

TERM	DEFINITION
Air changes per hour	How often air changes in a home. 5 air changes are good for kitchen with no hood ventilation. 4 air changes are code built homes in Michigan as of 2023 and .6 air changes per hour are for super efficient passive house projects.
Airsealing	Air sealing includes reducing a homes air leaks which can reduce energy loss and improve the air quality of the home as well as reduce humidity issues. Air leakage is reduced through airsealing walls, windows, doors, attics and all penetrations in the home. It is measured with a blower door test in CFM (detailed). Often required by code or incentives programs.
Air Quality Monitoring System	Home air quality monitoring systems can detect air quality such as humidity, temperature, dew point, pressure, radon, total volatile organic compounds, particulate matter and more.
ASHRAE 62.2	The American Society of Heating, Refrigerating and Air-Conditioning Engineers sets global standards for ventilation rates in homes and buildings. The 2010 standard is current code and the 2016 - 2019 standard is a current rate to ensure improved air quality in the home which is set by the ventilation systems and test by a professional or HVAC contractor.
Back up power and Battery System whole home	Some inverters can back up power from solar during an outage to supply some power to the home if the power goes down. A battery can store energy for days and be charged from the sun or grid to supply power to home during an outage and/or during peak times when energy is more expensive and more carbon intense.
Balanced Ventilation	This is the type of ventilation that ensures the CFM of air coming into the house equals that going out. Avoiding positive or negative pressure and ensuring an equal exchange of air.
CFM	Cubic Feet Per Minutes of air as determined at 50 pascals of pressure blowing on a house using a blower door test to measure air leakage loss in a home. Measures duct leakage with a duct blaster test to ensure heating and cooling is delivered in the home appropriately.
Community Solar Shares	This is when a home can be assigned shares of solar power that is not located on the home can contribute renewable energy credits for the homeowner to reduce carbon emissions and utility bills.
Condensing Dryer	A dryer that does not vent air out a whole inside of the house instead flushes the water down the same drain used by the washer. Typically is more energy efficient.
Cold weather climate (heat pump)	A air source heat pump rated to continue to pull enough out of the air efficiently below 40 degrees and still pull enough heat to operate below 0 degrees.
CRI / Green Label Plus	Flooring or carpeting sustainability labels that ensure reduced air pollution in the home from these surfaces compared to non labeled carpets.
Demand controlled ventilation	This is a smart ventilation system that operates at higher levels of CFM when air pollution is detected in the home and then runs lower or recirculates air when pollution level are low to save energy.
DOE Zero Energy Ready	Department of Energy Program (DOE) that confirms an energy efficient home beyond energy star that is ready for future solar power. It also requires improved indoor air quality featured and is certified during the construction process by an energy star rater. It is currently available for federal tax incentives.
Drain pan	A metal pan under clothes washers or water heaters to catch leaks and prevent major water damage.
Dual Fuel (HVAC)	A System with gas or propane furnace paired with an outdoor air source heat pump or add on ground source heat pump. The heat pump runs with electricity in the shoulder seasons and cools in the summer and the gas furnace runs in the cold winter.
Energy Star	Energy Star by the Environmental Protection Agency certifies entire homes and not just products through an energy star rater or verifier during the construction process. This program ensures energy efficient building features, HVAC and best practices. The NEXT GEN versions ensures electrification and a higher performing home. . It is currently available for federal tax incentives.
Energy/Heat Recovery Ventilator	Energy or Heat Recovery Ventilators act like lungs in a home. Bringing in fresh air and exhausting stale polluted air constantly. They capture the wasted heat to reduce energy wasted. Energy recovery ventilators have less humidity concerns than heat ones do. These system allow balanced ventilation.
Fortified	A voluntary construction standard where the roofing contractor or builder gets verified the home was built to protect the home against severe weather.
Gallons per minute/flush	The rate at which water flows to determine water efficiency or waste. Higher rater means more water used. Toilets use per flush and all other devices use per minute.
Green Guard Certified Carpet/Flooring	Third-party certification program for carpet & flooring.
Grey water System	Untreated wastewater resulting from lavatory wash basins, laundry & bathing is re used in the toilet. Waste water from kitchen sinks is often excluded because of the high food & grease content.
GreenStar Homes Certification	This is a 3 rd party certification delivered by the GreenHome Institute which includes evaluation and testing of the home by a GreenHome Inspector to review features that meet the 5 pillars of green, energy, health, materials, water and place.
