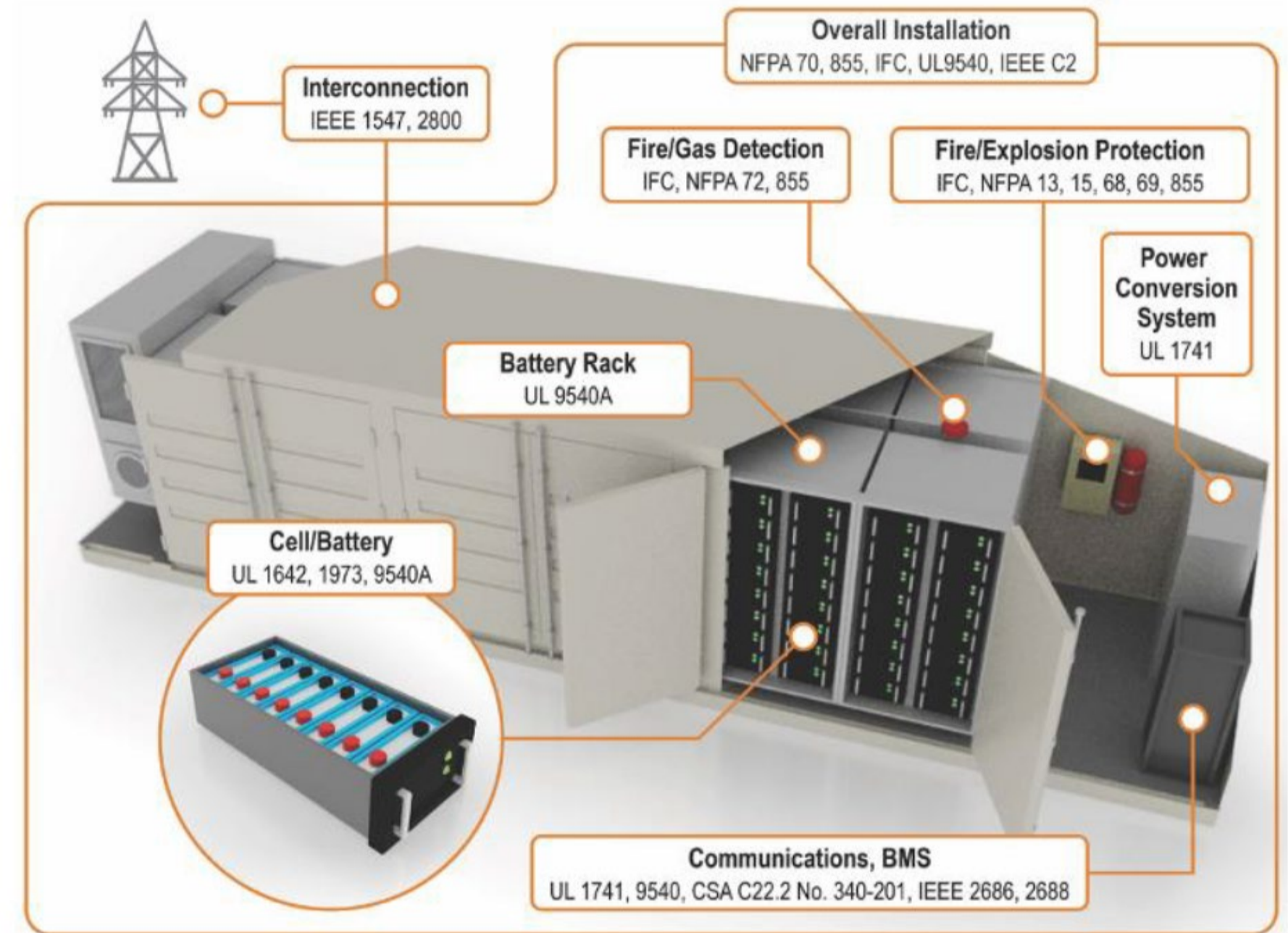


# Land Use Ordinance Amendments



**PART 2 – Battery Energy Storage Systems (BESS)**  
As Recommended by the  
Planning Board & Select Board

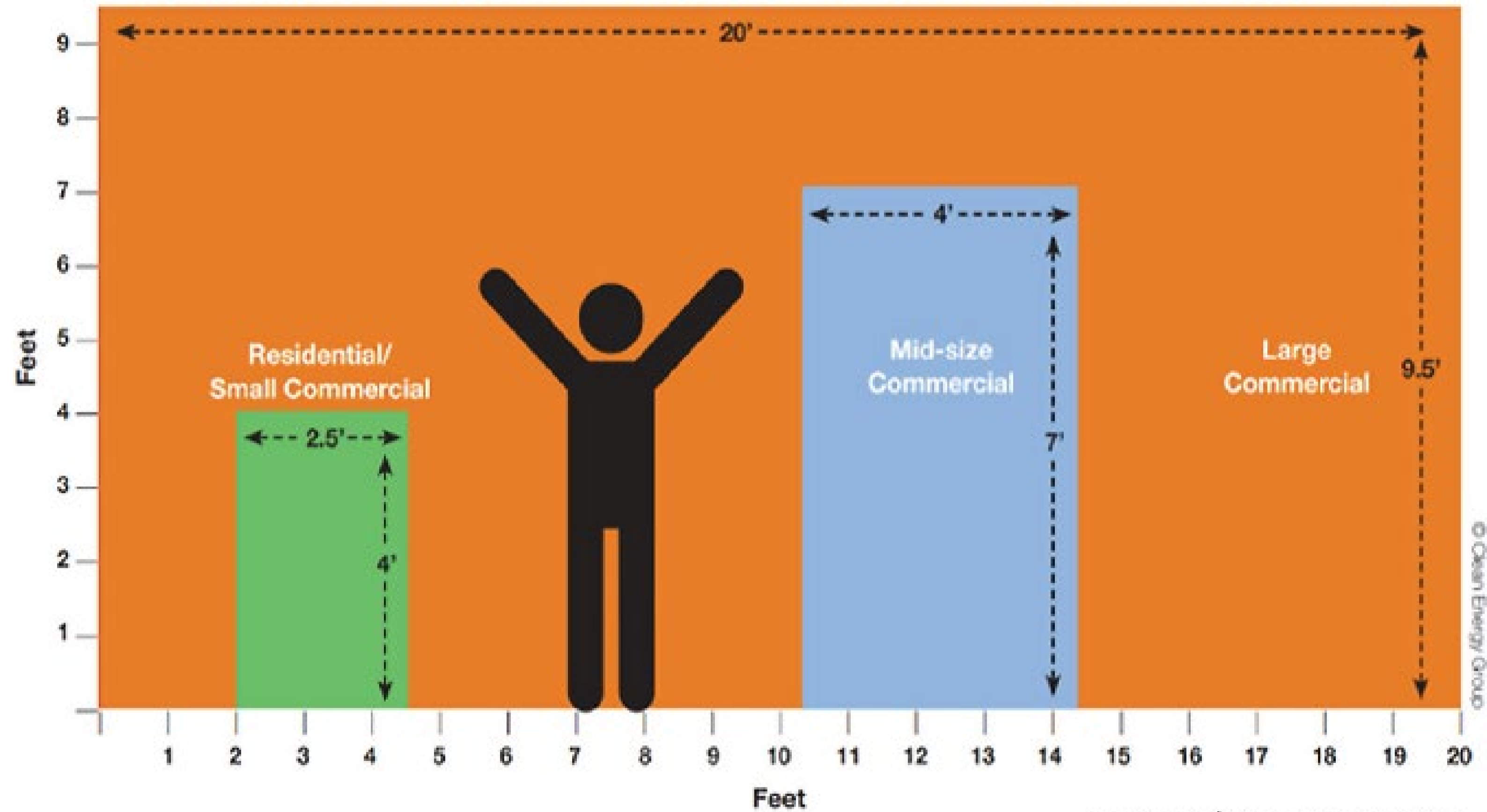
# Key Findings of the Planning Board & Town Attorney

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- ❑ The Town of Gorham recently approved a utility-scale BESS next to a CMP substation in an industrial park. Durham has received inquiries about building a larger facility here.
- ❑ The Town Attorney has advised that utility-scale BESS meets the definition of “essential services” and is a permitted use in the Rural Residential & Agricultural District.
- ❑ There are significant fire safety, noise, & environmental concerns associated with such systems and the Ordinance currently has no regulations to address those issues.
- ❑ To prevent applications from being filed prior to the April 2025 Town Meeting, the special Town Meeting on November 19<sup>th</sup>, 2024 enacted a 6-month moratorium.
- ❑ The Select Board directed the Town Attorney to draft amendments for contract zoning and asked the Planning Board to prepare BESS performance standards.

