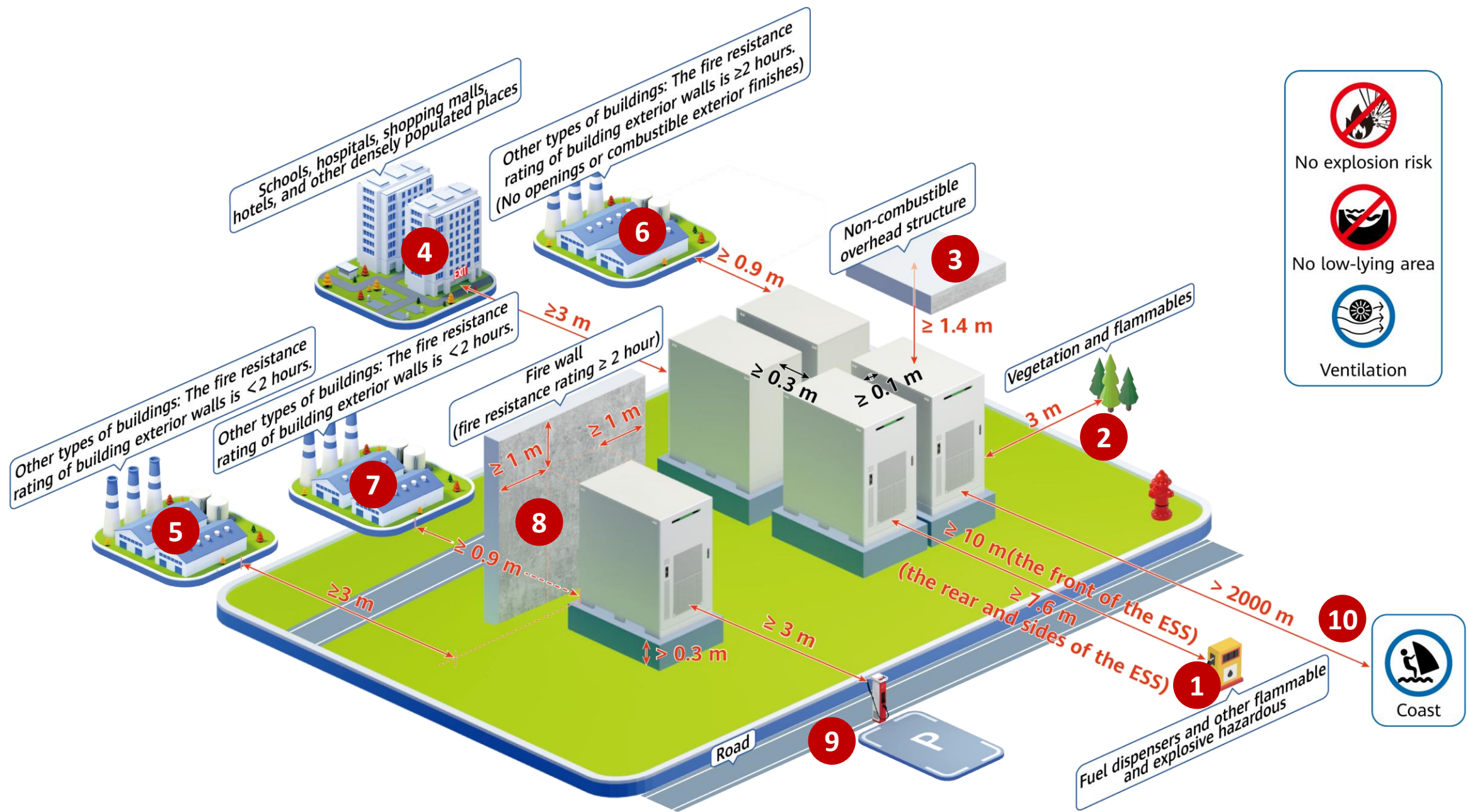


C&I Hybrid Cooling ESS

Quick Guide to Site Selection

Safety Spacing Requirements



Type	No.	Item	Constraints Description or Situations	Distance from ESS	Changes (vs. Previous)	Significance Level ¹
Compliance			The ESS site selection and installation shall comply with local standards and fire protection regulations.	-	-	I
Deployment			The ESS should be deployed outdoors , and not indoors ²	-	-	I
Distance	1	Flammable and Explosive Hazards ³	The distance from the front of ESS should be ≥10m ; The distance from the back and sides of ESS should be ≥7.6m .	≥10m (front) ≥7.6m (other)	Refine requirements	I
	2	Vegetation and flammables	There shall be no vegetation or flammables within 3 m of ESS or ESS site. And please see the exemption condition ⁴	≥3m	-	I
	3	Overhead structure	It should be non-combustible and at least 1.4m away from the top of ESS.	≥1.4m (top)	3m to 1.4m	I
	4	Key locations in densely populated places ⁵	Key locations (main entrances, fresh air systems, etc.) in densely populated places (schools, hospitals, hotels, shopping malls, etc.) : The distance from ESS should be ≥3m , and cannot be reduced by a firewall. <i>Note: Non-key locations refer to other buildings (not densely populated).</i>	≥3m	Distinguish key and non-key location of densely populated places, and distance changes from 30.5m/12m to 3m	II
