## Making **Green** make sense.





ENERGY WATER INDOOR AIR QUALITY

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### A little practical thinking. And a lot of working together.

The good news is that building green is becoming more and more a reality that's easy to embrace. Green products, practices and experts of all varieties are everywhere. And there's no end to the possibilities for working together to make a sustainable difference.

The not so good news is that green products, practices and experts of all varieties are everywhere. For many building professionals, it's all a bit overwhelming—especially as new standards for homebuilding meet the heightened eco-expectations of consumers—driving a sense of sustainable urgency in the marketplace.

As the world's leading manufacturer of major household appliances including appliances that lead the industry in energy and water efficiency and supporting healthy indoor air—Whirlpool Corporation has a great deal of experience in this area. We can help you make sense of sustainability and take your commitment to sustainable building practices to the next level.





## Then. Now. Always.

### 2006

2001

Introduced energy- and

water-saving Duet<sup>®</sup>

washer and dryer pair

We release 90% less toxic chemicals in the United States compared to 1987 baseline year, while increasing production approximately 80%

### 2007

Established The Green Touch<sup>™</sup> Program and Excellence in Sustainability Awards saluting sustainable building projects

Announced a revised GHG target of 6.6% by 2012





## 2008

2007

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DIGITAL GREEN

PORTFOLI

Introduced The Digital Green<sup>™</sup> Portfolio of online design tools and The Green Appliance Collection of energy- and water-saving appliances

# SmartWay

### 2003

Became world's first appliance manufacturer to announce global strategy to reduce greenhouse gases (GHG)

reducing carbon dioxide

### 2007

Partnered with SmartWay Transport<sup>®</sup> to increase energy efficiency while

### 1998

The U.S. Green Building Council establishes LEED®

Collaborated with the European Authorities to draft the Waste Electrical and Electronic Equipment (WEEE) Directive for proper recycling

ergy

**ENERGY STAR®** 

1992

program

introduced

### 1979

Helped craft U.S. Federal Trade Commission Energy Labeling Rules

ENERGYGUIDE

1980

SuperFund

environmental

becomes law

cleanup legislation

Green Lights

Helped develop the Green Lights Program, a U.S. Environmental Protection Agency (EPA) precursor to the ENERGY STAR<sup>®</sup> program

1972 U.S. Clean Water Act is passed

### 1970

First Earth Day

**U.S. Environmental Protection** Agency established Clean Air Act sets federal and state emissions standards

We establish a Corporate Office for **Environmental Control** 

LL VELCORE - FREE



Led in crafting the Energy Policy and Conservation Act

1991

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### 2009 and beyond

Continuing to develop products that contribute to a sustainable future



#### 2009

Won our tenth award from ENERGY STAR®; nearly 300 ENERGY STAR® qualified appliances offered



2008

Induction cooktops set a new

benchmark in cooking control;

the technology is

90% energy efficient

NAHB launches National Green Building standards

### 2008

Whirlpool Gold<sup>®</sup> Resource Saver<sup>™</sup> dishwashers are Whirlpool brand's most efficient ever, using 1/3 less water and energy; they also have an eco-friendly CEE Tier II energy rating

Green has evolved. And Whirlpool Corporation has been a part of the process.

## Working together to take sustainability to the next level.

For more than 30 years, we've demonstrated our commitment to effectively utilizing and preserving natural resources. In fact, sustainability has been our focus for so long, to us it comes second nature.

But we realize that's not the case for everyone. That's why we continue to work with our trade customers to promote sustainable building practices through our product development, trade programs, corporate policies and industry partnerships.

Looking back, there's a lot to be proud of. Looking ahead, there's so much more we can do. Together.



