

# THE TECHNOLOGIES OF A CARBON-NEUTRAL WAREHOUSE

Although warehouses often only account for a small portion of a company's GHG emissions, carbon-neutral buildings designed with the latest technologies are becoming the new normal and can help reduce the carbon footprint of the supply chain. Some now standard technologies, such as LED lights, sustainable heating systems, and rooftop solar panels can be used to retrofit existing facilities. Carbon-neutral buildings are becoming the gold standard for new constructions, enabled by a host of advanced technologies, like battery storage for on-site, solar-generated electricity. Carbon negativity is even achievable in some cases. Efforts should be made to increase the use of sustainable and reusable building materials in the coming years.

### STANDARD TECHNOLOGIES

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|--|---|
| 1. Renewable energy from the grid          | 12. LED lighting with smart controls    |
| 2. Battery storage ready                   | 13. Solar shading                       |
| 3. Efficient transformers                  | 14. Rapid rise doors                    |
| 4. Main meter energy monitoring            | 15. Efficient dock seals/ air tightness |
| 5. Sub meters advanced energy monitoring   | 16. Electric vehicle charging           |
| 6. Electric vehicles charging              | 17. Vertical skylight                   |
| 7. Biodiversity                            | 18. Rainwater harvesting                |
| 8. Solar panels                            | 19. Building automation                 |
| 9. Efficient HVAC                          | 20. Solar ready roof                    |
| 10. Natural ventilation automated controls |   |
| 11. Low use water appliances               |   |





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## ENHANCED MEASURES FOR CARBON NEUTRAL BUILDINGS

### Renewable Energy

- Battery storage
- Wind turbine

### Electrical Energy

- Advanced lighting
- Enhanced electrical infrastructure

### Heating & Cooling

- Sustainable heat generation
- Enhanced heat distribution
- Enhanced insulation
- Enhanced glazing
- Sustainable cooling
- Solar effective roof
- Solar wall

### Building Automation & Metering

- Building automation, enhanced BMS
- Building automation, artificial intelligence

### Environmental

- Green roof
- Gray water

1) Variation's due geographical location, operational & statutory requirements