Chicagoland Natural Gas Savings Program 2/6/2009
Cost Effectiveness Summary

	# Units	Benefits	Admin Costs	Incentive Costs	Incremental Measure Costs	TRC	PAC/UC	Measure Level Information Therm/Unit	kWh/Unit	kW/Unit	Incremetal Measure Cost/Unit	Incentive Per Unit	Measure Life	TRC (no admin)	PAC/UC (No admin)		
Portfolio		$ 6,518,469	$ 1,119,618	$ 953,225	$ 4,198,384	1.23	3.14										
Retailer Program		$ 6,036,085	$ 735,844	$ 826,625	$ 3,907,834	1.30	3.86										
Furnance Program		$ 482,384	$ 383,774	$ 126,600	$ 290,550	0.72	0.95										
Measure Level-(Note: cost effectiveness results do not include admin costs)																	
Ceiling Insulation R-38	843	$ 5,482,536		$ 632,250	$ 3,540,600	1.55	8.67	467.00	970	0	$ 4,200.00	$ 750	20	1.55	8.67	393,681	
Wall Insulation R-11	94	$ 276,335		$ 70,500	$ 110,741	2.50	3.92	275.00	-313	0	$ 1,178.10	$ 750	20	2.50	3.92	25,850	
Storage Water Heater (Energy Star: EF >/= 0.62)	289	$ 81,864		$ 21,675	$ 41,853	1.96	3.78	42.00	3	0	$ 144.82	$ 75	11	1.96	3.78	12,138	
Tankless Water Heater (Energy Star: EF >/= 0.82)	32	$ 27,823		$ 12,800	$ 35,840	0.78	2.17	115.00	6	0	$ 1,120.00	$ 400	13	0.78	2.17	3,680	
Gas Condensing Water Heater (Energy Star: EF >/= 0.80)	0	$ -		$ -	$ -	#DIV/0!	#DIV/0!	110.00	6	0	$ 685.00	$ 400	11	-	-	-	
ENERGY STAR Clothes Washers (Energy Star: MEF >/= 1.72 and WF </=8.0)	894	$ 167,526		$ 89,400	$ 178,800	0.94	1.87	13.00	67	0	$ 200.00	$ 100	11	0.94	1.30	11,622	
High Eff Furnace AFUE 92%	219	$ 251,424		$ 76,650	$ 165,126	1.52	3.28	97.00	0	0	$ 754.00	$ 350	20	1.52	3.28	21,243	
High Eff Furnace AFUE 94%	48	$ 73,854		$ 21,600	$ 47,424	1.56	3.42	130.00	0	0	$ 988.00	$ 450	20	1.56	3.42	6,240	
High Eff Boiler Eff 85%	57	$ 114,687		$ 19,950	$ 57,000	2.01	5.75	170.00	0	0	$ 1,000.00	$ 350	20	2.01	5.75	9,690	
High Eff Boiler Eff 95%	14	$ 42,419		$ 8,400	$ 21,000	2.02	5.05	256.00	0	0	$ 1,500.00	$ 600	20	2.02	5.05	3,584	
																487,728	390,182

Note on Wall insulation: For forecasting, the modeled square footage per home was used. Per sq ft value were 0.08 therms, -0.09 kWh and $0.35 IMC

ICC Docket No. 09-0436/0437
North Shore Gas Company and The Peoples Gas Light and Coke Company's Response to
Staff Data Request POL 1.01-1.03
Dated: July 6, 2010

Docket Nos. 09-0436/0437
Consolidated
ICC Staff Ex. 3.0
Attachment B

Data Request: POL 1.02

Please refer to lines 497-500 of NS PGL EX. 4.0. Please provide copies of all correspondences between members of the program design team that relate to operating a tankless water heater in the Peoples Gas' low pressure delivery system. Also, please provide all documentation of communications between the program design team and members of Chicagoland's Operating Committee or Governance Board that served to inform those members of the potential problems related to using tankless water heaters in a low pressure system.

Response:

The relevant correspondence occurred subsequent to the reconciliation period covered by this proceeding. As such, it is beyond the scope of this proceeding and was not information available at the time the Governance Board made the decisions that are the subject of this proceeding. Accordingly, Peoples Gas objects to providing such correspondence. However, without waiving the objection, Peoples Gas states the following.

The program design team was not aware that portions of Peoples Gas' system was low pressure until August 27, 2009, which was in Reconciliation Period 2. The program design team learned about the low gas pressure on portions of Peoples Gas' delivery system when ICC staff member Tom Kennedy informed the Chicagoland Governance Board, via e-mail communication, that Peoples Gas had submitted testimony in its rate case indicating that tankless water heaters "will not work in on Peoples system since it is a low pressure system." Prior to August 27, 2009, the members of the program design team were unaware of the low pressure system in portions of Peoples Gas service territory.

For the time period covered by Reconciliation Year 1, there are no correspondences between members of the program design team that relate to operating a tankless water heater on Peoples Gas' low pressure delivery system. Furthermore, for the period covered by Reconciliation Year 1, there is no documentation of communications between the program design team and members of the Chicagoland's Operating Committee or Governance Board that serve to inform those members of the potential problems related to using tankless water heaters in a low pressure system.

Also see Ms. Beitel's rebuttal testimony, page 22:497-500, which explains that about 50% of Peoples Gas' customers take service from facilities with sufficient pressure to accommodate tankless water heaters. This is consistent with Peoples Gas' testimony in its most recent rate case, Docket Nos. 09-0166/09-0167 (Cons.).