### Green from cradle to cradle.

Whirlpool brings an "across the board" focus to energy and water conservation, from design to manufacturing and distribution to end-of-product lifecycle. We focus on four key areas:

### Design and development

- Focused on creating even more resource-saving appliances as studies show that 93% of life-cycle greenhouse gas (GHG) emissions come from in-home use.
- Developed more ENERGY STAR<sup>®</sup> qualified appliances than any other manufacturer in the United States, plus numerous ENERGY STAR<sup>®</sup> qualified appliances in Canada, PROCEL qualified appliances in Brazil and A, A+ and A++ class appliances in Europe.

### Manufacturing

- Discontinued the use of volatile organic compound (VOC) paints and eliminated emissions from their solvents.
- Lessened power plant emissions through low-energy lighting and high-efficiency equipment.
- Participated in the EPA's voluntary emissions reductions program.

### Product distribution

- Partnered with SmartWay Transport,<sup>®</sup> a collaboration between the EPA and the freight industry to increase energy efficiency while reducing carbon dioxide by 33 to 66 million metric tons and up to 200,000 tons of nitrogen oxide per year by 2012.
- Installed electric truck lifts with fewer net emissions.

### End-of-life management

- Eighty-five to 90% of materials (steel and other metals, some plastics) used in Whirlpool products can be recycled.
- Pioneered efforts to safely dispose of ozone-depleting refrigerants.
- Reuse plastic foam that was previously sent to landfills; it's now ground up and made into plastic furniture, food containers, playground equipment and other consumer products.



## Refrigeration

ENERGY STAR<sup>®</sup> qualified refrigerators provide energy savings without sacrificing the features your customers want. Models are available in a variety of configurations, and many feature automatic icemakers and through-the-door water dispensers.



ENERGY STAR<sup>®</sup> qualified models use high-efficiency compressors, improved insulation, and more precise temperature and defrost mechanisms to improve energy efficiency.\* In fact, they require about 60% less energy as models manufactured before 1993, and 42% less energy than conventional models sold in 2001.\* Did you know that replacing a refrigerator manufactured before 1993 with a new ENERGY STAR<sup>®</sup> qualified model would save enough energy to light the average household for more than 4 1/2 months?\*

> \* U.S. Department of Energy ENERGY STAR® Program—www.energystar.gov To see a complete list of our ENERGY STAR® qualified appliances, please visit www.insideadvantage.com.

### Foam-in-Place Insulation

Doors and cabinet liners are sealed with foam-in-place insulation to add strength, durability and efficiency.

Foam strengthens the refrigerator and helps maintain proper door alignment. It also acts as an excellent insulator to help maintain consistent temperatures for optimal food preservation.

### Variable Speed Technology

The refrigerator's compressor, evaporator fan and air baffle work together at variable levels for optimal airflow.

This technology reduces energy consumption, helps to maintain consistent and even temperatures, and allows for quiet operation.

### Adaptive Defrost Control (ADC)

Featuring an electronic defrost timer that bases its usage on patterns, ADC gathers input from previous cycles.

The defrost cycle occurs only when necessary, consuming less energy and reducing temperature fluctuations within the refrigerator.

### Million-Magnet<sup>™</sup> Door Gasket

Forming a tight seal that minimizes cold air loss, this engineering feature reduces compressor usage, thus saving energy.

It's one of the many features available on several Whirlpool<sup>®</sup> freezers that contributes to ENERGY STAR<sup>®</sup> qualification and helps your customers save energy every day.

### Fast Fill Dispensing System

Utilizing the Measured Fill feature, the Fast Fill in-door dispenser delivers the precise amount of water needed by a homeowner.

Available on Whirlpool<sup>®</sup> brand refrigerators, this innovation dispenses the precise amount of water—in ounces, cups or liters, avoiding waste.



WATER

ENERGY

## Dishwashers

Homeowners can feel good about using an ENERGY STAR<sup>®</sup> qualified dishwasher for their clean-up needs. That's because ENERGY STAR<sup>®</sup> qualified dishwashers use an average of 44% less water than conventional models.\* With dishwashers from Whirlpool Corporation, it's easy to be green. More than 90% of our branded dishwashers meet ENERGY STAR<sup>®</sup> requirements. And both KitchenAid<sup>®</sup> and Whirlpool<sup>®</sup> brands offer dishwashers that meet the CEE Tier II rating for energy efficiency.

