



May 30, 2013

Ann Bailey  
ENERGY STAR Labeling Branch Chief  
U.S. Environmental Protection Agency  
ENERGY STAR Appliance Program  
appliances@energystar.gov

Re: ENERGY STAR Program Requirements, Product Specification for Residential Refrigerators and Freezers Final Draft, Version 5.0 and Final Draft Test Method to Validate Demand Response

Dear Ms. Bailey:

These joint comments are filed on behalf of Electrolux Home Products, Inc., General Electric Co., Sub-Zero, Inc. and Whirlpool Corp. (the "Companies"), all of whom have production facilities in the United States and manufacture a wide range of refrigerators and refrigerator-freezers for sale in the U.S. and for export. All have been ENERGY STAR partners for many years and several have been recognized by EPA for their contributions to the program. As partners, we support the goals of the ENERGY STAR Program (the "Program") and appreciate the hard work done to date to try to finalize the specification. While we are close to resolving most issues, we continue to disagree strongly with the proposal to make March 2014 the effective date of the new refrigerator specification. However, we are committed to work for a satisfactory resolution of the remaining issues and look forward to the joint announcement of a new specification with significant consumer and environmental benefits.

The Companies are members of the Association of Home Appliance Manufacturers ("AHAM") and, like all 20 members who manufacture refrigerators, we support AHAM's comments, which have consistently opposed any ENERGY STAR effective date other than September 2014.

We file these supplemental comments to (1) urge EPA to align the effective date of the 2014 ENERGY STAR Refrigerator/Freezer specification with the effective date of the new Department of Energy (DOE) energy minimum standard on September 15, 2014, and (2) provide additional data in support of that position.



Aligning the ENERGY STAR and DOE effective dates is consistent with the Program's historical practice.

The Companies have had to invest billions of dollars to design and manufacture refrigerators/freezers that will comply with the 2014 DOE mandatory standards, the first issued by that agency since 2001. That explains, in part, why they are so stringent: top-freezer and side-freezer models must, on average, be 25% more efficient than today's models, and bottom-freezer models 20% more efficient. The ENERGY STAR Program will require that products be 10% more efficient than the new DOE requirements. Thus, ENERGY STAR models must be 35% and 30% more efficient than under the current DOE requirements. Moreover, significant cost to full-line manufacturers is even more significant as they must redesign every product to meet the new standard instead of competing on a few models targeted at high-end consumers.

Creating entirely new platforms is the only cost-effective way to achieve efficiency levels of the required magnitude for all models. Every system and component that impacts energy performance — insulation materials, foam agents, compressors, cases and doors, etc. — must be redesigned and new production equipment and assembly lines installed to build the products.

In the past, recognizing the cost and effort required just to achieve the new compliance levels, the Program almost always has set the effective date of the new specifications at a *date later than the federal minimum standard compliance date*.<sup>1</sup>

The justification offered by Program officials for jumping ahead of the compliance date is concern regarding the high penetration of ENERGY STAR models in industry shipments. As the Companies have pointed out, and as further explained below, implementing a March effective date, while it might reduce penetration, would do so for reasons that undermine the Program's goals and reputational brand because a March date would result in widespread consumer confusion over an extended timeframe. It may also force manufacturers and retailers to spend millions of dollars, in duplicative and costly activities to comply with both dates with little resulting benefit to consumers or the environment.

Perversely, the effect of premature implementation will likely be the unintended consequence of a *net increase in energy consumption on the grid*.

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<sup>1</sup> EPA points to the 2001 refrigerator specification, which went into effect in January 2001, six months before the July 2001 effective date of the 2001 DOE standard as precedent for the current proposal. While technically correct, the distinguishing fact—a critical one—between the 2001 specification and the current specification is that the 2001 specification's level was well known to manufacturers before it was issued, which allowed them to integrate the specification level into basic product platform designs. The pending proposal, coming well into the design phase, and in some cases, after plants, manufacturing tooling and equipment is being built, removes that opportunity. We understand that this was not the fault of EPA but the effect of the actions of other stakeholders in the regulatory process, one of which, DOE, changed the test procedure in a way that adversely affected the energy consumption and operating costs as displayed on the EnergyGuide for ENERGY STAR products. (In contrast, the test procedure changes did not impact the 2001 specification.)



