





NJ Green Home Remodeling Guidelines V1.0 - Kitchen Bath and Living Space


Building Envelope

Product	Features	Certifications	Product Directory/Service Resources
Doors, windows, and skylights	Look for doors, windows, and skylights with a High R-Value or low U-factor, and Low Air Leakage Value. Several types of window and skylight glazing are gas filled, heat-absorbing tint, insulated (double-glazed, triple-glazed, and quad-glazed), low emissivity (low-E) coatings, reflective coatings, and spectrally selective coatings. Select	 	<p>National Fenestration Rating Council - Product Directory cpd.nfrc.org/search/searchdefault.aspx</p> <p>National Fenestration Rating Council. Windows, Doors, & Skylights. http://www.nfrc.org/windows-doors-skylights/</p> <p>US EPA Energy Star. Certified Products. Energy Efficient Window and Door Performance Criteria https://www.energystar.gov/products/building_products/residential_windows_doors_and_skylights/key_product_criteria</p> <p>US EPA Energy Star. Residential Windows, Doors and Skylights https://www.energystar.gov/products/building_products/residential_windows_doors_and_skylights/</p> <p>Efficient Windows Collaborative. 2018 https://www.efficientwindows.org/</p> <p>U.S. Department of Energy. Office of Energy Efficiency & Renewable Energy. Design: Windows, Doors, and Skylights https://www.energy.gov/energysaver/design/windows-doors-and-skylights</p> <p>Consumer Reports. Replacement Window Buying Guide. 2019 https://www.consumerreports.org/cro/replacement-windows/buying-guide/index.htm</p>
Weatherstripping	Weather resistant and durable will last longer and save resources because they are replaced less often.		<p>Caulking and Weatherstripping https://www.energy.gov/energysaver/weatherize/air-sealing-your-home/weatherstripping</p> <p>California Energy Commission - Consumer Energy Center http://www.energy.ca.gov/</p>

Insulation	Reflective or radiant barrier insulation with a High R-Value will decrease heat loss.		<p>Energy Star - Do It Yourself Guide to Sealing and Insulation https://www.energystar.gov/index.cfm?c=home_sealing.hm_improvement_sealing</p> <p>U.S. Department of Energy - Energy Efficiency and Renewable Energy https://www.energy.gov/energysaver/weatherize/insulation/types-insulation</p>
Caulk and sealants	Always look for low or no VOC products.	 	<p>GreenGuard - Product Search SPOT. Caulks and Sealants. GreenGuard Certification https://spot.ul.com/main-app/products/catalog/?keywords=caulks+and+sealants</p> <p>Green Seal - Product Search http://www.greenseal.org/Home.aspx</p>



HVAC

Dryer Vent	Install an air-lock dryer vent to release hot moist air produced by the dryer. Installing a vent cap can reduce the heating load in the home by reducing air leakage.		<p>Dryer Wall Vent https://dryerwallvent.com/</p> <p>How to Upgrade a Dryer Vent. This Old House. 2019 https://www.thisoldhouse.com/how-to/how-to-upgrade-dryer-vent</p>
Range Hood/Kitchen Ventilation	Units that produce 1.5 sones or less (measure of how loud fan is) are best for home use. Choose a range hood with and Energy Star-rated fan that uses less energy and is quiet. Kitchen ventilation		<p>ACEE- Smarter House - Proper Ventilation for Gas Appliances https://smarterhouse.org/cooking/proper-ventilation-gas-appliances</p> <p>EPA Energy Star Ventilating Fans www.energystar.gov</p> <p>US EPA. Energy Star. Certified Products. Ventilation Fans. 2019 https://www.energystar.gov/products/heating_cooling/fans_ventilating</p>








	systems remove moisture and VOCs (volatile organic compounds) that are produced from cooking.		<p>HVI's Fresh Ideas Home Ventilation & Indoor Air Quality Guide Articles. Home Ventilating Institute. 2019 https://www.hvi.org/publications/VentLivingAreas.cfm</p> <p>Consumer Reports. Range Hoods. Range Hood Buying Guide. 2016. https://www.consumerreports.org/cro/range-hoods/buying-guide/index.htm</p>
Thermostat	Install a programmable thermostat that meets or exceeds Energy Star standards. The thermostat will save energy and money by reducing wasted cooling or heating when no one is home. The model should be compatible with your system and have features including battery operation and indicator, settings options that allow for vacation overrides and weekends, an energy monitor, and filter change indicator.		<p>US EPA. Energy Star. Certified Products. Programmable Thermostats https://www.energystar.gov/products/heating_cooling/programmable_thermostats</p> <p>U.S. Department of Energy. Office of Energy Efficiency and Renewable Energy. Thermostats. Energy Saver. Setting Your Thermostat for Comfort and Savings. https://www.energy.gov/energysaver/thermostats</p>