> What makes a dishwasher ENERGY STAR<sup>®</sup> qualified? Many things. First, the dishwasher must be at least 31% more energy efficient than the minimum federal government standard and use 1/5 the water used in handwashing dishes. Second, it uses 5 gallons per cycle compared to 6 gallons by non-qualifying dishwashers. Third, it costs just about 16 cents a load to use an ENERGY STAR<sup>®</sup> qualified dishwasher, and about two cents per load to use the dry cycle. Replacing a dishwasher manufactured before 1994 with an ENERGY STAR<sup>®</sup> qualified dishwasher just makes sense—saving more than \$25 a year in energy costs.\*



### Automatic Temperature Control (ATC)

ATC automatically adjusts the water temperature to the cleaning required for maximum cleaning and energy savings. So heavily soiled dishes are washed at higher temperatures.

Homeowners can save even more energy when running their dishwasher by switching to the "air dry" cycle instead of "heat dry." Currently only 29% of dishwasher owners use the "air dry" cycle.



WATER

### Soil Sensors

Soil Sensors gauge the cleanliness of the water during the wash cycle, making sure that dirty water is not recirculated through the wash, redepositing soil on dishes.

Many of our ENERGY STAR<sup>®</sup> qualified dishwashers have the capability to purge food soils without draining all of the water in the wash cycle. The food soil chamber empties itself as needed. Many competitive dishwashers require a complete drain and refill to purge food soils.

### AccuSense<sup>™</sup>Adaptive Wash Cycle

No need to wait until the dishwasher is full to be efficient. Or to change the settings. AccuSense™ Adaptive Wash Cycle automatically selects the correct cleaning level and cycle time.

This feature builds in efficiency where it's needed most. Two-thirds of American dishwasher owners say they wait until the dishwasher is full to run a cycle. And three in five owners never change the cycle on their dishwasher regardless of what they are washing.

### **Drawer Dishwasher**

The KitchenAid<sup>®</sup> drawer dishwasher holds small or specialized loads with two independent drawers that can be used separately—on different cycles.

Half-loads (one drawer) use approximately 35% less water than our standard full-size dishwasher.\*\*

\*\*Normal cycle when compared to a KUDS03 KitchenAid® dishwasher. To see a complete list of our ENERGY STAR® qualified appliances, please visit www.insideadvantage.com.



## Laundry

ENERGY STAR<sup>®</sup> qualified laundry products contribute greatly to a home's energy and water efficiency. Whirlpool Corporation offers a variety of front- and top-load models that meet ENERGY STAR<sup>®</sup> qualifications using 50% less energy and water compared to conventional top-load washers.\* ENERGY STAR<sup>®</sup> qualified washers must exceed federal minimum energy standards by at least 37%.

Earning the ENERGY STAR<sup>®</sup> label means that a washing machine must have a Modified Energy Factor (MEF) of 1.80 or greater and a maximum Water Factor (WF) of 7.5.<sup>†</sup> Only front- and top-load clothes washers with capacities greater than 1.6 cu. ft. are eligible to earn the ENERGY STAR<sup>®</sup> qualification.\*

### **Front-Load**

Popular front-load models from Whirlpool Corporation include the Whirlpool<sup>®</sup> Duet<sup>®</sup> Steam front-load washer which uses 73% less water and 77% less energy than a conventional top-load.\*\* The Maytag<sup>®</sup> Epic<sup>®</sup> front-load washer uses 65% less water and 46% less energy than a conventional top-load washer.\*\*



† MEF = Modified Energy Factor; an energy factor equation that takes into account the amount of dryer energy required to remove the remaining moisture from a washed item. WF = Water Factor; the present water performance metric that allows the comparison of clothes washer water consumption independent of clothes washer capacity.