A March effective date will effectively require manufacturers and retailers to prepare for and perform two showroom floor transitions.

Below is a list of the activities that manufacturers perform when removing ENERGY STAR qualification of a model. Typically floors are transitioned whenever significant numbers of new models are offered by manufacturers. As now proposed by Program officials, transitions would occur in March and September, in many instances doubling the work—and creating waste.

To illustrate, for ENERGY STAR models that on March 1, 2014, will not meet the September 2014 DOE standard and whose basic structure is not capable of being upgraded to meet the standard, but which lawfully can be manufactured and sold until September 15, 2014, the following activities must be performed:

- Update internal systems (SAP)
- Update ENERGY STAR listings
- Facilitate trade transition
- Transition manufacturing materials
- Create new energy tag
- Create new POP materials
- Update user manual, serial tag, product documentation
- Update store website
- Update systems
- Change brochures, catalog of products
- Change POP materials on retail floor (i.e. "most-efficient" claim)
- Change floor pricing tag

The activities in red are waste, i.e., they would not need to be done if the products retained their ENERGY STAR status until September 15. The activity in black does not constitute waste as it would still need to be done in September as a result of the products losing their status.<sup>2</sup>

The four companies have reviewed the efficiency capabilities of their products and their product plans and determined that the combined waste that they and the retailers would incur as a result of the March model disqualification exceeds \$7 million, an amount that is significantly higher when all manufacturers and their retail partners are included. Sears and Lowes, the largest major appliance retailers, and Nationwide Group, the largest appliances buying group, have informed EPA of their concerns regarding the waste and disruption that would result from a floor transition to accommodate the March 2014 ENERGY STAR effective date followed by a floor transition in September 2014 to

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<sup>2</sup> Other activities that must be performed in September when retiring and adding new models are as follows: Perform energy test create and submit certification documentation, update internal systems (SAP), facilitate retailer floor transition (which may require full or cost-share), transition manufacturing materials, create new energy tag, update store website, update systems, change POP materials on floor, change floor energy tags.

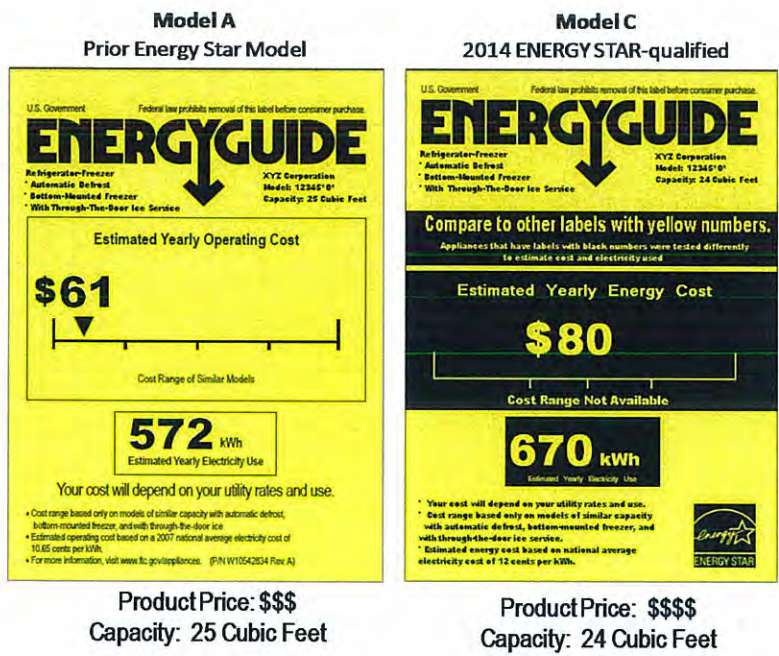


accommodate introduction of models that meet the new DOE standard. These concerns have led them to support the Companies' request that the dates be aligned to September 2014.<sup>3</sup>

Label changes resulting from changes to the DOE test procedure and changes required and proposed by the Federal Trade Commission (FTC) will result in widespread consumer confusion.