	5	Other buildings (not densely populated)	If the fire resistance rating of exterior wall of building / additional firewall is < 2h , including doors, windows and openings .	≥3m	Refine distance requirements	II
	6		If the fire resistance rating of the exterior wall of building is ≥2h	≥0.9m		II
	7		If the fire resistance of additional firewall is ≥2h			II
	8	Firewall requirements	1. The fire resistance rating of firewall (exterior wall of building / additional firewall) shall be ≥2h . And the firewall dimensions shall extend 1m beyond the outline of ESS. 2. Example of 2h fire-resistant firewall: concrete, reinforced concrete solid, silicate, clay brick walls, etc., with a thickness of ≥120 mm .	-	Fire resistance rating from 1h to 2h , dimensions changed from 1.5m to 1m	II
	9	Public roads and parking spots	The ESS shall be ≥ 3 m away from public roads ⁶ and parking spots.	≥3m	-	II
	10	Coastal requirements	If the distance from coast is ≥2000m , deployment is normal. If the distance from coast is <2000m ⁷ , the project site corrosion level must be self-checked.	-	Refine requirements	II
Facilities		Fire access	Transportation to the site shall be convenient, with fire engines able to reach it via surrounding roads.	-	-	III
		Fences and walls	Outdoor open plants of ESS shall be equipped with fences and walls.	-	-	III

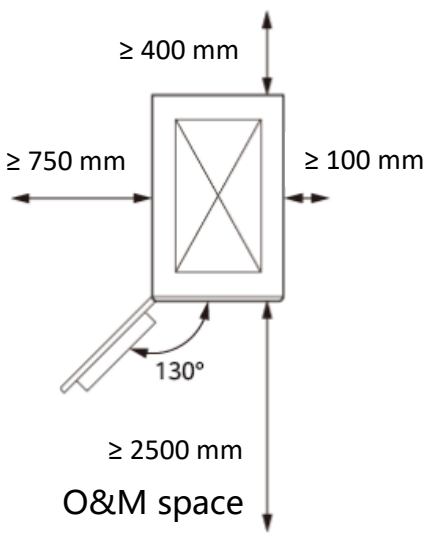
* For details, please refer to the user manual.

