Battery Energy Storage Systems (BESS) Public Meeting

Mary Kopaskie-Brown, Planning Director
Rachel Phillips, Assistant Planning Director

mesa·az
PLANNING

Background

- Battery Energy Storage System (BESS) and BESS Facilities are not defined uses within the Mesa Zoning Ordinance (MZO)
- BESS are electrochemical devices that:
  - Charge or collect energy from the grid or generation facility
  - Store that energy so that it can be discharged later
  - Provide electricity or other grid services
- BESS includes battery cells; thermal, battery, and energy management systems; inverters; and related control and safety components
- BESS Facilities are the physical sites that store BESS and all associated equipment and infrastructure

Background

- BESS and BESS Facilities are an emerging and increasingly prominent land use
  - Provide grid stability by storing excess power for use during peak demand periods, outages, or emergencies
- They have unique public health and safety considerations, including but not limited to:
  - Fire and explosion risk
  - Electric shock hazard
  - Environmental impacts if improperly managed or disposed of
  - Emergency response challenges

Purpose

- City of Mesa's Planning Division, Building Division, Fire & Medical, and Energy Resources Department are proposing Zoning and Fire Code amendments to:
  - Mitigate potential health, safety, and environmental impacts
  - Ensure land use compatibility and appropriate siting of BESS and BESS Facilities
  - Ensure high-quality design and address visual impacts
  - Support electric capacity and economic development in the city

Proposed MZO Amendments

- Create land use definitions for BESS and BESS Facility
- Establish criteria for BESS and BESS Facility as either a principal or accessory use:
  - Principal Use - Nameplate capacity ≥5,000 kilowatts
  - Accessory Use - Nameplate capacity ≤ 5,000 kilowatts and exclusively serves the subject property
- Principal use permitted in the GI and HI Districts with approval of a Planned Area Development (PAD) Overlay District
  - Must comply with all BESS and BESS Facility standards
- Accessory use permitted in Agricultural, Residential, Commercial, Employment, and Downtown Districts
  - Doesn’t have to comply with BESS and BESS Facilities standards

Proposed MZO Amendments

Additional Application Requirements

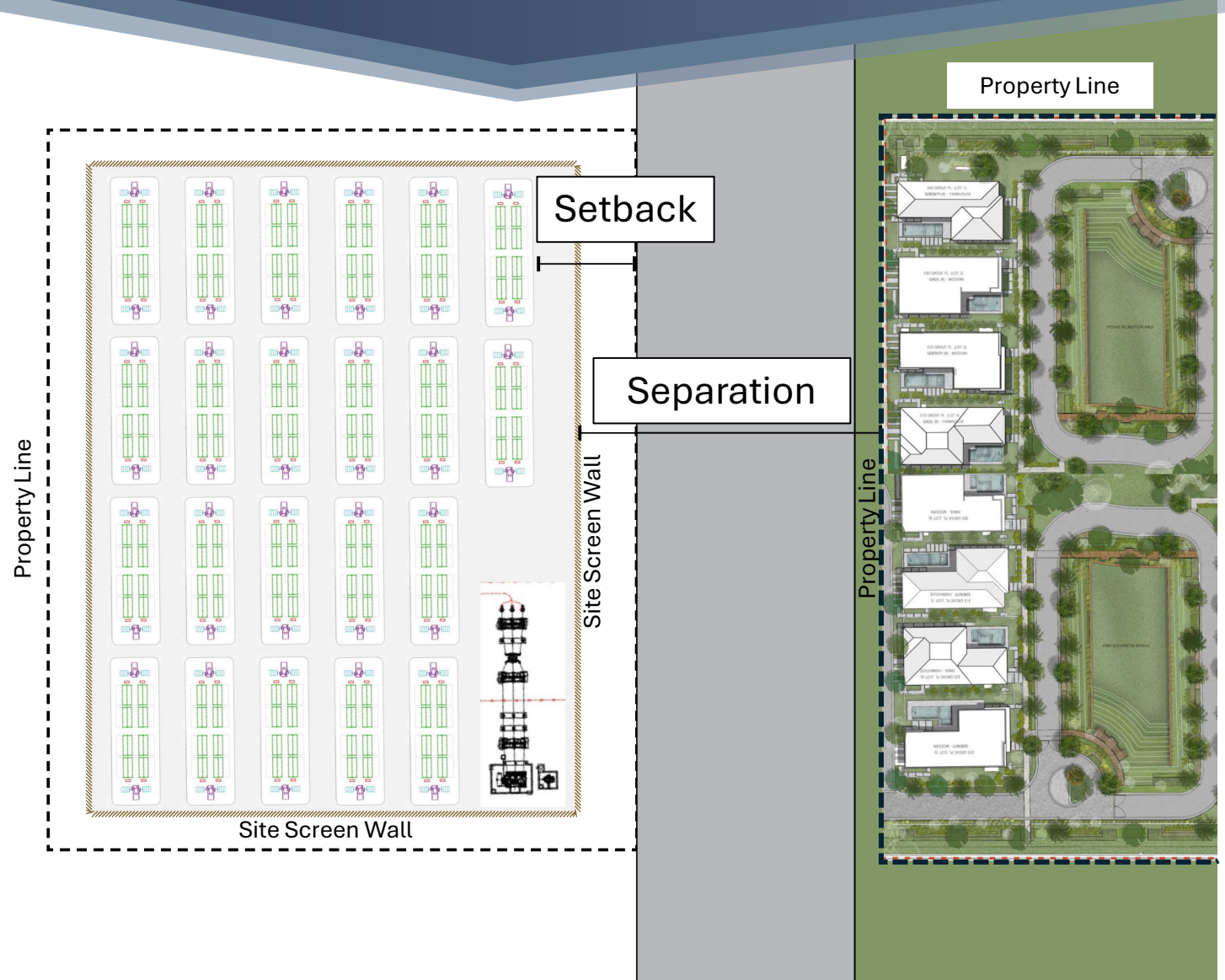
- Operational Plan which includes:
  - Compliance Statement - evidence of compliance with all applicable zoning, building, fire, and federal, state and local environmental laws
  - Preliminary Emergency Response Plan - procedures for safe shutdown, de-energizing, or isolation of equipment and systems under emergency conditions
  - Preliminary Decommissioning Plan - steps required for the complete physical removal of all BESS components
- Good Neighbor Policy - compliant response procedures
- Initial Sound Study - establish baseline levels at nearest residential zoning district, residential use, church, park, school, or other sensitive use