\* U.S. Department of Energy ENERGY STAR<sup>®</sup> Program www.energystar.gov

\* Compared to conventional top-load washers, manufactured before 2004, using the normal cycle. To see a complete list of our ENERGY STAR<sup>®</sup> qualified appliances, please visit www.insideadvantage.com.



### **Top-Load**

Compared to a top-load model manufactured before 1994, an ENERGY STAR<sup>®</sup> qualified top-load clothes washer can save homeowners up to \$119 per year on their utility bills.\* Several Whirlpool Corporation top-load models also meet the CEE Tier III rating for energy efficiency.

The Whirlpool<sup>®</sup> brand Cabrio<sup>®</sup> top-load is CEE Tier III qualified and uses up to 67% less energy and 70% less water.\*\* The Maytag<sup>®</sup> Bravos<sup>®</sup> is also a CEE Tier III energy qualified top-load washer, delivering 67% energy and 70% water savings.

\* U.S. Department of Energy ENERGY STAR<sup>®</sup> Program—www.energystar.gov \*\* Compared to conventional top-load washers, manufactured before 2004, using the normal cycle. To see a complete list of our ENERGY STAR<sup>®</sup> qualified appliances, please visit www.insideadvantage.com.

WATER

## Laundry [continued]



### Adaptive Variable Speed Motor

This feature reduces drying times and uses less energy.

Available with the Whirlpool<sup>®</sup> Duet HT<sup>®</sup> washer and Maytag<sup>®</sup> Epic<sup>®</sup> washer, the motor extracts 20% more water than a traditional washing machine.

### Intellitemp<sup>™</sup> Temperature Control

Precise temperature at each cycle translates to cleaner clothes and decreased energy consumption.

Available on the Maytag<sup>®</sup> Epic<sup>®</sup> washer, the Intellitemp<sup>™</sup> Automatic Temperature Control regulates water temperature and ensures the proper temperature level is maintained through each step of the washing and rinsing cycles.

### Abundant Drum Holes

5382 holes in the commercial quality stainless steel wash drum allows soils and water to move away from garment during the spin speed cycle.

Water is thoroughly extracted from garments which means less energy is needed for drying.

### **Delay Wash**

### Completing the laundry when energy rates are off-peak saves energy.

Delay wash makes it possible to set the washer to begin cleaning 12 hours later during off-peak hours to lower energy costs.



### Automatic Water Level Sensor

Available on the Whirlpool® Duet® and Maytag® Epic® washers, the Automatic Water Level Sensor allows the washer to use only the water needed to clean and rinse clothes.

Adapting the size of the load to the type of fabric being washed saves energy and allows the machine to be more efficient when cleaning smaller loads.

### **Ultra Capacity Plus**

Available with the Whirlpool® Cabrio® washers. No other ENERGY STAR® qualified washer has a larger capacity.

This feature creates 5.0 cu.ft. (IEC) of cleaning space, or enough room to wash three baskets of laundry in a single load.

### 6th Sense® Technology.

The Whirlpool<sup>®</sup> Cabrio<sup>®</sup> washer features built-in intelligence that "knows every load" for optimal cleaning, fabric care and efficiency.

As soon as the wash cycle is started, the Whirlpool® Cabrio® washer "senses" the size of the load and precisely how much water and heat is needed to clean it. Suds sensors also work to prevent oversudsing in the low-water wash system.

### Direct Inject Wash System.

This revolutionary system provides a concentrated burst of detergent to penetrate deep into stains and stubborn soil, virtually eliminating the need to pre-treat.

Prior to the start of Whirlpool<sup>®</sup> Duet<sup>®</sup> and Whirlpool<sup>®</sup> Cabrio<sup>®</sup> wash cycles, the injection of detergent penetrates stains and pre-treats soil. Only when the entire load has been treated with the concentrated cleaning lather does the wash cycle begin.