Green Home Inspection	Similar to a home inspection but includes a blower door test, home energy score and test for ventilation, gas and water leaks. Review green and sustainability features of the home and is required for the GreenStar Certification or as a standalone inspection.
Ground Source Heat Pump (Geothermal heat pumps/geothermal heat exchange)	Ground source heat pumps (GSHPs) are electrically powered systems that tap the stored energy of the earth. These systems use the earth's relatively constant temperature to provide heating, cooling, & hot water.
Heat pump (air source)	Heat pump technology is like an air conditioning system but it works in reverse when it comes to heating by taking heat out of the air. Even in the winter there is heat in the air. Devices that might be heatpumps include HVAC systems for heating and cooling, water heaters and dryers. They use energy more efficiently than non heatpump system and may several tax credits available to fund them.
HERS index	Home Energy Rating System is delivered by RESNET by a HERS rater during construction to score the home.

Home Orientation (South Facing Overhangs)	The home is located on the property to maximize solar gain in winter, & provide shade in summer. In general, a south-facing orientation, within 30° east or west of true south, will provide around 90% of the maximum static solar collection potential.
Home Energy Score	A program administered the Department of Energy (DOE) by a partner organization that includes evaluation of a home energy efficiency features to determine a home's score 1 – 10, with 10 being the most efficient homes compared to others. Tax credits may be available a Home Energy Score audit and some jurisdictions requires a score to be done during real estate transaction.
Home Energy Yardstick	This the EPA Energy Star for existing homes program that uses the homes location, square footage and 1 years worth of utility data to evaluate the homes energy efficiency from 1 – 100 compared to other similar homes in the area.
Hot Water Recirculation Pump loop / Structured Plumbing	Hot water recirculation systems use a pump to move hot water through the plumbing system from the water heater to near the fixtures. Structured Plumbing is a method of designing the hot water plumbing layout to minimize hot water delivery times.
ICF	Rigid plastic foam forms that hold concrete in place during curing & remain in place afterwards to serve as thermal insulation for concrete walls. The foam sections are lightweight & result in energy efficient, durable construction.
Indoor air PLUS By ENERGYSTAR®	A variety of construction practices & technologies to decrease the risk of poor indoor air quality. The Environmental Protection Agency administers a builder program called Indoor air PLUS.
Induction Cooking	The most energy efficient way to cook that has no direct air pollution emissions from the cooking device. This technology uses magnets to heat only the pan as opposed to heating any surface around it.
LED lighting	Light Emitting Diode. The most energy efficient form of lighting. Usually discounted by the utilities or sometimes given away. They can come with motion sensor controls and even type of lighting output.
LEED for Homes	A 3 rd party green building certification delivered by the Green Business Certification Inc (GBCI), the United States Green Building Council (USGBC) with features verified by a Green Rater during construction.
Low Flow Fixtures / Shower Heads	A faucet with aerator installed to reduce the flow of water but not reduce water pressure. Low-flow shower heads use about 2 ½ gallons of water per minute compared to between four & five gallons per minute used by conventional heads.

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Low Flow Toilets	A toilet that uses less water per flush when compared to the current federal requirements. Such toilets often have the EPA's WaterSense label. In general, low-flow toilets use a maximum of 1.28 gallons of water per flush.
Low-water Sod	Landscaping that has significantly lower watering requirements than conventional turf. Most of these types come with certificates of installation in Colorado.
MERV filtration	Minimum Energy Rating Value on filters means how small particles can be blocked to improve a homes indoor air quality. MERV 4 – 6 is standard. MERV 8 is better. MERV 10 – 13 is good and MERV 16 reduces cooking, traffic and wildfire smoke as well as airborne viruses. Make sure static pressure in the system is tested before adding higher rated filters.
Minisplit	A air source heat pump (see above) that is mounted on or in wall or ceiling. Sometimes hidden or visible. It can have no ductwork or have minimal ductwork compared to a traditional HVAC system. Often more energy efficient than ducted systems. Tax credits may be available.
National Green Building Standard	A 3 rd party green building certification delivered by the Home Innovations Lab, A subsidiary of the National Association of Home Builders with features verified by a Green Verifier during construction.
No Formaldehyde Certified Cabinetry	The Kitchen Cabinet Manufacturers Association (KCMA) created the Environmental Stewardship Program (ESP) to help cabinet manufacturers demonstrate their commitment to environmental sustainability & help consumers easily identify environmentally-friendly products.