Remarks and Definition

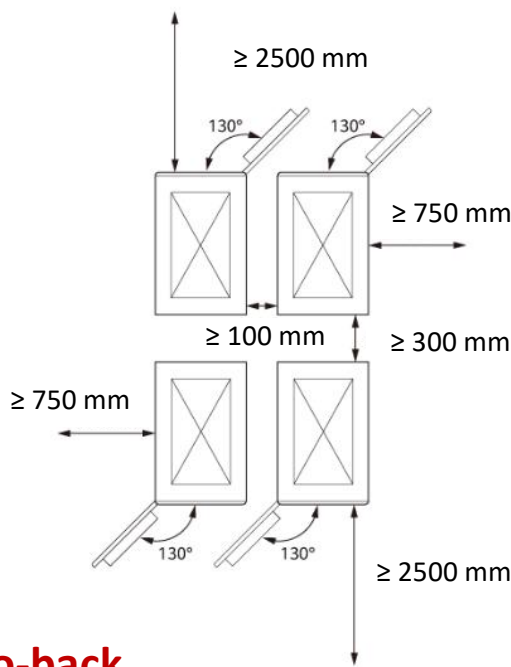
No.	Remarks and Definition	Description
1	Significance Level Classification	(1) Class I: Red-line and mandatory requirements ; (2) Class II: Non-compliance items requires review; (3) Class III: Recommended requirements.
2	Indoor Scenario	(1) Indoor Scenario definition: an enclosed space surrounded by walls, floors, and ceilings, which is isolated from the outdoor natural space. (2) If the project has special requirements, pls submit to review by the ESS Safety Sub-DRB . <i>Note: Safety sub-DRB review includes submission documents, such as the site coordinates, ESS layout, surrounding environment information, and site fire suppression facilities.</i>
3	Flammable and explosive hazards	Including fuel dispensers, oil storage tanks, gas storage tanks, hydrogen filling machines, etc.
4	Exemption condition	Single specimens of flammables (such as green grass, ivy, succulent plants, trees, shrubs, or cultivated ground cover) shall be exempt.
5	Densely populated places	(1) Outpatient buildings and wards of hospitals ; (2) Teaching buildings, libraries, canteens, and dormitories of schools ; (3) Nursing homes, welfare homes, nurseries, kindergartens; (4) Reading rooms of public libraries; (5) Public exhibition halls, museum exhibition halls; (6) Production workshops and dormitories of labor-intensive enterprises; (7) tourist attractions, and religious places.
6	Public roads	Roads that are freely accessible to the public and subject to regulation by public authorities and public transportation laws, such as municipal roads, urban streets .
7	Coastal requirements (<2000m)	If the distance from coast is <2000m , the project site corrosion level must be self-checked: - For C1-C4 levels, deployment is normal. - For C4.5 and C5 levels, deployment must follow the " C&I Hybrid Cooling ESS C4.5/C5 Environmental Application Note ." - For C5.5 and CX levels, the sale of ESS is prohibited.
8	Applicable products	Huawei LUNA2000-(107~215) Series C&I hybrid cooling grid forming ESS.
9	Update description	The document will continuously be updated based on the progress of the ESS industry and related research results.