## HVAC

Heating and cooling accounts for as much as half of a home's energy usage.\* So it's good to know that Whirlpool Corporation can help you make an impact—and where the savings can be most noticeable.

We offer several ENERGY STAR<sup>®</sup> qualified whole home HVAC products, including air conditioners, heat pumps and gas furnaces. ENERGY STAR<sup>®</sup> qualified central air conditioners have a higher Seasonal Energy Efficiency Ratio (SEER) than standard models, which makes them about 14% more efficient than standard models.<sup>\*</sup> Whirlpool can provide you with air conditioners rated up to 18 SEER.

Efficiency and support of good indoor air quality combine in other Whirlpool products as well. As part of our lineup, look for ENERGY STAR<sup>®</sup> qualified room air conditioners, air purifiers and dehumidifiers.

An ENERGY STAR<sup>®</sup> qualified dehumidifier removes the same amount of moisture as a similarly-sized standard unit—but uses 10% less energy.\* In fact, an ENERGY STAR<sup>®</sup> qualified 40-pint model can save your customers up to \$200 or more over 10 years, which is enough to pay for its initial cost.\* It's just another example of how you can act responsibility on behalf of the environment without sacrificing product quality or performance.



### **Heat Pumps**

When reliable technology meets energy efficiency, the result is dependable comfort any time your homeowners need it.

Energy usage can be reduced with the 13 SEER heat pump and ENERGY STAR<sup>®</sup> qualified 16 SEER and 18 SEER heat pumps. In addition, the two-stage, high-efficiency Copeland Scroll UltraTech<sup>™</sup> Compressor is capable of capacity reduction, which provides improved temperature control and greater energy savings when compared to a standard compressor. Enhanced fins and tubing maximize heat transfer and airflow to reduce energy consumption.

### **Dual Fuel Systems**

Homeowners can save energy costs with a dual fuel system that switches heat sources to maximize energy efficiency.

The dual fuel system consists of a heat pump condensing unit and a gas furnace. When temperatures fluctuate, this system selects the most energy efficient heat source to provide maximum comfort in the home. Typically, the heat pump will be the primary heat source. When temperatures plummet, the gas furnace becomes the primary heat source.

### Packaged Units

From a relaxing burst of cool to a comforting touch of warmth, Whirlpool<sup>®</sup> packaged units meet high standards with equally high efficiency.

Backed by innovative technology, the Gas and A/C package, Heat Pump package, and A/C & Electric Heat package units achieve an energy rating of 13 SEER—that's up to 30% more efficient than standard 2005 models.\*

#### **Gas Furnaces**

Better efficiency means greater energy savings. From the WFA and WGFB series with an efficiency rate of 80%, to the WGFE series at a rate of 95%, every Whirlpool brand gas furnace features innovative technology that drives performance.

On some models, the Secondary Heat Exchange made of high-grade, corrosion-resistant stainless steel extracts additional heat and transfers it into the airflow for added comfort and savings.

\* U.S. Department of Energy ENERGY STAR® Program—www.energystar.gov





### Air Handlers

Working in tandem with an outdoor heating and cooling unit, the indoor air handler efficiently uses energy to circulate air—hot or cold—throughout the home.

All air handlers feature the environmentally approved R-410A and A-22 refrigerants. Enhanced aluminum fins and copper tubing maximize heat transfer and airflow to reduce energy consumption.

### EcoCentral<sup>™</sup> Living System



Sometimes energy-efficiency can be difficult to recognize. We've made it easier with our EcoCentral<sup>™</sup> Living System trademarked symbol that identifies Whirlpool<sup>®</sup> and Whirlpool Gold<sup>®</sup> HVAC products that carry one or more environmentally friendly feature.

### INDOOR AIR QUALITY

ENERGY

### **Air Purifiers**

Whirlpool<sup>®</sup> air purifiers remove odors and capture airborne allergens such as: household dust, pet dander, tobacco smoke, mold spores, plant pollens, and fabric fibers from air passing through the filter.

