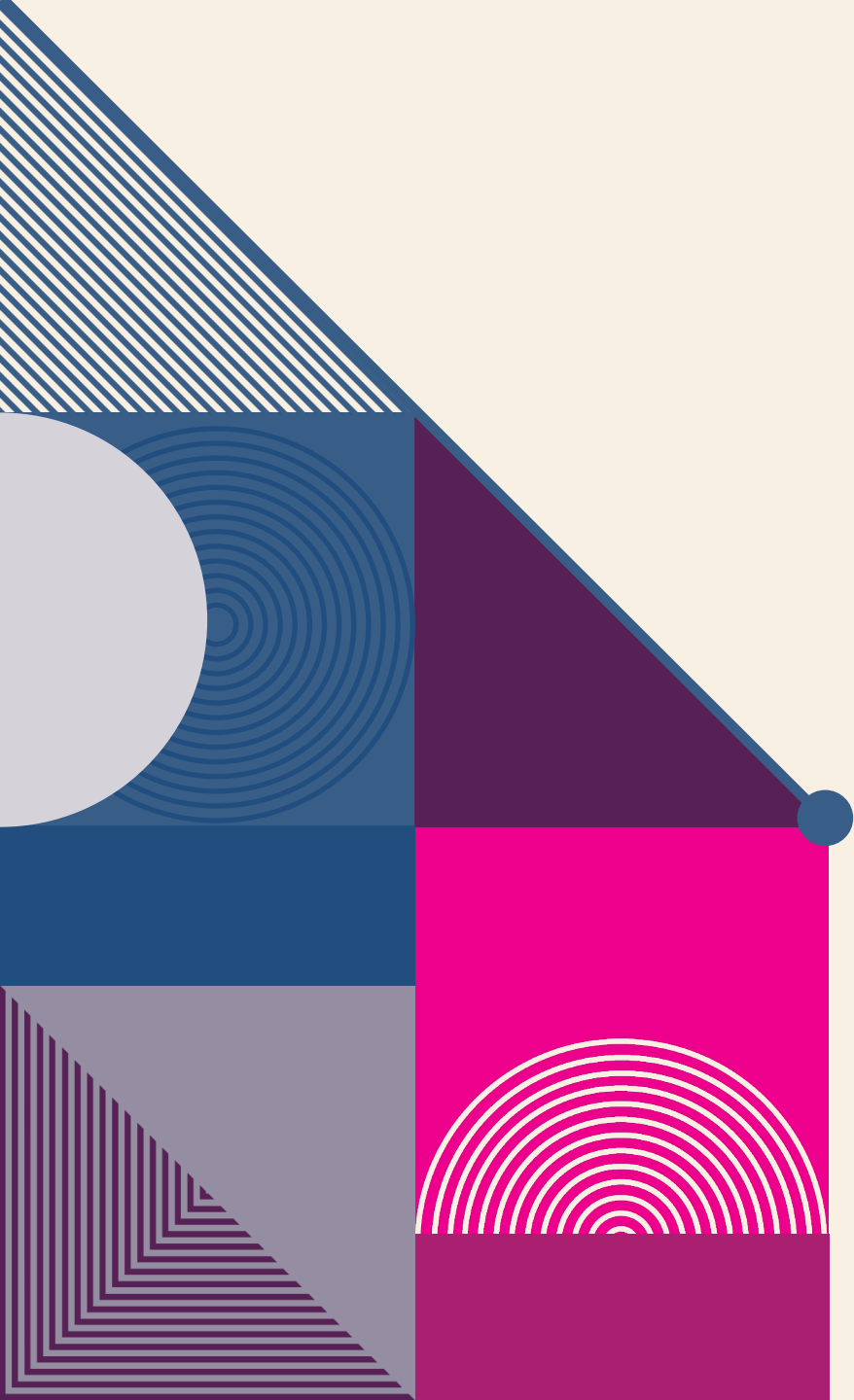




BATTERY ENERGY STORAGE SYSTEM



AGENDA

Introduction

Overview

User Needs

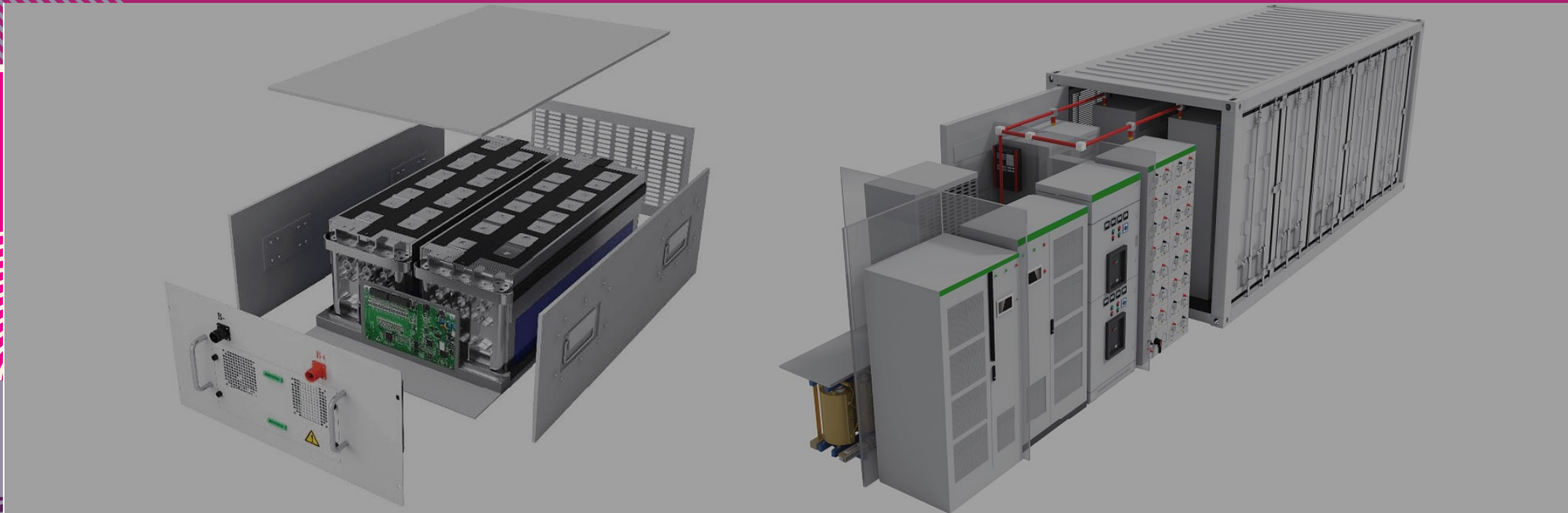
Requirements

Standards Applied



OVERVIEW

- Design a battery energy storage system(BESS) capable of generating 25 MW of power.
- Design the BESS to last for four hours continuously. This will give it 100 MWhs of energy.



Battery Containers



Battery Energy Storage System



USER NEEDS

- A BESS that will reduce generation needs at peak demand times, leading to cheaper power
- A cost-effective 20+ year life span with upgradability in mind
- A robust system that is easy to maintain

REQUIREMENTS

- Create a one-line diagram of the electrical connections
- Create technical documentation of the project including justifications
- Create a site layout design in AutoCAD that will include the map





STANDARDS APPLIED

- **NEC 310.16** determines the diameter of the cable required
- **IEEE 1547** ensures interconnectivity and interoperability of connections
- **IEC 62477** addresses the safety requirements for the lithium batteries



THANK YOU

Iowa State BESS team (SSDEC24-18)