Proposed MZO Amendments

Development Standards

- Underground Utilities – if deemed necessary by the Development Services Department or the utility provider
- Site Screening
  - 1-ft above tallest piece of equipment
  - Opaque wall or fence with high quality materials
  - Articulated every 40 ft. with an offset or landscape pocket
- Separation Requirements
  - 1,000 ft. from residential zoning district and uses
    - Planning & Zoning Board recommended 400 ft. from residential zoning district and uses
  - 400 ft. from churches, parks, school, and other sensitive uses
  - 150 ft. from commercial or industrial buildings

Separation vs Setback



Setback -

- Fire Code
- Property line to BESS Equipment

Separation -

- Zoning Code
- Site screen wall to either:
  - Property line of zoning district or use
  - Building

Proposed MZO Amendments

- Substation Screening
  - 1-ft above the tallest piece of ground-mounted equipment
  - Opaque wall that matches the site wall
  - When 10-ft. tall or less - articulated every 40 ft. with an offset or landscape pocket
  - When greater than 10-ft. tall, consist of:
    - A 10-ft. masonry wall that matches the site wall; and
    - A decorate louvre, slated, or perforated upper screen, no more than 75% opaque, mounted on the masonry wall
  - When located internal to the site
    - Combination of 10-ft. masonry wall and louvres, slats, etc.; or
    - Fully decorate louvre, slated, or perforated screen

Proposed MZO Amendments

Operational Requirements

- On-Going Sound Studies
  - Within 30-days of receiving a Certificate of Occupancy
  - Annual Sound Study for 5 years thereafter
- Ownership or Operator Changes
  - Must notify the Development Services Department within 30 days
  - Approval remains in effect – new owner/operator assume all obligations
- Augmentation permitted if it complies with the approved Site Plan and Phasing Plan
  - Site Plan Modification or modification to phasing plan follows procedures in Ch. 69: Site Plan Review
  - Increase in Nameplate Capacity requires City Council approval

Public Participation

- 2 Open Houses
  - In-person at the Mark @Eastmark on October 1st
    - 17 attendees
  - Zoom on October 13th
    - 24 attendees
  - Comments & Questions
    - Environmental impacts - setbacks from waterway & detention of water
    - Sound study levels
    - Zoning separation and Fire Code setbacks
    - Applicability to Eastmark

Public Comment

- 11 people spoke at the Planning & Zoning Board hearing - Oct 22nd
  - Comments & Questions
    - The 1-megawatt threshold is too low; the nameplate capacity should be higher for accessory use
    - A 1,000-foot separation is too high; doesn't align with National Fire Protection Association (NFPA) standards
    - The ordinance is in conflict with Mesa's Energy and Climate goals which site the use of battery storage
    - How do we address projects already in development?
- Question & Answer Summary and public comments are included in the packet

Questions?

mesa·az
PLANNING

mesa·az