Whirlpool<sup>®</sup> air purifier model #AP45030S quietly and effortlessly cleans room air using a Pre-Filter and True HEPA filter that filters the air 4.8 times per hour. All Whirlpool brand purifiers are ENERGY STAR<sup>®</sup> qualified to use less energy.

### Whole Home Air Filtration, Ventilation and Dehumidification

Indoor air quality is among the top environmental risks to public health. EPA studies have shown that the levels of many airborne pollutants may be 25 to 100 times higher indoors that outdoors.

Whirlpool whole home systems include a HEPA/UV option to remove airborne particles and help protect against airborne germs. The dehumidifier removes up to 160 pints of water a day from the air.

## Cooking & Ventilation

Preparing food in the kitchen can result in some wonderful aromas and delicious meals. The process uses energy. And the steam, grease, odors and heat that empties into a kitchen can have some unpleasant results.

Using an induction cooktop can make a significant contribution to energy efficiency. And proper ventilation is key to avoiding unwanted steam and odor—measured in CFMs.\*





\* CFM (cubic feet per minute) is a unit of measurement used to describe the measurement of air a blower can move in one minute. A ventilation system is considered efficient if it is able to change the air in the kitchen 8 to 15 times per hour. The industry guideline calls for a ventilation system that moves 1 CFM for every 100 BTU delivered by all of the burners.

#### **Induction Cooktops**

Saving energy and effort in the kitchen—achieved with induction cooking from Whirlpool Corporation.

Induction Cooktops decrease cook time and are 90% energy efficient.



### Wall-mounted and Canopy Hood Ventilation

Choose from updraft wall-mounted, perimetric, canopy and custom hoods; or downdraft ventilation systems.

KitchenAid<sup>®</sup> and Jenn-Air<sup>®</sup> brands offer some of the best-performing ventilation systems. Exhaust capacities range from 600 CFM with an internal blower to 900 CFM with an external blower.



### The Green Touch™ program.

As part of our ongoing commitment to sustainability, we offer a comprehensive program to help you design, build and market sustainable homes. Our Green Touch<sup>™</sup> program includes: Design tools that streamline the

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that streamline the way you design and visualize projects, as well as specify appliances.



### **Appliances**

More than 300 ENERGY STAR<sup>®</sup> qualified appliances—energy- and water-efficient products across all brands. More than any other appliance manufacturer.

Marketing assistance that shines the spotlight on you and your smart decisions to design and build green.

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## **Partnerships**



As leaders in sustainability, we can help you build green by taking advantage of our association with the EPA, PATH, EEBA, MHI and USGBC, AH&LA, NCHE as well as NAHB, the NAHB Resource Center, AIBD, AIA and NKBA.



Proof of our ongoing dedication to sustainability can be seen through industry recognition. We helped craft the Green Lights Program, the EPA's precursor to the ENERGY STAR® Partner program in 1996. We've received the ENERGY STAR® Partner of the Year Award for Sustained Excellence the past three years, and we offer nearly 300 ENERGY STAR® appliances. As a result, no other company comes close to the Whirlpool record of ENERGY STAR® award wins, or depth and breadth of product. Whirlpool works closely with NAHB, EEBA, USGBC and other organizations to make it easier to build and operate green homes.



### Working together to make a sustainable difference.

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WARM AND FUTZ

GREEN ENOUGH FOR NOW

TRULY SUSTAINABLE



The thing to ask now is how can you take sustainable building to the next level? As a building professional, our innovative products are available directly to you through a program offered exclusively by Whirlpool Corporation—The Inside Advantage.<sup>™</sup> With us as your go-to resource for appliances that promote comfort and energy efficiency in your homes, the effect you have will not just be green for today and gone tomorrow. It'll be a difference that's truly sustainable.

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ENERGY | WATER | INDOOR AIR QUALITY

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