by all other regulatory bodies of the state and federal governments.

(Ord. 12-16-15)

Zoning Text Amendment: Stack Height

Proposed Expedition Generating Station

September 9, 2025



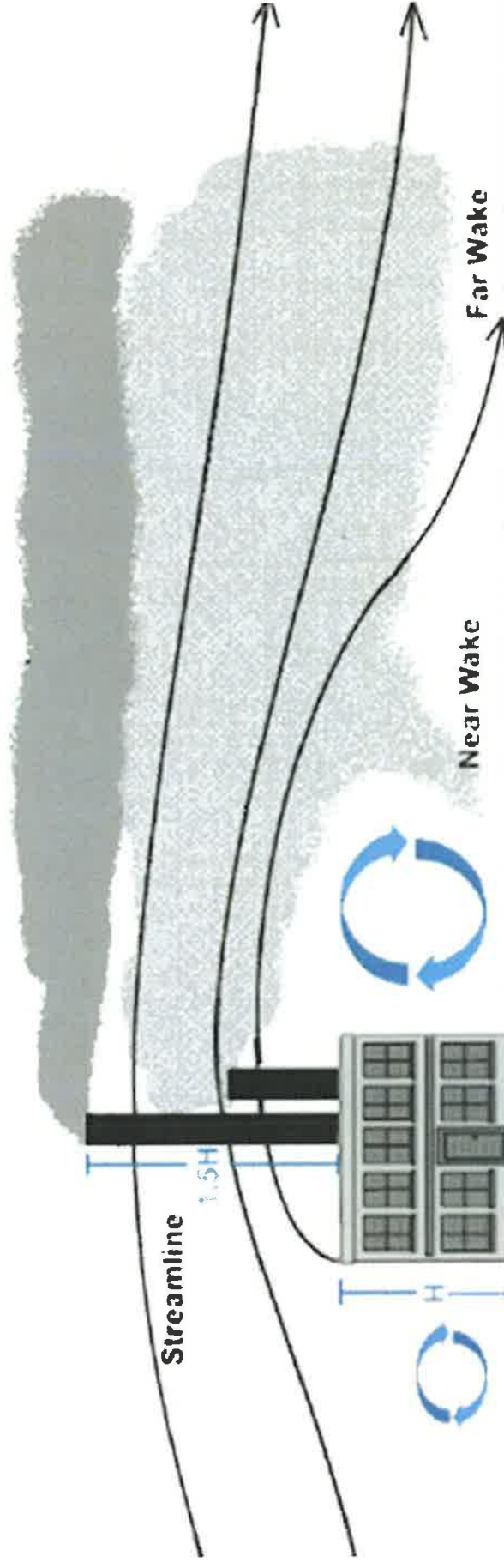
Zoning Text Amendment: Stack Height

- ▶ Gas turbine technology has become more efficient and more energy dense since the previous facility was constructed
- ▶ This has increased the size of the turbines, as well as downstream equipment such as the HRSG (boiler) and the exhaust stack
- ▶ Taller stack height is also needed to comply with air quality modeling required by Virginia Department of Environmental Quality (VDEQ)
- ▶ In summary: a taller stack is needed to accommodate the larger and more efficient generation equipment and standards being used today

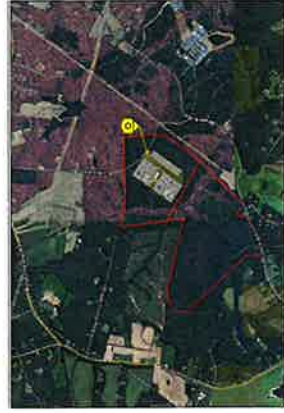
Zoning Text Amendment: Stack Height

- ▶ Virginia Department of Environmental Quality (VDEQ) air quality modeling guidance requires applicants to include “downwash” effects caused by structures near stacks
- ▶ Downwash affects the air flow and dispersion characteristics of the exhaust exiting stacks
- ▶ “Good Engineering Practice” stack height is generally the height above which downwash effects are minimized or nonexistent (*defined in 9VAC5-10-20*)
- ▶ The larger, state-of-the-art generation technology being proposed requires taller stacks to minimize downwash effects
- ▶ Final equipment design and air quality modeling will dictate what stack height is required, which will become part of the air permit record