# Comparison of BESS Systems Size

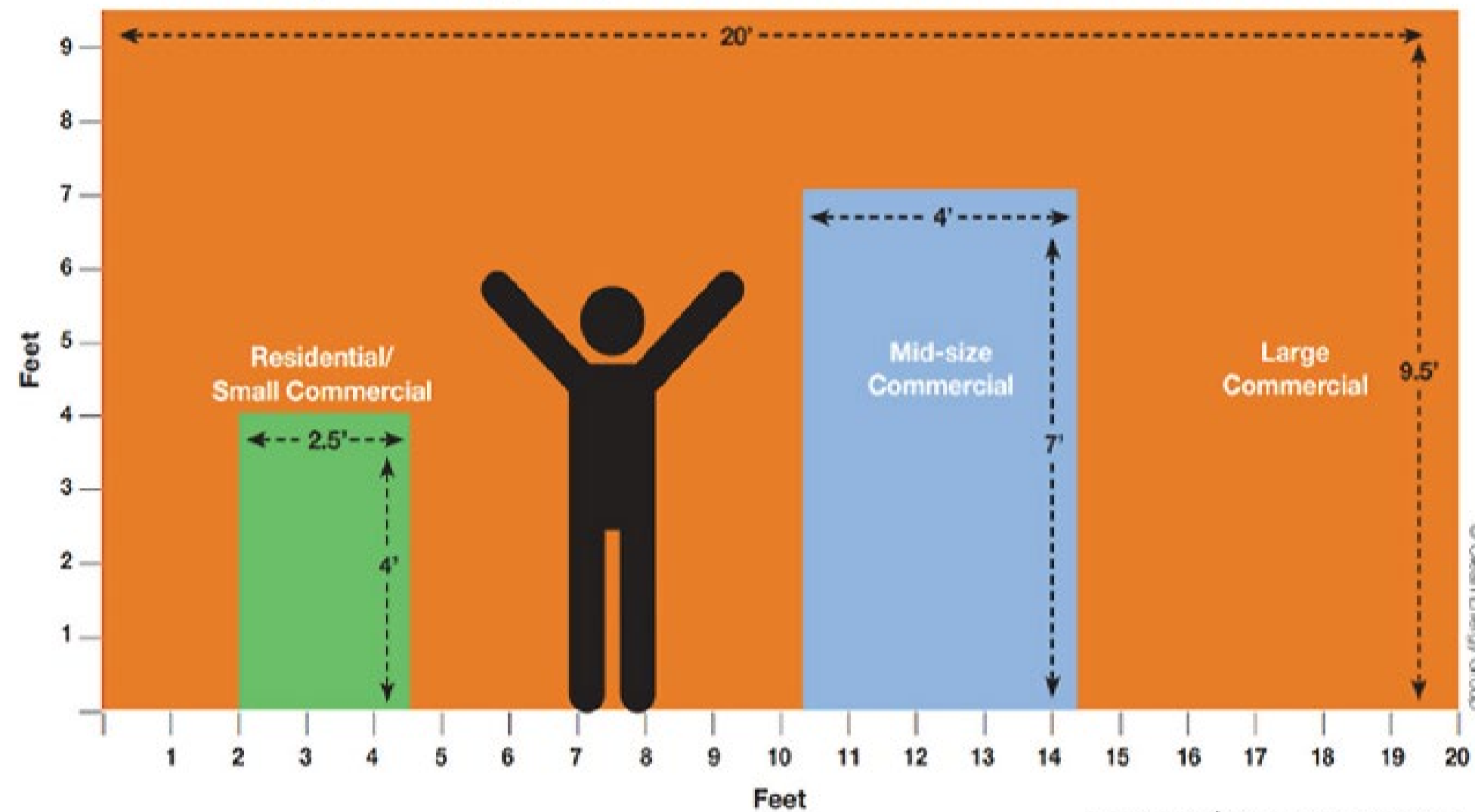
## Battery storage systems come in a variety of sizes



Source: Clean Energy Group

# Comparison of BESS Systems Capacities

## Battery storage systems come in a variety of sizes



Source: Clean Energy Group



### Average Household Energy Usage:

- The average U.S. household uses about 30 kWh per day (900 kWh per month) for electricity, based on data from the U.S. Energy Information Administration (EIA).

### BESS Typical Storage Unit

- Typical Size Around 160–320 square feet (e.g., a 10x32-foot footprint).
- For a 1 MWh system, a single 40-foot container or two 20-foot containers could be used, often with added equipment for safety and cooling systems to maintain stable operations.

### BESS Unit Storage Capacity

- Capacity: 1 MWh (1,000 kWh).
- Households Powered:  $1 \text{ MWh} / 30 \text{ kWh} \approx 33$  households for one day.

# Moratorium Exemption for Residential Systems

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*A Tesla Powerwall residential battery system (Photo by Dennis Schroeder, NREL 48520)*

Most residential backup systems would also fall below the 20 kWh International Fire Code (IFC) limitation for residential battery units.

# Safety Codes for BESS System Connections & Components