CLOTHES WASHER PRODUCT SNAPSHOT

May 2008

Prepared by D&R International, Ltd.
On behalf of the
U.S. Department Energy

Docket Nos. 09-0436/0437
Consolidated
ICC Staff Ex. 3.0
Attachment C

TABLE OF CONTENTS

ENERGY STAR® QUALIFIED CLOTHES WASHERS:
A Great Opportunity to Save Energy and Water

When it comes to saving energy and water, ENERGY STAR qualified clothes washers are the power-hitters of home appliances, using an average of 31 percent less energy and 55 percent less water than standard clothes washers. Many Energy Efficiency Program Sponsors (EEPS) promote them because they deliver cost effective energy savings. Water utilities also promote them because they are a direct and cost-effective way to achieve water savings. They appeal to consumers because they are gentler on clothes and save hundreds of dollars in water and energy costs.

This document presents key market facts that program sponsors will find helpful in developing clothes washer programs. A brief summary is presented below; details follow in the body of this *Snapshot*.

- **An increasing proportion of consumers are choosing to purchase ENERGY STAR qualified clothes washers.** Every year a greater proportion of units sold are qualified. In 2006, 38 percent of all washers sold were ENERGY STAR, up from 27 percent in 2004, when new criteria took effect.

- **More than half of all clothes washer models available for sale in the United States are ENERGY STAR qualified.**[1] All ENERGY STAR qualified clothes washers are now either front-loaders or advanced high-efficiency top-loaders. Only these two types of machines are able to meet current ENERGY STAR criteria.

- **ENERGY STAR clothes washers appeal to consumers for many reasons.** Utility cost savings are compelling: an ENERGY STAR qualified clothes washer will save the average consumer $50 annually and $550 over the lifetime of the machine.[2] Many ENERGY STAR models also have other features that consumers find attractive, including larger capacities, sleek styling, more cycle options, and less wear and tear on clothes.

- **First cost (sticker price) and unfamiliarity remain the greatest barriers to even more rapid growth in ENERGY STAR qualified clothes washer sales.** Purchase price is still the principal barrier to accelerating that growth. Traditional top-loading washers sell for hundreds of dollars less, yet their lifetime costs are higher. Some consumers are also deterred by the unfamiliar configuration and operation of front-loading and advanced top-loading washers.

- **New, more stringent ENERGY STAR criteria will take effect in two phases over the next three years.** The first phase, which increases energy and water efficiency by five percent, will take effect in July 2009. The second phase, which increases energy and water efficiency another ten percent, will take effect in January 2011. With the new criteria, ENERGY STAR clothes washers will continue to offer substantial energy and water savings for years to come.

- **The market potential for ENERGY STAR qualified clothes washers remains large.** Although 79 percent of U.S. households have a clothes washer,[3] only 11 percent of those units are ENERGY STAR qualified.[4] If all conventional units were replaced with ENERGY STAR qualified models, U.S. consumers could save approximately 11 billion kilowatt hours (kWh) of electricity, 290 million therms of natural gas, 550 billion gallons of water, and $4 billion annually.

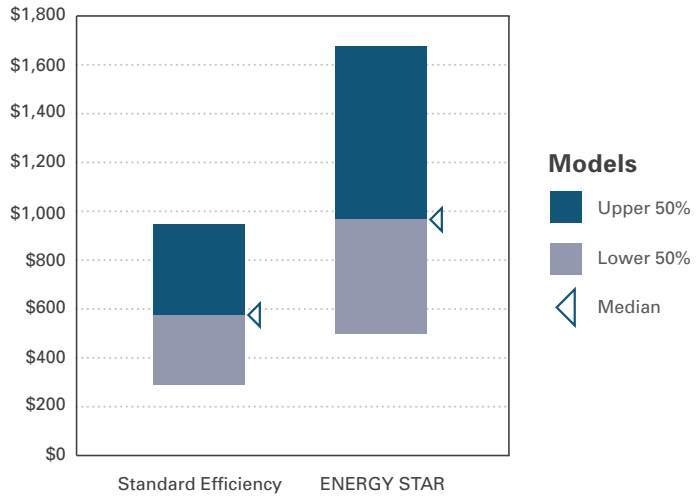
PRODUCT FEATURES AND BENEFITS

Price and features are the key factors consumers consider in choosing a particular appliance model. Consumers increasingly demand appliances with premium features, and clothes washers are no exception to this trend. Consumers are attracted to touch-pad controls, programmable settings, higher spin speeds, steam cleaning, greater capacity, more cycle options, and stainless steel tubs. Some of these premium features—most prominently higher spin speeds and greater capacity—are directly linked to improved efficiency. As a result, nearly all premium washers qualify for the ENERGY STAR.

Washers with higher spin speeds extract more water from clothes, meaning less time and energy spent in the dryer. Washers without a turning agitator are gentler on clothes and leave more space in the tub for laundry, meaning fewer loads of laundry each week.

ENERGY STAR qualified clothes washers are generally more expensive than standard washers. They incorporate advanced technologies that are more expensive to build or buy than are conventional washer technologies. For example, to accommodate higher spin speeds, manufacturers often must use more expensive suspensions. Partly as a result of increased manufacturing costs, many high-efficiency washers are positioned as premium products and are loaded with many of the other features listed above. Manufacturers give them appealing names and make them available in an assortment of colors to attract consumers' attention. Manufacturers and retailers find these products highly profitable and are eager to partner with EEPS to promote them.