Wall and Ceiling

Product	Features	Certifications	Product Directory/Service Resources
Fan shut-off	Automatic shut-off on bathroom fans that can save money, energy and improve indoor air quality. Fans should be on for an hour after a shower or bath to remove moisture preventing mold growth.		<p>US EPA Energy Star. Certified Products. Ventilation Fans. 2019 https://www.energystar.gov/products/heating_cooling/fans_ventilating</p> <p>Home Ventilating Institute - Home Ventilation & Indoor Air Quality Guide . 2019 https://www.hvi.org/publications/VentLivingAreas.cfm</p>
Paint	Paints with natural pigments and oils and with low or no VOC's,	 	<p>GreenGuard - Product Search SPOT. Paints. GreenGuard Certification https://spot.ul.com/main-app/products/catalog/?keywords=paints&filter=Certification:GREENGUARD%2520Certification</p> <p>Green Seal - Product Search –Paints & Coatings http://www.greenseal.org/FindGreenSealProductsandServices.aspx?vid=ViewProductDetail&cid=10</p> <p>Selecting Healthy and Environmentally Sound Finishes http://www.bayarea.greenhomeguide.com/index.php/knowhow/entry/760/C224</p>
Gypsum Board	Products that are moisture resistant, non-paper faced, and mold resistant will improve indoor air quality and prevent premature replacement and repair.		<p>Using Gypsum Board for Walls and Ceilings Section I – Gypsum Association. 2019 https://www.gypsum.org/about/gypsum-101/gypsum-board/</p>





Tiles	Look for products with recycled content and that are durable.		<p>Types of Tile Flooring and Walls - The Spruce. 2017. https://www.thespruce.com/tile-types-for-floor-and-wall-1822635</p> <p>The best tile for floors, counters, and backsplashes. The pros and cons of ceramic, porcelain, stone, cement, and glass. 2015. https://www.consumerreports.org/cro/news/2015/01/the-best-tile-for-floors-counters-and-backsplashes/index.htm</p>
Construction adhesives, grouts, caulking, and sealants	Products with low or no VOC's.	 	<p>SPOT. Caulks and Sealants. GreenGuard Certification. 2019 https://spot.ul.com/main-app/products/catalog/?keywords=caulks+and+sealants</p> <p>Green Seal. Find Certified Products and Services. 2019 https://www.greenseal.org/products-services/?category=368</p> <p>Green Seal. Adhesives for Commercial Use. 2019 https://www.greenseal.org/green-seal-standards/gs-36/</p>

Floors and Flooring Products

Product	Features	Certifications	Product Directory/Service Resources
Hard Surface Flooring	Products with Low or no formaldehyde, recycled content, low or no VOC finish, and hard durable surfaces.	  	<p>FSC – Market – Find Products http://www.fscus.org/faqs/fsc_products.php</p> <p>GreenGuard - Product Search SPOT. Hard Surface Flooring. GreenGuard Certification. Flooring https://spot.ul.com/main-app/products/catalog/?keywords=hard+surface+flooring</p>
Certified, reclaimed or rapidly renewable flooring products	FSC certified, recycled content, bamboo or other renewable material reduces strain on the environment. Always try to use low or no VOC finishes.	 	<p>FSC (Forest Stewardship Council). Market. Find Products.2019 http://www.fscus.org/faqs/fsc_products.php</p> <p>Sustainable Forestry Initiative. Find SFI Products. 2019. https://www.sfiprogram.org/findsfiproducts</p>
Finishes	Finishes derived from natural products like plant oils or beeswax are healthier for indoor air quality.	 	<p>Green Building Supply- Non-Toxic Finishes https://www.greenbuildingsupply.com/All-Products/Non-Toxic-Paints</p>

Carpet	Brominated flame retardants (PBDE) are hazardous for indoor air quality.		<p>Carpet. EWG's (Environmental Working Group) Healthy Living: Home Guide. 2019 https://www.ewg.org/healthyhomeguide/carpet/</p> <p>Benefits of Carpet. CRI (Carpet and Rug Institute). 2019 https://carpet-rug.org/carpet-for-business/benefits-of-carpet/</p>
Grout, Caulk, Sealants	Look for low or no VOC products.	 	<p>GreenGuard - Product Search SPOT. Caulks and Sealants. GreenGuard Certification https://spot.ul.com/main-app/products/catalog/?keywords=caulks+and+sealants</p>



