

# THE BREAKERS

*Something for every lifestyle*

## ENERGY EFFICIENCY AND SUSTAINABILITY

All aspects of The Breakers incorporate Energy Efficiency and Sustainability best practices. The site selection, design and construction have reduced the environmental footprint of this community. The high density, “infill” project allowed for efficient utilization of existing utilities and transportation infrastructure, while maintaining a sense of privacy and individuality.

The buildings were designed to use dimensional materials to limit cuts and waste. The residences were “stacked” to reduce the requirement for additional foundation and roofing materials and enhance efficiency for plumbing, electrical and structural components.

To limit demolition and unnecessary waste the existing pool has been restored and refurbished, instead of demolished and replaced. The shade structure and open walls of the exercise and pool cabana provide shade and maximum natural ventilation to eliminate the need for air conditioning.

The site is landscaped with water conservation, water quality control and minimum maintenance in mind. Limited use of non-native plantings along with the incorporation of extensive drip irrigation for shrub beds and ground cover will result in efficient use of natural resources. Drainage flows to planted bioswales to preserve water quality and reduce runoff. Existing natural resources were protected during construction or returned to a natural state and incorporated into the design.

The Breakers “Building Envelope” is 1.5 times more efficient than recommended by the American Society of Heating Refrigeration and Air Conditioning Engineers (ASHRAE) and includes:

- Double Glazed Windows with Thermal Break Vinyl Frames;
- Sto Gold Coat System (building wrap system) to reduce air and moisture infiltration;
- Sto Next exterior insulation and Finish System to channel condensation away from walls to reduce the possibility of mold and mildew;
- The combined exterior system results in R-23.4 living unit exterior walls; the higher the R-value, the thicker and more effective the insulation – The Breakers significantly exceeds the R-11 that is recommended for Hawaii
- The roof and attic insulation is R-19 roof which is recommended for Hawaii
- Five foot deep roof/corridor overhangs were used over all of the primary south facing (subject to solar heat gain) exterior walls of the residences, providing cooling shade to reduce air conditioning load requirements; and
- The building assembly was evaluated by RES CHECK software and exceeds the required minimum standards by more than 50%

The Model Energy Code is the basis for the “Energy Star” rating. In 1995, the first year that the Energy Star® ranking was introduced for overall building energy use, the requirement for an “Energy Star” rating was to exceed the Model Energy Code by 30%. By 2002 there were only 110,000 units built to Energy Star® requirements. The buildings at The Breakers exceed requirements of the Model Energy Code by 50.9 to 58%.

The Breakers building design and construction exceed the standards set forth by the Model Energy Code and the Maui County Building Department. The residences include super insulation, efficient ventilation, natural light, and ENERGY STAR® appliances.



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## ENERGY EFFICIENCY AND SUSTAINABILITY (cont)

Specific elements of the energy efficiency and sustainability efforts include:

1. An efficient central hot water system provides hot water for each building. The system includes a pump that continually circulates the hot water for immediate delivery rather than “running” the faucet until the water heats up. This will conserve thousands of gallons of water every year and reduce the sewage treatment needs
2. The hot water heaters are commercial, heavily insulated 120-gallon units with over 3” of external polyurethane rigid insulation over the jacket. This results in less heat loss than that produced by a 100-watt light bulb in 48 hours. These units exceed the requirements of ASHRAE Standard 90.1b-2001 (the Federal Energy Policy Act), as well as the energy efficiency codes of all states, including the stringent California Energy Commission. All of the supply lines are also insulated. Maui County Building Department waived their typical requirement for solar collector fueled hot water heaters because these units far exceeded their mandated energy requirements.
3. Air Conditioning is provided only on the top floors in Buildings Dahlia and Echinacea and all residences in Fuchsia. Air conditioning air handlers have a Rheem 13 SEER “seasonal energy efficiency ratio” condensing unit representing a 30% increase in energy efficiency over older 10 SEER units.
4. The Breakers second and third floors residences rely on naturally provided air circulation. These residences include jalousie transom windows above the doors, and screens on the doors and windows on the opposite side of the residences for natural cross ventilation/cooling. Hawaii BUILTGREEN™ strongly encourages well designed, Naturally Ventilated (NV), energy-efficient homes.
5. ENERGY STAR® Appliances are included in all residences.
6. Ultra low flow, 1.6 liter per flush toilets are installed in all bathrooms
7. Water-efficient sink faucets and showerheads are provided throughout

Thanks to careful selection of interior materials, each home will be more comfortable and healthy. The buildings incorporate high quality green materials that are designed to last, while minimizing costs for ongoing maintenance. These new energy efficient homes will use less energy and water resulting in lower monthly utility bills.

The Breakers location, within a short walk or bike ride to recreation amenities, services and retail shops, will significantly reduce the need to use a car.

So you see, The Breakers isn't just friendly.  
It's eco-friendly.