Refrigerators that claim compliance with the 2014 DOE standard must test the product in accordance with the DOE's new test procedure. That new procedure will require that each model add approximately 14% more energy to the rating. In addition, for the substantial number of units with ice making capability, there will be an additional 84 kWh/year of energy added.<sup>4</sup> As a result, because of these DOE test procedure changes, all new 2014 models will appear to consumers to be less efficient than they would have been based on the 2001 test procedure. They will also appear to be more costly to operate than pre-2014 models and this cost increase will be further exaggerated because the kWh energy cost for 2014 models will increase from \$0.1065 to \$0.12, or approximately 13%.

The following images for a typical bottom-freezer model, with Model A representing the now disqualified ENERGY STAR model and Model C representing the new 20% more efficient model illustrate the problem:



Should consumers compare these two models on the retail floor, the lower cost and kWh consumption information on the EnergyGuide label will likely drive their purchasing decisions to Model A, which actually uses 109kwh/yr more energy, when tested under the provisions of the 2014

<sup>3</sup> See Exhibits 1, 2 and 3, letters from Sears, Lowes and Nationwide, attached.

<sup>4</sup> See 10 CFR 430, **SUBPART B, APPENDIX A1**

DOE energy test procedure. Of the millions of consumer decisions that will be made during the 6 month period between March and September 2014, many will be “wrong” in that the product selected, despite the label’s assurances, will use more energy, not less, than the 2014 ENERGY STAR model. If just 10% of the potential ENERGY STAR purchasers select the older model, there will be a loss of over 300 million kWh of lifetime energy efficiency benefits.

Not only does the label indicate—incorrectly—that Model A is more efficient and less costly to operate, consumers also “learn” that it is *one cubic foot larger!* This is a further confounding consequence of the DOE test procedure change, which, in redefining capacity for dispensing models, deducts volume associated with the dispensing mechanism that was previously included in the calculation.

These models, and their confusing labels, will certainly be in close proximity to each other—if not side by side—for much of the 6-month period between March and September 2014. The law, common sense and economic necessity will assure this result:

- As noted earlier, such products are lawful to manufacture and sell during the 6-month period
- Manufacturers, who may not yet have replacement models, will want to maximize the return on their investments in the “old” 2001-compliant units
- Retailers, who will not have a full line of replacement products, will want to preserve customer traffic for as long as possible until the new 2014-compliant models arrive
- Manufacturers and retailers will want to reduce inventory of obsolete models ahead of September 2014
- Discounting is likely to make Model A even more attractive to consumers

As much as one might want to believe that consumers will overcome the confusion, it would be a serious error to rest EPA’s efficiency and greenhouse gas-reduction goals on such an assumption. Even under normal market conditions, consumers still place price above energy efficiency and all other features when they shop for major appliances. That preference can only be exacerbated by the confusion that will result from an accelerated, disconnected March effective date.

The Companies acknowledge that some confusion will exist even with the aligned September effective date, which the Companies have been working hard with the FTC to minimize. But that confusion will be reduced substantially if the effective dates are synchronized:

- By September the new models that manufacturers developed to meet DOE’s September 2014 compliance date will have been introduced in significant numbers, and displaced older models on retail floors
- Manufacturers and retailers will have had more time to train sales force personnel on the new labels, what they mean and don’t mean, so there will be many fewer with the “old” labels on the floor and more retail personnel to help consumers understand the labels.