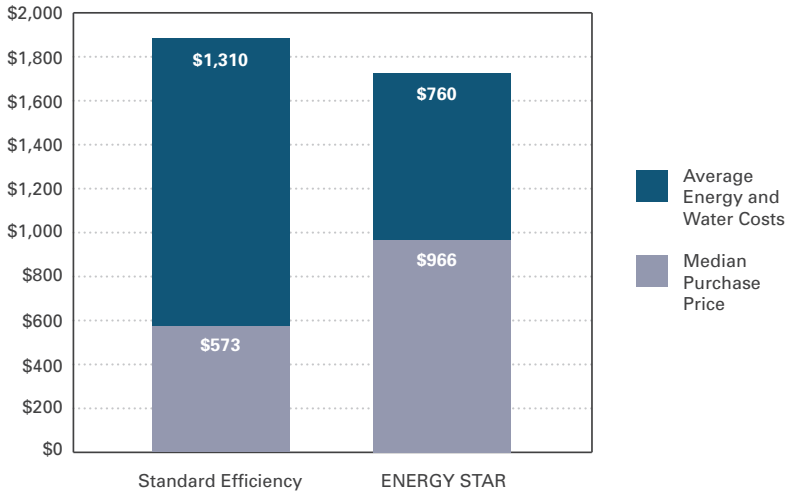
Figure 1: Purchase Price Range for Clothes Washers



Note: Price data are not sales weighted.

Source: D&R International Ltd.; based on data provided by ENERGY STAR retail partners.

Figure 2: Lifetime Cost for Clothes Washers Standard Efficiency vs. ENERGY STAR



Source: D&R International Ltd.; 2007 product database.

Nevertheless, there are a number of ENERGY STAR models that are less expensive than the more expensive standard-efficiency washers (Figure 1). Manufacturers have recently introduced these less expensive ENERGY STAR models to make energy-efficient washers affordable to more consumers.

When you consider both the purchase price and the lifetime operating costs, ENERGY STAR qualified washers compare favorably to standard-efficiency models because ENERGY STAR qualified models cost substantially less to operate (Figure 2). For example, the sticker price on the least expensive standard model is about $200 less than the least expensive ENERGY STAR qualified model. However, when lifetime operating costs are considered together with purchase price, that same standard model will cost the owner about $340 more over its lifetime than the ENERGY STAR qualified model. On average, an ENERGY STAR qualified clothes washer will pay for the increased purchase price within five years, well before its average life of 11 years.

Despite the many benefits of ENERGY STAR models, new technology and a changing market present challenges for increasing sales of ENERGY STAR qualified clothes washers, including a need to educate consumers and change consumer behavior. The key challenges facing those who are promoting ENERGY STAR qualified washers are as follows:

- **Price and familiarity still favor traditional top-loaders.** First cost strongly influences nearly all purchasing decisions, and traditional top-loading products typically cost less than ENERGY STAR qualified alternatives. In addition, all clothes washers that meet ENERGY STAR criteria are either front-loaders or advanced top-loaders. These product designs are unfamiliar to many consumers, which can create an obstacle to sales.

- **Front-loading models operate best with special detergent.** ENERGY STAR clothes washers work best with special low-sudsing detergents formulated for lower water volumes and temperatures. Regular detergents may produce extra suds that remain in the clothes; cause units to overflow; or, if the machine can sense residual detergent, cause the unit to use additional water, thus reducing energy and water savings. The specially formulated detergents are usually marked with an "h•e" symbol (pictured at right).

- **Front-loading models require additional care.** With front loaders, users are typically advised to run a bleach cycle occasionally and leave the door open when not in use to avoid mold. Consumers unfamiliar with this additional care may be upset by unexpected mold or mildew, which can stain clothing.

Problems With Non-ENERGY STAR Models.

Consumer Reports magazine reported in June 2007 that "several manufacturers are meeting the new federal minimum clothes washer standard by lowering wash water temperatures,"[6] which can result in poor cleaning performance and unhappy consumers. The problem is associated only with non-ENERGY STAR top-loading products. Its effect on the collective consumer psyche is not known, but program managers may need to address the misconception that increased energy efficiency is associated with poor cleaning performance.

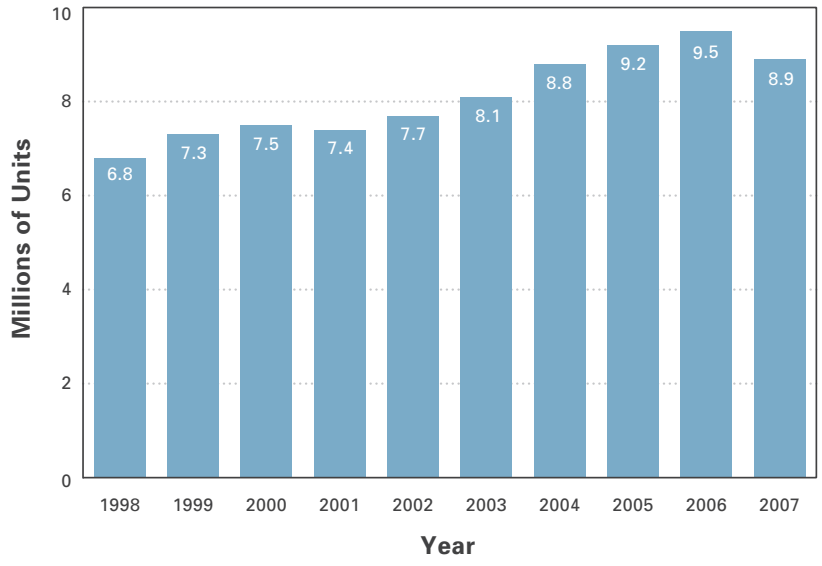
HOUSEHOLD PENETRATION AND MARKET SIZE

An estimated 87 million households, or 79 percent of U.S. households, have a clothes washer.[7] Of those, only 11 percent have an ENERGY STAR qualified model, so there remain significant energy and water savings opportunities from increasing the household penetration of ENERGY STAR qualified clothes washers. After a decade of steady growth, total clothes washer sales declined in 2007, falling to 8.9 million units (Figure 3). This was due to the dramatic decrease in new housing starts. Industry sources estimate that 7.3 million of those units replaced existing units, with the remaining 1.6 million units going into new homes.[8]

While individual households buy most clothes washers, there is also a large market for residential-style commercial clothes washers. Some 3.5 million units are used in laundry rooms in multifamily housing, on college campuses, or at independent do-it-yourself laundromats.[9] These machines are standard residential machines modified to withstand more frequent use and to require payment. Typically, they are owned by route operators who place them in service in laundry facilities in return for a share of the vend revenues.

