



Building for the Future

Community energy systems offer several advantages that benefit architectural and mechanical engineers significantly. These systems involve the centralized production and distribution of heating, cooling, and sometimes power for multiple buildings within a community.

Design Flexibility

During project design, planning, and construction phases, architectural engineers can benefit by adopting community energy as a heating and cooling source. Community energy allows architectural engineers to simplify the mechanical system designs for buildings, as they don't need to incorporate large-scale heating and cooling equipment. Community energy systems often provide standardized connections, which makes it easier to design and maintain the building's energy systems.

A centralized community energy system can help buildings comply with local emissions and energy efficiency regulations. Also, many governments and municipalities offer incentives for buildings that connect to community energy systems, which can offset initial costs and provide long-term financial benefits.

With less equipment to house, architectural engineers can save valuable space otherwise needed for individual heating and cooling equipment and utilize the space for other uses.

For architectural engineers, community energy systems can provide several benefits. Community energy plants can adopt new technologies and innovations more readily, ensuring that buildings benefit from the latest advancements without needing significant retrofits. Also, community energy systems can expand as demand grows, making accommodating new developments or increased energy needs easier.



Operational Simplicity

Community energy systems typically use more efficient and larger-scale equipment for producing heating and cooling, which leads to better energy efficiency compared to individual building systems. These systems can utilize waste heat from industrial processes, power generation, or even combined heat and power (CHP) plants, which enhances overall energy efficiency.

Buildings connected to a community energy system also save money on equipment, as boilers, chillers, and cooling towers are no longer needed, reducing capital and maintenance costs. Cost savings in fuel procurement, operation, and maintenance are another financial benefit.

A community energy plant often has multiple units and backup systems, providing more reliable service than individual building systems. The centralized plant can also more easily integrate renewable energy sources, such as biomass, geothermal, or solar thermal, reducing the environmental impact by reducing greenhouse gas emissions and other pollutants.



**Efficient.
Economical.
Sustainable.**

By leveraging the benefits of community energy, architectural and mechanical engineers can design and operate more efficient, cost-effective, and environmentally friendly buildings.



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