The impact of this consumer confusion on the Program's goals of promoting energy efficiency awareness and reductions in greenhouse gas emissions can only be negative. Unfortunately, the ENERGY STAR logo will be associated with and even a major contributor to the confusion and the resulting losses in energy efficiency. For the first time, in the eyes of many consumers, the logo will promote the "less" efficient products. The resulting loss of actual efficiency and potential damage to the integrity of the ENERGY STAR brand would greatly outweigh any benefits associated with the March date.<sup>5</sup>

The March effective date will likely generate competitive and economic pressures that will exacerbate efficiency losses.

The Companies celebrate the market positive impact of the ENERGY STAR logo. This is one of the reasons why individual companies and AHAM supported the inclusion of the logo on the EnergyGuide.<sup>6</sup> Retailers demand that manufacturers provide them a certain percentage or number of ENERGY STAR-qualified models for inclusion in the showroom. Failure to accommodate these requests could lead to termination of the supply arrangement. It often causes a loss of floor "spots" or space to display the manufacturer's products, which in turn results in lower sales. Retailers assume the non-ENERGY STAR models merely meet the legal standard.

While individual companies make their own decisions regarding offerings and pricing, and the Companies submitting these comments have not collectively discussed their future product plans, offerings or prices, we can make certain general observations.

The Program's success has created a market phenomenon in which, for our direct customers—i.e., retailers—ENERGY STAR is the hallmark of energy performance. As a result, the market for enhanced energy performance between the DOE standard and ENERGY STAR, or above ENERGY STAR, may not exist.

Thus, ENERGY STAR-qualification level changes can dramatically reduce marketability of the formerly qualified product. With no value attached to less-than-ENERGY STAR level energy performance, there may be an incentive in this highly competitive, low-margin industry, for some manufacturers to make changes to reduce product cost by removing expensive components that contribute to efficiency and reduce energy performance to the level of the 2001 DOE standard. The

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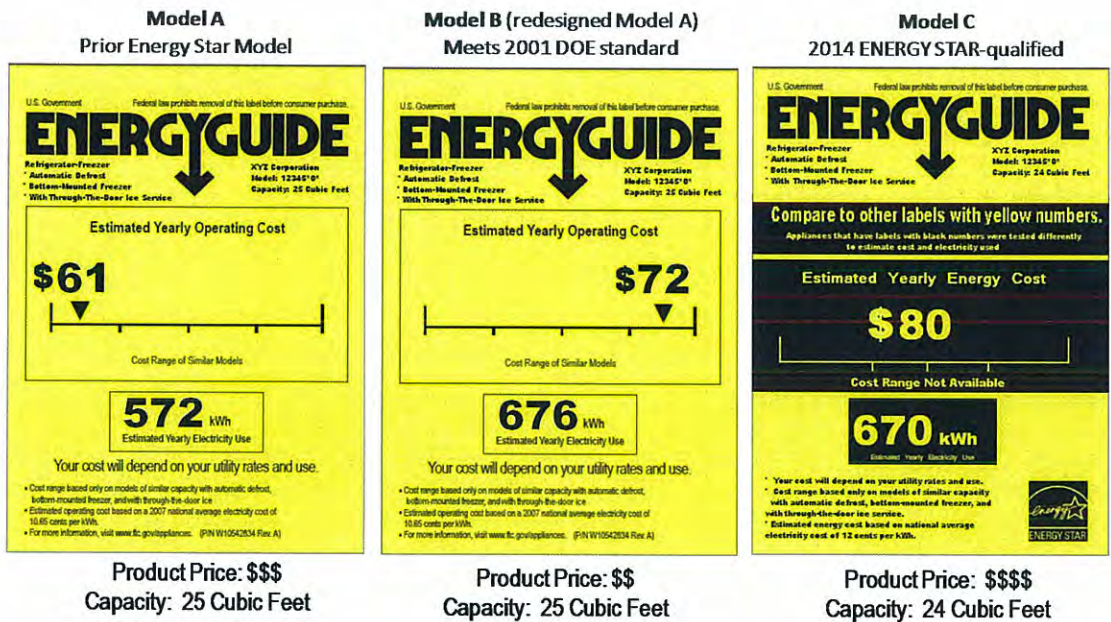
<sup>5</sup> EPA has yet to produce data to support the statement that a high penetration rate diminishes the brand's integrity or adversely affects efficient product up-take. The record does contain a letter from one retailer, with less than 10% retail appliance outlet share, expressing concern that a high rate makes it more difficult for the brand to call out efficient products. No other retailer has supported this concern. On the contrary, the two largest retailers of major appliances, Sears and Lowes, have urged EPA to go with the September 2014 date. Support also has come from Nationwide Group, the largest buying group that represents hundreds of retailers, including small businesses, who will bear the brunt of transition costs, and who, because they are generally not well resourced and do not have specialized trainers on staff, will face greater sales force training woes. Together Sears, Lowes and the Nationwide Group comprise much more than 50% of the outlet share.