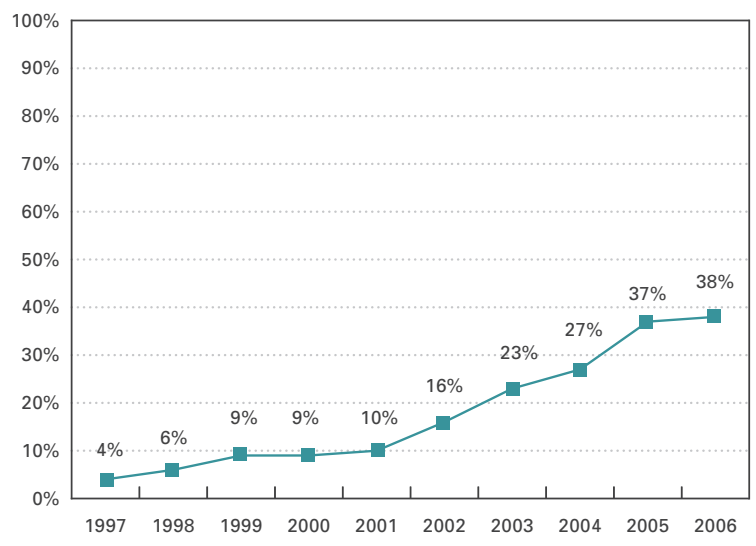
Although these commercial units represent just three percent of the total installed base, they are used three times more frequently and so account for nearly 10 percent of U.S. clothes washer energy and water consumption. These commercial units are replaced more frequently than residential units; therefore, investments in replacing older, less-efficient units with newer, more-efficient units will pay off more quickly in commercial settings.[10]

Figure 3: Residential Clothes Washer Shipments by Year



Sources: 1998-2006 data from Annual Statistical Review, *Appliance Magazine* May 2007. 2007 data from D&R International, Ltd.; based on data provided by ENERGY STAR retail partners.

Figure 4: ENERGY STAR Qualified Clothes Washer Market Share



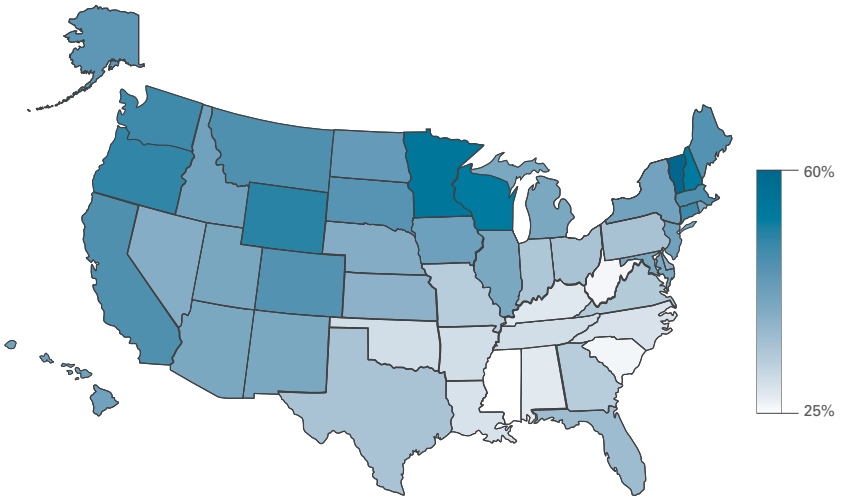
Source: D&R International, Ltd.; based on data provided by ENERGY STAR retail partners.

ENERGY STAR MARKET SHARE

Sales of ENERGY STAR qualified clothes washers have grown faster than sales of clothes washers as a whole. ENERGY STAR market share rose from four percent in 1997 to 38 percent in 2006 (Figure 4). While final data are not yet available, preliminary estimates suggest that ENERGY STAR market share declined in 2007 due to implementation of new ENERGY STAR criteria, which increased clothes washer efficiency requirements by 21 percent and added a new water efficiency requirement. Under the new criteria, many previously qualified models, particularly traditional top loaders, no longer qualified.

On March 7, 2008, the U.S. Department of Energy (DOE) released updated criteria, effective July 1, 2009, with additional criteria effective January 1, 2011 (Table 1). The 2009 criteria increase efficiency by five percent over current levels; the 2011 criteria then improve efficiency by an additional ten percent over 2009 levels. These new criteria are expected to bring immediate drops in ENERGY STAR market share, followed by increases as manufacturers introduce new, more efficient models.

Figure 5: ENERGY STAR Market Share by State 2006



Source: D&R International Ltd.; based on data provided by ENERGY STAR retail partners.