Orientation / Passive Solar Design	Solar geometry, window technology & local climate are used to direct building design. Helps reduce or even eliminate the need for mechanical cooling & heating & daytime artificial lighting.
Passive House	A 3 rd party certification delivered by the Passive House US Institute (PHIUS) to ensure the highest energy efficiency in regards to reduced heat loss, air loss and improved ventilation. The home involved a certified passive house consultant and passive house rater to confirm features during construction.
Pearl Certification	A home energy certification with good, better and best home features as evaluated by a pearl partner. Home has ties to real estate and appraisal industry with studies on home value increase.
Rain water harvesting system	A system for indoor rain water use to run all water use or just to flush toilets. Includes catchment, storage and treatment.
Radon System (Passive or Active)	Radon is gas that comes up through the soil and cause lung problems. A passive system is designed to keep radon out through proper construction of the foundation and then guides radon to a PVC pipe. An active system includes having a fan turned on in the pipe to suck radon up and out of the house.
Reflectivity (roofs)	Sometimes referred to as a white roof but not always, a more reflective roof. Measured by the The Solar Reflectance Index (SRI) 0 (black roof) to 100 (whiter roofs)

R – Value	Resistance to heat in a material. The higher the R value the more it stops heating from leaving in the winter or coming in, in the summer. Many types of insulation have R values and depending on how they are installed may impact their R value. Tax incentives are available for available for these.
Sealed Combustion Water Heater	A gas fired water heater that is more energy efficient than natural draft and is either sealed, power vented or direct vented to exhaust harmful pollutants directly outdoors.
SEER Rating	The rating & performance standard developed by the U.S. government & equipment manufacturer's to produce an energy consumption rating that is easy to understand by consumers. The lower the SEER rating, the more energy required to produce the desired effect. Higher is more efficient.
Smart Thermostat	An HVAC control Thermostat that can be set to run on a schedule. Sometimes it gives data on the energy usage or run time of the HVAC. May be used to control ventilation and may also connect with wifi to be controlled remotely.
Smart Electric Panel	An electric panel that can be controlled remotely and intelligently manage and communicate energy usage. Can help reduce energy usage at certain times when needed and help make solar power more effective.
Straw Bale	A construction method that uses waste straw left over from crops, such as wheat, oats, barley, rye, rice & flax, after all the food has been extracted. Straw is gathered, baled, compressed & tied together. Bales are placed over a "stemwall" to protect the straw from the ground soil & the straw bales are stuccoed & plastered over for finishing.
Solar Heat Gain Coefficient SHGC (windows)	The fraction of solar radiation admitted through a window, door, or skylight -- either transmitted directly and/or absorbed, and subsequently released as heat inside a home. The lower the SHGC, the less solar heat it transmits and the greater its shading ability.
Solar Power (and solar ready)	A home that is solar ready is wired for future solar, with electric panel that can add solar and has roof facing east, south or west with space to add solar. Solar power on a home includes panels or shingles that are on or off the home (ground mounted) and the solar generated electricity from the sun sending it to the home first and then to the grid or a battery when there is more energy than the home needs.
Time of Use Programming	Devices like electric or heat pump water heaters, clothes washers, dryers, dish washers and other appliances can be set only to run at certain times of the day when energy rates are lower and energy is cleaner.
UEF	Uniform Energy Factor is a rating for electric water heater. Heat pump water heaters have the highest UEF meaning they are the most energy efficient
On demand Water Heater (tankless)	A system that delivers hot water at a preset temperature when needed, but without requiring the storage of water. The approach reduces or eliminates energy standby losses. Tankless water heaters can be used for supplementary heat, such as a booster to a solar hot water system, or to meet all hot water needs. Tankless water heaters have an electric, gas, or propane heating device that is activated by the flow of water.
Vehicle Charging Station	This is charging device often referred to as level 2 or level charging that allows faster charging for electric vehicles and is usually connected to the internet.
Water Sense Certification	An EPA Energy Star Program that ensures both a home and the products within the home are water efficient. The program labels many different products and certifies whole homes including indoor and outdoor water use.
Zero Energy	A home that produces as much energy as it comes over the course of the year typically through renewable energy. Typically it means a home over produces solar power in the winter and part of the spring and fall to make for the energy used in the winter.
Zero Step	A 3 rd party rating system to show homes are meeting a standard of accessibility. Sometimes called visibility or universal design. American Disability Advocates implement these types of standards on commercial buildings but for residential it is managed by disability advocates of kent county.