<sup>6</sup> 10 CFR 305.11(f)(12)(iii)



current market highlights this reality: a review of industry shipments indicates that approximately only 0.1% of the market is above the 2001 DOE minimum standard but below the current ENERGY STAR level.

The potential impact of product redesign is illustrated in the below mocked-up Energy Guides for Models A, B and C, which, respectively, represent a pre-March 2014 ENERGY STAR model, that same model redesigned to take its energy efficiency level down to the 2001 DOE standard level, and a comparably featured new model that meets the 2014 ENERGY STAR level for bottom-freezer refrigerators.



Although the labels read as if Model C is the most costly to operate, it is actually *13% more efficient than Model A and 26% more efficient than Model B and, despite the stated \$80 annual operating cost, less expensive to operate than either of the other models.*

Based on AHAM's analysis of appliance shipments of models that will be below the ENERGY STAR level at the time of a March effective date but which would remain ENERGY STAR-qualified through September 15 if the effective dates were aligned, 322 million *more* kWh of energy over a 15 year product life would be consumed if only 10% of these possible products were redesigned down to the 2001 DOE standards. If the percent of redesigned models increased to 50%, approximately 1.6 billion more kWh of energy would be consumed.



## Conclusion.

The risks of accelerating the ENERGY STAR effective date to March 2014 outweigh any resulting benefits. Lengthening the period of label overlap by six months would only compound consumer confusion and increase the likelihood that consumers will make decisions against their best interests. Aligning the ENERGY STAR effective date with September effective date of the 2014 DOE standard is the only way to avoid this risk.

As demonstrated above, if the March date is maintained, consumers are likely to be confused into buying products that will use more energy over the life of the refrigerator than would be the case if the six months of unnecessary confusion is avoided. If that confusion resulted in as few as 10% of the expected purchases wrongly selecting the more energy consuming product, the increased energy consumption could be up to 300 million kWh, costing consumers approximately \$36 million<sup>7</sup> and generating 211,665 metric tons of carbon equivalent (MTCE).<sup>8</sup>

Moreover, the loss of economic value that will inevitably follow loss of ENERGY STAR-qualification, which as currently proposed will happen in March 2014, likely will result in redesign of some of the disqualified models. The potential efficiency “losses” that would result if only 10% of such models were redesigned—a very conservative assumption—would amount to approximately 322 million kWh and generate 227,187 MTCE, the annual emissions from adding 47,331 passenger vehicles to the road, costing consumers approximately \$39 million.<sup>9</sup>

The efficiency losses discussed above have the potential to substantially reduce or eliminate entirely any potential efficiency gains from implementing the March 2014 effective date.

Finally, the unnecessary and duplicative burdens, including many millions in costs, that would be imposed on manufacturers and retailers if EPA were to proceed with the proposed March effective date are additional reasons to reexamine the proposal.<sup>10</sup>

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<sup>7</sup> kWh x \$0.12.

<sup>8</sup> Calculated using EPA’s Greenhouse Gas Equivalent Calculator, <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>

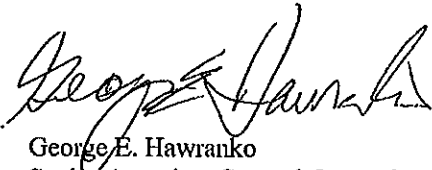
<sup>9</sup> Ibid.