Market share of qualified units varies by state (Figure 5). Sales are highest in California, New England, and the Northwest, regions where EEPS' programs are established and active. Market share is lowest in the lower Midwest and South, where energy efficiency has only recently received attention and investment.[11]

Table 1: Timeline of ENERGY STAR Criteria and Federal Standards for Clothes Washers *(Residential and Residential–Style Commercial)*

Criteria	1997	Jan. 1, 2001	Jan. 1, 2004	Jan. 1, 2007	July 1, 2009	Jan. 1, 2011
ENERGY STAR	EF ≥ 2.5	MEF ≥ 1.26	MEF ≥ 1.42	MEF ≥ 1.72 WF ≤ 8.0	MEF ≥ 1.8 WF ≤ 7.5	MEF ≥ 2.0 WF ≤ 6.0
Federal Standard: Residential	EF ≥ 1.18		MEF ≥ 1.04	MEF ≥ 1.26		MEF ≥ 1.26 WF ≤ 9.5
Federal Standard: Residential-Style Commercial	None			MEF ≥ 1.26 WF ≤ 9.5		

Note: Current criteria and standards are in shaded boxes. Modified Energy Factor (MEF), the current measure of clothes washer efficiency, is the ratio of the capacity of the washer to the energy used in one cycle. MEF includes energy used to operate the machine, to heat the water used for washing, and to dry clothes after the wash. The higher the MEF, the more efficient the product. The previous metric, Energy Factor (EF), excluded drying energy. Water Factor (WF) measures the ratio of the quantity of water used in one cycle to the capacity of the washer. The lower the WF, the more efficient the product.

Source: DOE.

What Happened to Those Tax Credits?

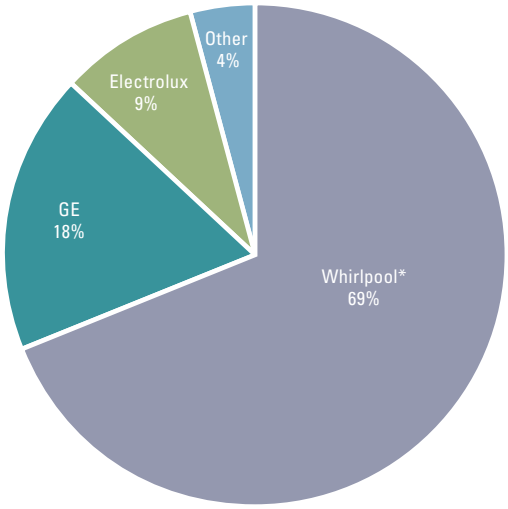
The Energy Policy Act of 2005 established a $100 tax credit for manufacturers for every clothes washer produced in the United States in 2006 and 2007 that met the 2007 ENERGY STAR criteria levels. Some manufacturers report using the credits to continue to invest in ENERGY STAR and raise the efficiency of future clothes washer platforms. Although Congress did not extend the tax credit in 2007, it may be revisited in 2008.

MANUFACTURERS

Three manufacturers currently dominate the U.S. clothes washer market (Figure 6). Whirlpool is the largest clothes washer manufacturer, controlling 69 percent of the market after its 2006 acquisition of Maytag. The market shares of the two other leading manufacturers, GE and Electrolux, have held relatively steady for the last five years, at 18 percent and 9 percent in 2006, respectively. Foreign players, such as Bosch, LG, Samsung, and Fisher & Paykel, are beginning to gain traction in the U.S. market, expanding floor space with national appliance retailers. The combined market share of manufacturers other than the big three rose from less than one percent in 2002 to four percent in 2006.

ENERGY STAR qualified clothes washers are available throughout the United States, and all major manufacturers offer qualified models (Figure 7). Today, 40 percent of all clothes washer models available for purchase in the United States are ENERGY STAR qualified.[12] To meet existing criteria and in anticipation of upcoming criteria, manufacturers have taken different approaches with respect to their ENERGY STAR product offerings. Fisher & Paykel only offers top-loading models. LG, Bosch, Electrolux, and Samsung offer only front-loading models. GE, Whirlpool, and Kenmore offer both types.

Figure 6: Manufacturer Market Share and Total Shipments, 2006



Manufacturer	Total Shipments (in millions)
Whirlpool	6.6
GE	1.7
Electrolux (Frigidaire)	0.9
Others	0.4
All	9.5

*Includes most Kenmore products.

Note: Figures do not sum to total due to rounding.

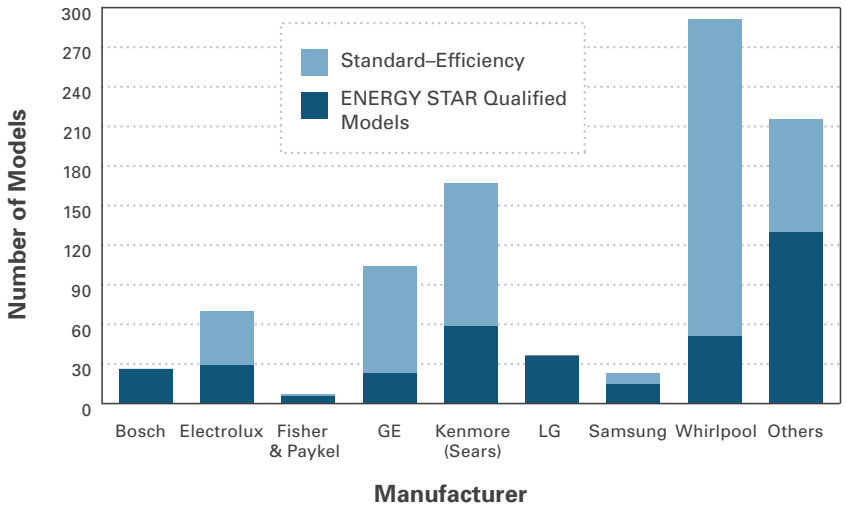
Source: "30th Annual Portrait of the U.S. Appliance Industry," *Appliance Magazine,* September 2007, p. 43.

Who Makes What Brand?

The table below lists the brand names used by the eight largest clothes washer manufacturers in the United States. Three of these manufacturers offer ENERGY STAR qualified clothes washers under two or more brand names.