Plumbing

Product	Features	Certifications	Product Directory/Service Resources
Faucet fixtures and aerators	Low flow faucets or aerators with a flow rate between 1.5 to 2.0 gallons per minute. WaterSense® labeled faucets require a maximum flow rate not exceed 1.5 gpm and that the minimum flow rate of .8 gpm.		US EPA Water Sense Program https://www.epa.gov/watersense H2Ouse – Water Saver Home https://www.h2ouse.org/water-conservation/
Water Filters	The most commonly used filter is a Granulated Activated Carbon (GAC, home carbon filter). More expensive options are Ultra-Violet (UV) filter, Reverse Osmosis.		NSF Water Treatment Product Search http://info.nsf.org/Certified/dwtu/ Minnesota Department of Health - Water Treatment Using Carbon Filters: GAC Filter Information http://www.health.state.mn.us/divs/eh/hazardous/topics/gac.html
Piping	Use PEX (or cross-linked polyethylene) tubing as a plumbing substitute for copper or rigid plastic piping. Look for products made of non-halogenated plastics that contain no heavy metals or brominated flame retardants.		Fact Sheet on the Safety of PEX Plumbing Products. NSF, The Public Health and Safety Organization. 2019. http://www.nsf.org/newsroom/fact-sheet-on-the-safety-of-pex-plumbing-products
Water Heater	Units with closed combustion or electric ignition. Tankless water heaters may also work depending on the user. Consider purchasing an On-Demand Water Heating Systems or “flash” or “tankless” water heater.	 	US Department of Energy. Tankless or Demand-Type Water Heaters https://www.energy.gov/energysaver/water-heating/tankless-or-demand-type-water-heaters US Department of Energy. Selecting a New Water Heater https://www.energy.gov/energysaver/water-heating/selecting-new-water-heater US EPA Water Sense – Guide for Efficient Hot Water Delivery Systems https://www.epa.gov/watersense/guide-efficient-hot-water-delivery-systems

Equipment

Refrigerator	Select an energy efficient refrigerator that meets or exceeds Energy Star standards. Top-freezer models are the most efficient followed by bottom-freezer models, while side-by-side models are the least efficient.		<p>American Council for an Energy Efficient Economy. Smarter House. Food Storage. Energy Saving Tips. 2015. https://smarterhouse.org/food-storage/energy-saving-tips</p> <p>Energy Star - Purchasing Tips http://www.energystar.gov/index.cfm?c=refrig.pr_tips_refrigerators</p> <p>US EPA. Energy Star. Certified Products. Refrigerators. 2019 https://www.energystar.gov/products/appliances/refrigerators</p> <p>US EPA. Energy Star. Certified Products. Find and Compare. Refrigerators. 2019 https://www.energystar.gov/productfinder/product/certified-residential-refrigerators/results</p> <p>US Department of Energy. Office of Energy Efficiency & Renewable Energy. Purchasing Energy-Efficient Residential Refrigerators. https://www.energy.gov/eere/femp/purchasing-energy-efficient-residential-refrigerators</p>
Dishwasher	Select a dishwasher that meets or exceeds Energy Star standards.		<p>US EPA. Energy Star. Buyers Guide. https://www.energystar.gov/index.cfm?c=dishwash.pr_tips_dishwashers</p> <p>US EPA. Energy Star. Certified Products. Dishwashers. 2019. https://www.energystar.gov/products/appliances/dishwashers</p>
Cooking Appliances (Ovens, ranges)	Self-cleaning ovens are more insulated therefore more efficient. Induction ovens are the most efficient but expensive convection are also efficient and more affordable.		<p>US EPA, Energy Star. Certified Products. Appliances. https://www.energystar.gov/products/appliances</p>

Uses

Cleaning Products	Products derived from natural ingredients, plant-based oils, and disinfectants are healthier for home use. Always look for low or no VOC products.	 	EWG's (Environmental Working Group) Guide to Healthy Cleaning. 2019 https://www.ewg.org/guides/cleaners
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Laundry

Shut-off Valve	Install a single-throw shut-off valve on the supply line the for hot and cold water. They are a quick and inexpensive way to prevent potential leakage problems		Do It Yourself – How to Install Shut Off Valves http://www.doityourself.com/stry/installshutoffvalve
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