<sup>10</sup> See also Exhibit 4, a powerpoint presentation that also outlines the Companies’ position.



The undersigned Companies urge EPA to make the effective date of the refrigerator/freezer specification September 15, 2014, the effective date of the DOE standard. Doing so will minimize consumer confusion and enable EPA and industry to work together to promote the sale of 2014 ENERGY STAR-qualified products.

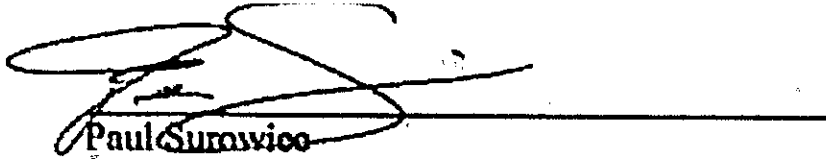
Sincerely,



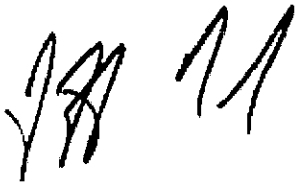
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VP, Design Engineering  
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General Manager, Refrigeration  
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April 29, 2013

The Honorable Gina McCarthy  
Assistant Administrator - Office of Air and Radiation  
U.S. Environmental Protection Agency  
Ariel Rios Building  
1200 Pennsylvania Avenue, N. W.  
Mail Code: 6101A  
Washington, DC 20460

Dear Ms. McCarthy:

This letter is in response to the EPA's potential decision to establish March 2014 as the effective date for ENERGY STAR requirements, different than the date for the DOE standard changes on Refrigerators and Freezers. The Kenmore brand believes that having common implementation dates between ENERGY STAR and DOE standards will ensure more efficient market transitions to the benefit of consumers and the ENERGY STAR brand. In particular, the Kenmore brand believes:

- Multiple product transitions necessitated by successive change in standards creates undue complexities and costs;
- Consumer confusion likely will be created with label discrepancies (e.g., ENERGY STAR products with higher energy than non-ENERGY STAR); and
- ENERGY STAR brand equity may be at risk due to such consumer confusion.

Accordingly, the Kenmore brand prefers a September 15, 2014 effective date for the Refrigerator/Freezer ENERGY STAR Specification, aligning with the 2014 Department of Energy implementation date.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Michael Castleman', with a long horizontal flourish extending to the right.

Michael Castleman





April 26, 2013

Ms. Katharine Kaplan  
Manager, ENERGY STAR Product Development and Program Administration  
ENERGY STAR Appliance Program  
U.S. Environmental Protection Agency  
Washington, DC 20460

[appliances@energystar.gov](mailto:appliances@energystar.gov)  
[kaplan.katharine@epa.gov](mailto:kaplan.katharine@epa.gov)

**Re: Alignment between ENERGY STAR Standards and DOE Energy Conservation Standards for Residential Refrigerators & Freezers**

Dear Ms. Kaplan:

Lowe's requests that EPA align the ENERGY STAR specification effective date with the already scheduled Department of Energy (DOE) energy conservation standards on September 15, 2014.

Misalignment between the new Department of Energy (DOE) energy conservation standards and EPA's ENERGY STAR specification creates an unnecessary burden in both time and expense. Lowe's understands and values the ENERGY STAR program, as evidenced by earning our third consecutive Sustained Excellence Award in 2012, but we have to manage both the DOE standards and the ENERGY STAR specification along with product cycles and retail displays.

The latest proposed ENERGY STAR version of the specifications for residential refrigerators and refrigerator-freezers sets March 1, 2014 as the effective date for the new requirements; just over six months earlier than the new DOE energy conservation standards effective date of September 15, 2014. This schedule will force our retail stores to undergo two major floor transitions, one in March and a second in September.