Manufacturer	Brands of ENERGY STAR Qualified Products
Bosch	Bosch Siemens
Electrolux	Frigidaire
Fisher & Paykel	Fisher & Paykel
GE	GE GE Profile
Kenmore (Sears)	Kenmore (Sears)
LG	LG
Samsung	Samsung
Whirlpool	Amana KitchenAid Maytag Whirlpool

Figure 7: Clothes Washer Models by Manufacturer, 2007



Source: D&R International, Ltd.; 2007 product database.

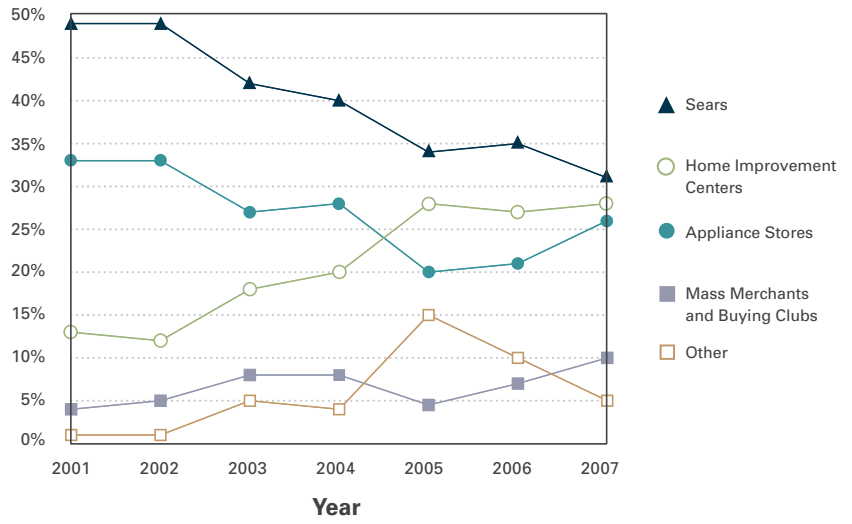
RETAILERS

All of the largest appliance retailers in the United States—Sears, Lowe's, The Home Depot, and Best Buy—offer large selections of ENERGY STAR qualified clothes washers.[13] For many years, Sears and appliance stores sold the lion's share of laundry equipment. In recent years, these retailers have lost market share to home improvement centers such as Lowe's and The Home Depot (Figure 8). However in the past two years, home improvement centers' market share seems to have leveled off, with appliance stores recapturing a modest amount of share. Additionally, mass merchants and warehouse clubs only accounted for four percent of the market in 2001, but they have since more than doubled their share to 10 percent in 2007.

One reason that independent appliance stores can effectively compete with giants like Sears, Best Buy, The Home Depot, and Lowe's is that they coordinate their activities through national buying groups. These umbrella organizations, notably Nationwide Marketing Group, Brand Source, and the NATM Buying Corporation, enable independent retailers to pool their purchasing power and obtain competitive prices from manufacturers. The buying groups also serve as points of contact so that EEPS can include independent stores in coordinated promotions and campaigns in the same way they do larger retail chains.

Each retailer offers a different selection of products. Table 2 shows which manufacturers' products each leading retailer or buying group carries.

Figure 8: Laundry Appliance Market Share by Retailer Type



Note: Includes both clothes washers and clothes dryers.

Sources: Data for 2001-2006 from "State of the Industry Annual Report," published annually from 2002 to 2007 as the last issue in February of the weekly publication *Home Furnishing News*. Data for 2007 from personal communication with the editor of *Home Furnishing News*, February 2008.

Table 2: Leading Retail Distribution Channels by Manufacturer

	Sears	Lowe's	The Home Depot	Best Buy	P.C. Richard & Son	H.H. Gregg	Menards	Nationwide Marketing Group	AVB BrandSource
Bosch	✓	✓		✓	✓	✓		✓	✓
Electrolux	✓	✓		✓	✓	✓	✓	✓	
Fisher & Paykel		✓			✓			✓	✓
GE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kenmore (Sears)	✓								
LG	✓		✓	✓	✓			✓	
Samsung	✓	✓		✓	✓				
Whirlpool	✓	✓	✓	✓	✓	✓	✓	✓	✓

Source: Retailer Web sites.

ENERGY SAVINGS OPPORTUNITIES

New ENERGY STAR qualified clothes washers use an average of 31 percent less energy and 55 percent less water than new standard clothes washers. Much of the cost savings come from the significant reduction in water used for cleaning, which can reach 7,000 gallons and $31.60 per household per year, a 60 percent cost savings, on average. An ENERGY STAR qualified clothes washer also saves households a modest amount of energy directly—16 kWh and $1.66 per year, on average.

Energy savings also come from two additional sources: the reduction in hot water use that occurs because of lower overall water consumption, and the shorter drying times needed because high spin speeds leave less water in the clothes. As a result, energy savings vary depending on the type of energy used for drying and water heating. Tables 3 and 4 provide average savings for each scenario, and weighted-average cost savings.

Table 3: Estimated Water and Energy Savings

Fuel Type		Annual Savings					
Water Heating Fuel	Clothes Drying Fuel	Water	Water Heater	Clothes Washer	Clothes Dryer	Total Energy Savings	
						Therms	kWh
Gas	Gas	6,977 gallons	5 therms	16 kWh	4 therms	9	16
	Electric				100 kWh	5	116
	None				-	5	16
Electric	Gas	6,977 gallons	142 kWh	16 kWh	4 therms	4	158
	Electric				100 kWh	-	258
	None				-	-	158

Source: D&R International, Ltd. product database.