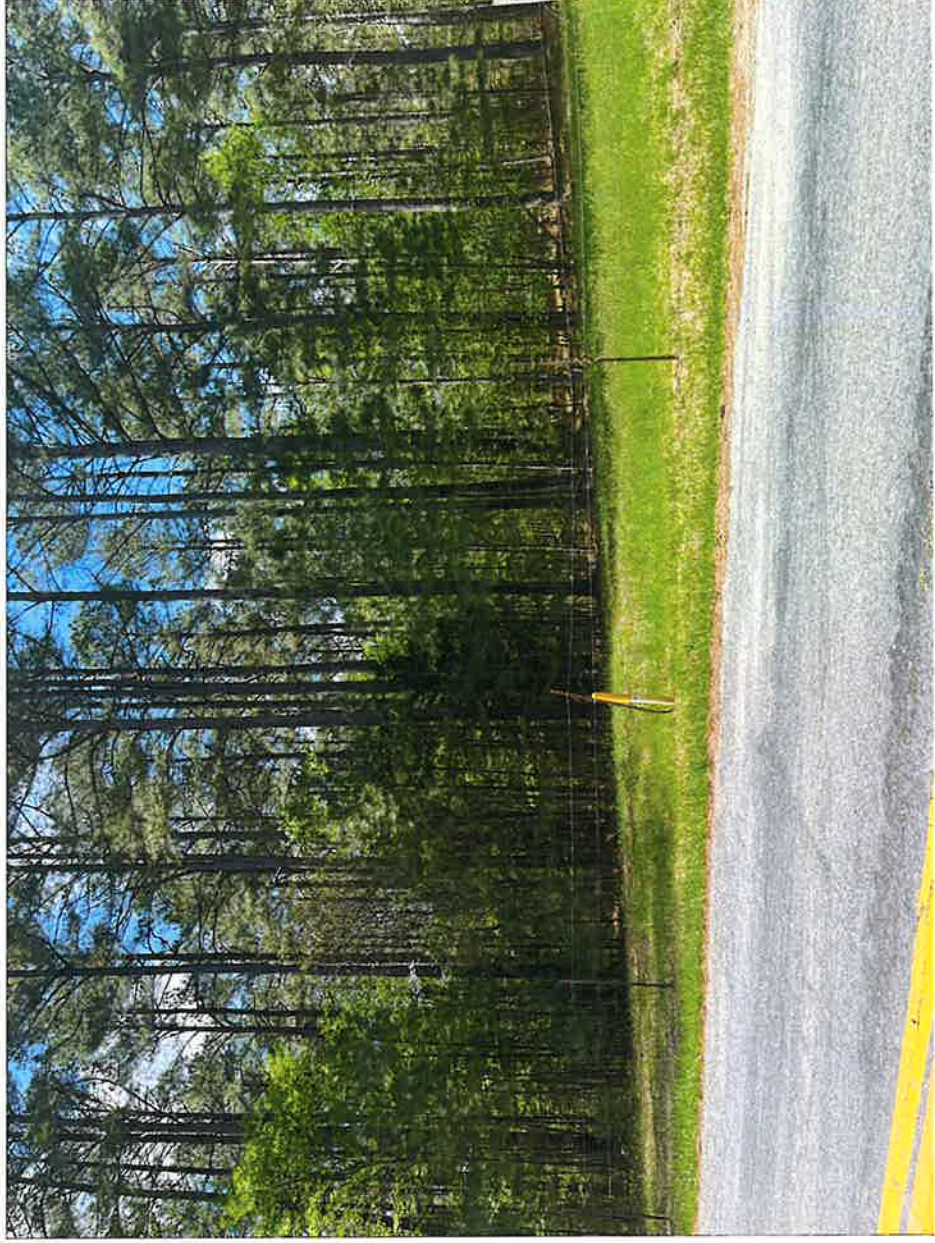
Downwash "Wake Effects" Caused by Nearby Structures



Rendering: Aerial View Northeast of Project



Directional View from Branch Road East of Project



Rendering: Directional View from Branch Road Southeast of Project