Maintenance Spacing Requirements

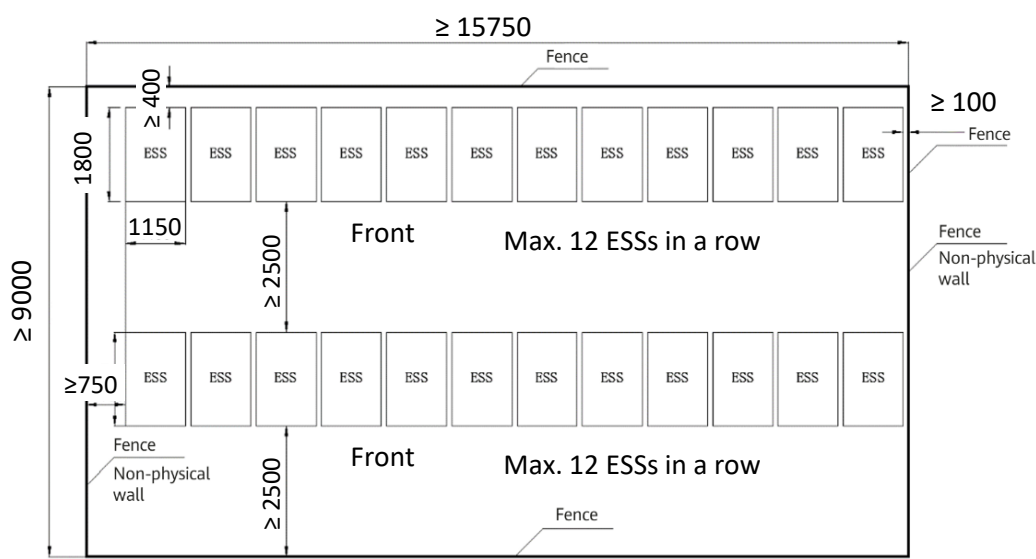
Single layout



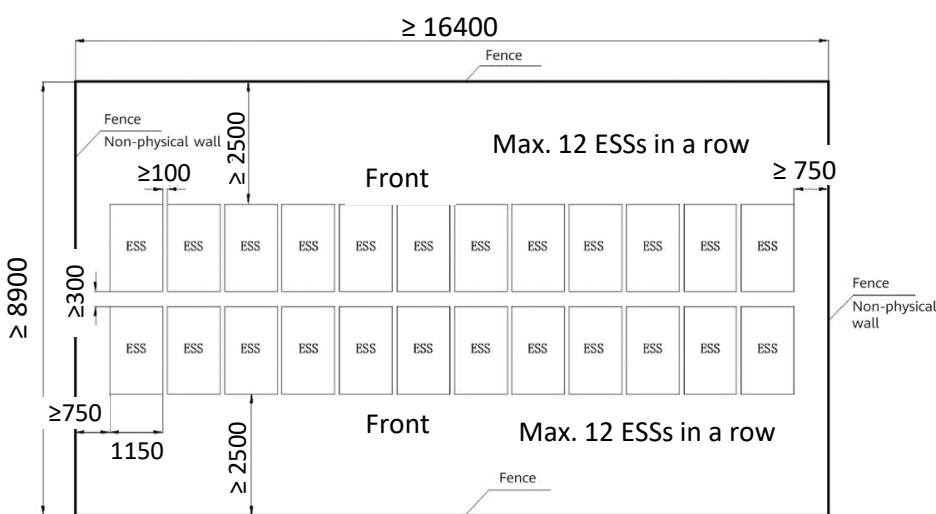
3-sided layout



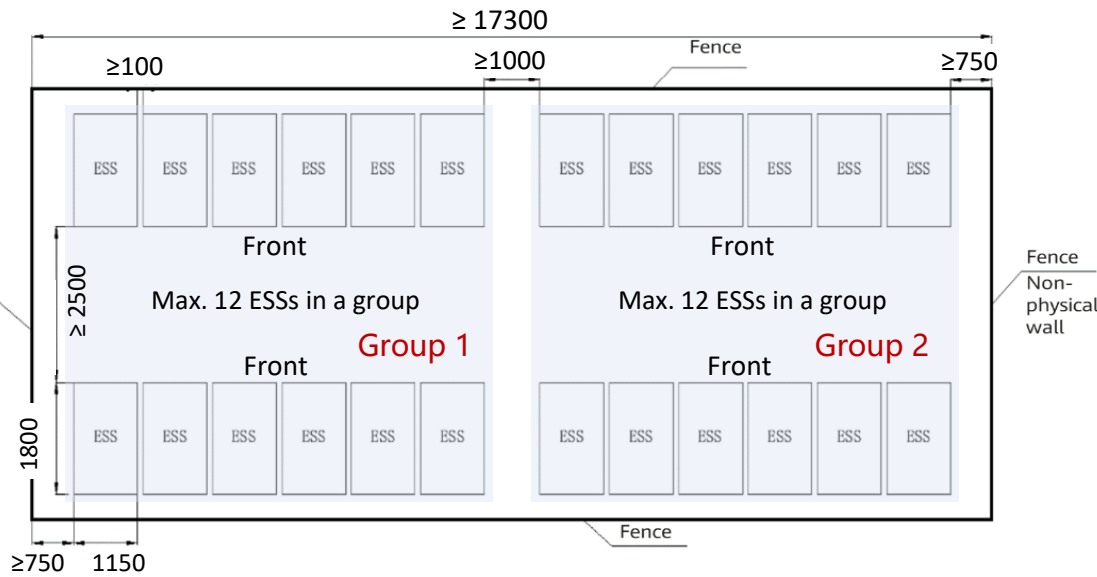
Rows in the same direction



Back-to-back



Face-to-face



Array layout principles:

- ≥ 2500 mm in front of the ESS, ≥ 400 mm behind the ESS, ≥ 750 mm on the left side, and ≥ 100 mm on the right side.
- ≥ 100 mm from side to side, ≥ 300 mm from back to back, ≥ 2500 mm from face to face
- ≤ 12 ESSs in a row (when rows are in the same direction or back-to-back).
- If two rows are **face to face** and > 12 ESSs, the ESSs shall be equally divided into groups (**6+6 in one group**). The distance between groups is ≥ 1 m and ≤ 12 ESSs in a row. It is recommended to increase the face-to-face distance to alleviate the heat cascading issue.
- ≤ 50 ESSs in a site.