



Typical Elements of a Retrofit Project

Retrofit projects involve replacing or upgrading an existing building's energy equipment and systems with new, more energy efficient, equipment and systems. A typical retrofit includes four principal components:

		Description	Examples
New Equipment	▶	Repair, replace and/or upgrade key energy consuming equipment that drives lower energy consumption for the same output	▪ Heating, ventilation, and air-conditioning (HVAC) upgrades ▪ High efficiency boilers and furnaces ▪ High efficiency lighting ▪ Heat recovery devices
New Controls	▶	A system applied to equipment that reduces energy usage by ensuring equipment is only running when needed	▪ Lighting sensors ▪ Variable speed drives on motors and pumps ▪ New building automation and HVAC controls
Integrated Design	▶	An engineering approach that addresses the combined impact of multiple replacements/upgrades of both equipment and control systems	▪ Combining upgraded energy efficient equipment, air sealing, moisture management, controlled ventilation, insulation, and solar control
Active Energy Management	▶	Installation of software that continue to monitor and manage the performance of the upgraded systems and inform the relevant people when faults are identified	▪ Detect/predict building faults ▪ Identify further savings opportunities ▪ Report on energy usage outside of contractual limits