Table 4: Estimated Cost Savings

Fuel Type			Annual Savings					Lifetime Savings*
Water Heating Fuel	Clothes Drying Fuel	Percent of U.S. Households	Water	Water Heater	Clothes Washer	Clothes Dryer	Total*	
Gas	Gas	21%	$32	$7	$2	$5	$45	$500
	Electric	29%				$11	$50	$555
	None	9%				-	$40	$440
Electric	Gas	1%		$15		$5	$54	$591
	Electric	33%				$11	$59	$646
	None	7%				-	$48	$530
Weighted Average		100%	$32	$10	$2	$8	$51	$562

* Estimates may not sum to total annual or lifetime savings due to rounding.

Note: Lifetime savings assume a product lifetime of 11 years.

Source: Fuel type splits from Energy Information Administration, *Residential Energy Consumption Survey, 2001.*
Energy prices from Energy Information Administration, 2008.
Water price from "Water and Wastewater Rate Survey," Raftelis Consulting, 2006.

Converting sales of standard clothes washers into sales of ENERGY STAR qualified models would result in significant energy and water savings for the country:

- Converting 1,000 standard clothes washer sales to sales of ENERGY STAR models would save 136,000 kWh of electricity, 7 million gallons of water, and 4,000 therms of natural gas every year.
- Shifting all sales of standard models to ENERGY STAR qualified models (5.5 million units) would save 750 million kWh of electricity, 39 billion gallons of water, and 20 million therms of natural gas every year, saving those consumers $275 million in energy bills annually.
- By replacing the entire country's installed base of standard clothes washers (78 million units) with new ENERGY STAR qualified models, the United States could save 11 billion kWh of electricity, 550 billion gallons of water, and 290 million therms of natural gas every year.

ENERGY STAR STRATEGY

DOE's overall objective is to increase market share of ENERGY STAR qualified clothes washers. To do this, it works closely with EEPS, retailers, and manufacturer partners to promote ENERGY STAR qualified clothes washers by highlighting their cost savings, environmental friendliness, and performance benefits. In addition, DOE aims to keep the ENERGY STAR label relevant in the market by periodically reviewing and updating the ENERGY STAR criteria as warranted.

In the coming year, DOE is collaborating with partners to develop promotional strategies and materials to take advantage of new ENERGY STAR criteria. The criteria that took effect in 2007 include a new water efficiency requirement, which is helping water utilities substantiate claims about the water savings associated with ENERGY STAR models. The momentum created by the new criteria provides a great opportunity for DOE to reach out to new and somewhat "un-tapped" ENERGY STAR stakeholders such as water utilities and commercial laundry route operators.

On March 7, 2008, DOE released updated criteria that will take effect on July 1, 2009, with additional criteria effective January 1, 2011. DOE is working with ENERGY STAR partners to develop water savings and other messaging for use in outreach materials.

DOE helps partners develop marketing materials and educational outreach activities. In addition, DOE publishes periodic market intelligence reports such as this one for partners to use in their program planning. On request, DOE can provide partners with customized "fun facts" to use in promoting ENERGY STAR products.

DOE's ENERGY STAR Appliance Partner Meeting, held every September, provides a forum in which partners can share promotional plans and coordinate their efforts with one another. These meetings also provide partners with an excellent opportunity to share best practices and network.

EEPS PROMOTIONS

Clothes washers have been a flagship product in EEPS' program portfolios because they bring substantial and cost-effective energy savings. ENERGY STAR serves as a valuable resource to EEPS, helping them realize their goals of

- Increasing market saturation of energy-efficient clothes washers;
- Encouraging energy conservation;
- Increasing consumer awareness of the ENERGY STAR brand and energy efficiency in general; and
- Reducing electricity demand, including during peak hours.

EEPS have successfully used a number of strategies to reach those goals, including consumer rebates, in-store signage and materials, advertising, and community outreach.

EEPS rebate programs have helped the national market share of ENERGY STAR qualified clothes washers quadruple from nine percent in 2000 to 38 percent in 2006.

Most EEPS with long-standing energy-efficiency programs tie rebates to efficiency tiers beyond ENERGY STAR levels, using tiers set by the Consortium for Energy Efficiency. Promoting a more efficient subset of ENERGY STAR qualified models provides these EEPS greater per-unit energy and water savings.

Many EEPS regularly involve manufacturers and retailers in rebate programs, coordinating activities at the ENERGY STAR Appliance Partner Meeting or sending requests for proposals to solicit their participation. EEPS typically assemble a varied group of interested parties to increase program visibility and effectiveness, and to avoid the impression that they are endorsing specific manufacturers or retailers.

ENDNOTES

[1] D&R International, Ltd. product database, 2007.

[2] "30th Annual Portrait of the U.S. Appliance Industry," *Appliance Magazine,* September 2007. Based on 11-year average life expectancy.

[3] U.S. Census Bureau, American Housing Survey 2005.

[4] D&R International, Ltd. Retail sales data, 2007.

[5] "Do Green Appliances Live Up to Their Billing," *The Wall Street Journal,* August 2, 2007.

[6] "Washers & Dryers: Dirty Laundry," *Consumer Reports,* June 2007.

[7] Based on 2005 saturation rate, from U.S. Census Bureau, American Housing Survey 2005. Estimate of number of U.S. households from U.S. Census Bureau, American Community Survey 2006.

[8] D&R International, Ltd. 2007, based on personal communications with major manufacturers and retailers.

[9] Multifamily Laundry Association, 2002.

[10] Ibid.

[11] D&R International, Ltd. retail sales data, 2007.

[12] D&R International, Ltd. product database, 2007.

[13] *Major Appliance Retailers Report*, June 2006.

U.S. DEPARTMENT OF
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ICC Docket No. 09-0436/0437
The Peoples Gas Light and Coke Company's Response to Staff Data Requests DAB 2.01-2.02
Dated: March 24, 2010

REQUEST NO. DAB 2.01:

The Companies' responses to PGL DAB 1.08 states in part that

On page 28 of the Order, the ICC concluded that:

Calculation of the TRC test at the portfolio level provides utilities with greater flexibility to ensure that measures with less short-term energy savings value, but greater value over several years, will be included in any overall portfolio of measures and programs. This contention is reasonable and hereby approved.

