




*Texas City*

EST. 1911

ENGINEERING & PLANNING

To: Planning Board – Regular Meeting – June 3, 2024  
From: Kim Golden, P.E., City Engineer   
CC: Doug Kneupper, P.E.  
Date: May 31, 2024  
Re: Heights Battery Storage – 410 Hwy 146N - Site Plan (Parcel ID 746133) (previously referenced in error as 430 Hwy 146N)

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**Background:** The applicant is Bluestem Energy Solutions. The proposed project will encompass approximately 1.5 acres on 2.799 acres of undeveloped land. The location of the project is on the east side of S.H 146 N and south of the existing TNMP Heights substation. The property is zoned District F. The project proposes to develop up to 9 lithium-ion containers for 9.9MW, 19.98 MWh capacity at the site. This capacity is estimated to serve approximately 750 homes for 24 hours.

**Requested Action:** The applicant is requesting approval of a Detailed Site Plan for development of an electric power generating station utilizing lithium-ion battery energy storage system. The application is being processed as a District SP (Site Plan) rezoning consistent with Section 160.051(A)(1)(f) *provide for the development of specific uses which are not normally found in zoning districts*, and (h) *provide additional information and regulatory controls concerning the proposed use or uses for the protection of the public health, safety, morals and general welfare of the community*. Planning Board recommendation will be presented to the Zoning Commission and City Commission as required for the District SP rezoning.

**Staff Review and Recommendation:** The project will include up to 9 individual battery containers. Site improvements will include a 20ft impervious (concrete or asphalt) perimeter fire lane with access to all containers and two access roads as required by the Fire Marshal, security fencing, and landscaping of at least 6ft in height to provide screening of the battery containers from S.H. 146. Container spacing has been adjusted to the 15ft minimum required by the Fire Marshal. In addition to the generating station, offsite improvements include electric transmission infrastructure that connects to Texas-New Mexico Power facilities in the vicinity. No water or sewer will be needed for this development. Site drainage will be accomplished using an on-site collection system that outfalls into the adjacent drainage channel.

The adjacent developed properties north and south of the site are zoned District F – Light Industrial. The property is bounded to the west by SH 146. Vacant property to the south and east of the site is currently zoned District B single family attached duplex residential but is vacant and unlikely to develop as a residential use. The residential district is not directly adjacent to the proposed site but is separated by a

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60ft drainage easement. Recent rezonings to District F indicate the area is continuing to transition to industrial districts.

The site is not located in a flood plain. It is located inside the area protected by the Texas City Hurricane Levee. Container foundations will be placed at elevation 7.0ft in accordance with Texas City ordinances.

Regarding protection from the saltwater/coastal environment, the applicant advises the containers are fully integrated cabinets and shipped to the site as such, so there is no exposure to the elements during the installation process. The containers will meet the requirements of IP 67 at the Pack level and IP55 at the Battery Container level. IP67 means the individual battery packs do not allow for the ingress of dust particles. They are protected against the ingress of water from spraying/water jets and are rated to be submersed in up to 3' of water for up to 30 minutes without penetration. IP55 means the battery containers themselves provide protection from dust, low pressure water jets and damp and wet weather. The storage units also meet an anti-corrosion class of up to C5-H depending on the local environment. C5 is the highest class of anti-corrosion coating. These codes and standards will be applied by the Fire Marshal and Chief Building Official during the permitting process.

Fire protection will be provided by on-site systems specifically designed for this application with Fire Marshal coordination. The project will be subject to the 2024 fire codes and building codes. The Fire Marshal may require additional submittals at the time of permitting and has advised these requirements will include at minimum commissioning and decommissioning plans, site safety plan, all UL test results for the batteries to be installed, a bond or other security for decommissioning and some requirements for insurance. The Chief Building Official is likely to require annual certification and inspection of ventilation systems at minimum. The Applicant acknowledges these, and other requirements must be satisfied to obtain the necessary permits.

The project previously received Planning Board approval in May 2023. Developer revised the previously approved site plan to accommodate review comments and requirements from Engineering & Planning and from the Fire Marshal.

City staff has reviewed the submitted Site Plan and offers no objection to approval of the site plan.