Why is this an issue? Changing out the major appliance display areas of more than 1,750 stores is a significant logistics undertaking. Floor configurations are driven by models and price ranges along with available product. New standards from EPA and DOE require new model and item numbers. The confusion between the two standards can also lead to supplier production interruption that could lead to product exclusion until the next transition cycle. Additionally, each product transition, especially one that follows regulatory changes, requires updating of marketing and training materials on product performance.

In summary, Lowe's requests EPA delays issuing the new refrigerator specification until September or later so that a more complete range of qualified products can be integrated into the major floor transition that will occur in advance of the new DOE standards.

Sincerely,

Michael Chenard  
Director, corporate sustainability





Katharine Kaplan  
U.S. Environmental Protection Agency  
ENERGY STAR Appliance Program  
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Re: ENERGY STAR Program Requirements, Product Specification for Residential Refrigerators and Freezers Final Draft, Version 5.0 and Final Draft Test Method to Validate Demand Response

Dear Ms. Kaplan:

Nationwide Marketing Group is North America's largest buying and marketing organization. We work with over 3,500 members, who operate more than 10,000 store fronts and have \$14 billion in combined annual sales, who sell major appliances, electronics, furniture and other household goods. Our members are often referred to as independent dealers to distinguish them from outlets that are part of national chains and so-called big-box retailers. Most are small businesses as defined by the SBA. As such, managing costs is critical to their ability to compete. Nationwide, by combining the purchasing power of the independent dealers, allows them to take advantage of savings from their combined purchasing volume.

I understand that in the latest version of the specification for ENERGY STAR-qualified residential refrigerators and refrigerator-freezers, EPA has proposed to make the effective date of the new requirements March 1, 2014, a little more than six months earlier than the date that the new DOE energy regulation for these products goes into effect. We are concerned that the proposed schedule will force our members to undergo two major floor transitions, one in March and a second in September. That is why, on behalf of Nationwide's 3,500 members, we request that EPA align the ENERGY STAR effective date with the already scheduled effective date of Department of Energy (DOE) energy conservation standards on September 15, 2014.

Floor transitions, especially ones that follow regulatory changes, also mean replacing merchandising materials and training employees on how the new regulations affect product performance. In contrast to the level of support that manufacturers provide to large retailers in the form of product training, preparing and placing merchandising materials, Nationwide members largely must themselves perform these activities. The need for sales training will be even greater in 2014 because the FTC EnergyGuide label will have to include the energy used to make ice. If EPA sets the effective date of the new specification for March, manufacturers will be compelled at least to have some qualified models available by that date. Ironically, those models, with labels reflecting the kilowatts used to make ice, will appear to be less efficient than some of the older





APPLIANCES • AUDIO/VIDEO • FURNITURE

models that qualified under the prior specification. And, since in all probability the new models will have higher prices, our sales team will have to be equipped to handle the expected negative consumer reaction. Increasing the pressure to introduce ENERGY STAR models in March will exacerbate consumer confusion because many older models will still be on retail floors during the six months before the September floor transition. Confusion would be reduced if the ENERGY STAR effective date were moved to September when 2014 DOE models with new labels that also reflect ice-making energy use are fully loaded onto the floors.

Most manufacturers will not be manufacturing their full 2014 line-ups by March. As a result, Nationwide members will have fewer new ENERGY STAR (and other) model refrigerators to offer. Competitive pressures will likely force manufacturers to offer any models that are available but a full transition will have to be implemented by September when all new products must comply with the DOE standards. As a result, our members will confront two problems: incomplete product availability at the beginning of the selling season and the need for a second floor transition in the fall.

For these reasons we urge EPA to hold off making the new refrigerator specification effective until September or later so that a more complete range of qualified products can be integrated into the major floor transition that will occur in anticipation of the new DOE standards.