For any measure included in the Chicagoland Natural Gas Savings "high efficiency furnaces and boilers program" or "retailer and measure rebate program" (Peoples Gas Ex. 2.1 pages 3 and 6) with a TRC less than 1, please provide all evidence that was used to determine that the measure has "greater value over several years."

RESPONSE:

Cost Effectiveness Considerations

When the Program was originally launched, there were two measures with TRCs below 1.0 – clothes washers and tankless water heaters. The TRC of less than 1.0 was due to their high incremental measure costs. Program experience around the country indicates that incremental measure costs change over time, sometimes in a short period. Generally, as sales of a measure increase, the cost of the measure (and hence the incremental measure cost) goes down, increasing the measure's cost-effectiveness. It is common program design strategy to include non-cost-effective measures in an overall cost-effective portfolio to increase product volume and reduce costs, rendering a once non-cost-effective measure at a single point in time cost-effective over time. In the case of the Chicagoland Natural Gas Savings program, the program did not rely solely on rebates to drive increased volume, but also included other strategies to drive volume including extensive retailer outreach (in the first phase of the program) to build awareness of and demand for high-efficiency clothes washers plus outreach to plumbing supply houses and plumbers to build awareness and demand for high-efficiency tankless water heaters.

Other reasons that portfolios around the country include non-cost-effective measures in an overall cost-effective portfolio are to foster emerging technologies, to build consumer awareness, acceptance and demand over time, to minimize lost opportunities, to address significant energy-using end uses and to create a diverse portfolio. All of these reasons for including non-cost effective measures in a portfolio provide "greater value" over time. Furthermore, there were multiple reasons for including clothes washers and tankless water heaters in the Chicagoland portfolio, as described further below.

ICC Docket No. 09-0436/0437
The Peoples Gas Light and Coke Company's Response to
Staff Data Requests DAB 2.01-2.02
Dated: March 24, 2010

Clothes Washers:

Clothes washers were included to create quick Program visibility through the retailer marketing channel to build on the significant energy efficiency awareness that the Commonwealth Edison electric energy efficiency program had built through the retailer channel. Including clothes washers at the beginning of the Program created a high-profile retail presence, which built trade ally and consumer awareness of and interest in the Program. In addition, consumers use clothes washers on a very frequent basis, and, for this reason, they present a particularly good opportunity to increase consumer awareness, education and acceptance of energy efficiency. The clothes washer measures was a good measure for a "quick launch" program in an area with limited recent gas efficiency program experience to foster awareness of, interest in, and acceptance of gas efficiency measures to build program momentum and greater savings over time. As the Program developed other marketing channels, the clothes washer measure was phased out.

Tankless Water Heaters:

Tankless water heaters were included in the original Program measure mix for multiple reasons. First, tankless water heaters only use approximately 25% of the energy that efficient storage water heaters use (19 therms/year compared to 78 therms/year). Water heating is the second largest gas end use in residential homes, so it is reasonable to include water heating gas savings measures in a comprehensive residential gas efficiency program. As tankless water heater incremental measure costs decrease over time, savings from tankless water heaters will provide more savings and value over time. Tankless water heaters are recognized by Energy Star and their demand has been increasing. Their current national "market share" is approximately 2%. Those factors contributed to the decision to include them as a Program measure to help generate consumer demand and create economies of scale (in combination with other efforts such as ARRA funds, federal tax rebates and the Energy Star designation) for these products in Chicagoland. Increasing demand would eventually reduce the installed costs and increase measure level cost-effectiveness. Finally, tankless water heaters are a relative "new" and "different" energy efficiency measure that consumers tend to get excited about. Because tankless water heaters are "new" and "different" they are a good measure to build consumer awareness, interest in and excitement about gas efficiency, resulting in greater program savings over time.

Wall Insulation:

Beyond these initial measures, a third measure with a TRC below 1.0 surfaced in the portfolio toward the end of program year 1. At that time the cost effectiveness assumptions were revised in response to a Staff request. The TRC for wall insulation then dropped below 1.0. Wall insulation was later removed from the program during program year 2, but was part of the portfolio for the duration of this reporting period.

Wall insulation was originally included in the Program design because data showed that a significant percentage of the aging housing stock in the Chicago area has little or no existing wall insulation. Based on the original cost effectiveness assumptions, wall insulation was determined to be cost effective and offered significant energy savings (92 therms per representative home per year). Additionally, due to the downturn in the economy, the Program design team wanted to offer self-installed measure options in the portfolio. Based on actual program experience, more wall insulation was being installed by insulation contractors rather than self-installed, which drives down the cost-effectiveness. However, wall insulation provides consumers with savings and greater comfort than little or no insulation, building consumer awareness, acceptance and demand for greater gas efficiency and savings over time.

Staff requested that the invoice data from Program applications be used for the insulation cost assumptions.

ICC Docket No. 09-0436/0437
North Shore Gas Company and The Peoples Gas Light and Coke Company's Response to
Staff Data Request POL 1.01-1.03
Dated: July 6, 2010

Docket Nos. 09-0436/0437
Consolidated
ICC Staff Ex. 3.0
Attachment E

Data Request: POL 1.03:

Please refer to lines 489-496 of NS PGL EX. 4.0. Please provide documentation of all premise visits that took place to ensure compliance with the referenced Chicagoland Program requirements.

Response:

No such premises visits occurred. See the response to Staff data request POL 1.02. The program design team was not aware of the low pressure delivery system on portions of Peoples Gas' delivery system during this reconciliation period.