Thank you,

David Bilas

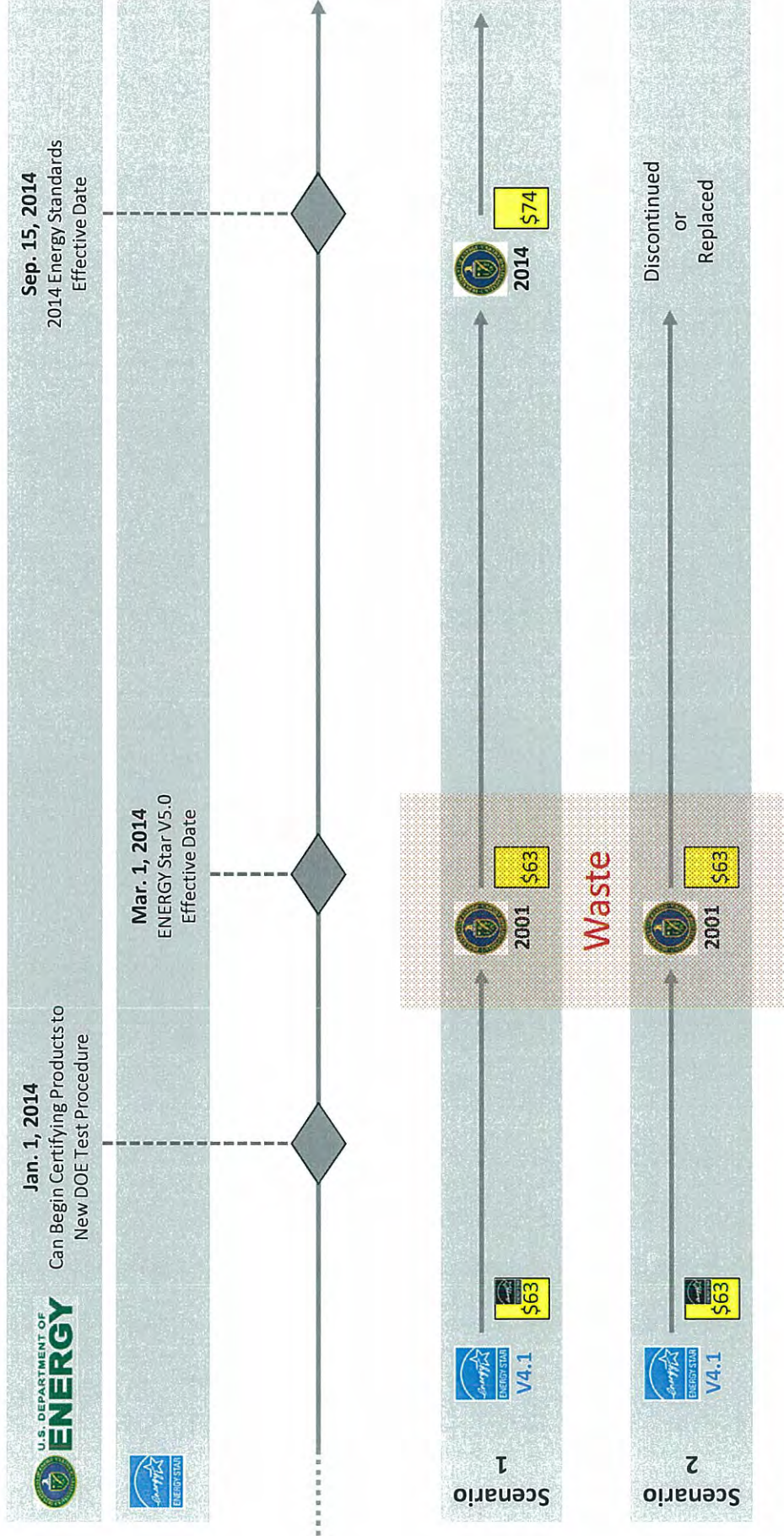


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**EFFECTIVE DATE CHANGE FOR REFRIGERATOR-  
FREEZER ENERGY STAR PROGRAM**

**MAY 21, 2013**

# MANUFACTURER AND TRADE BURDEN



**Waste for Manufacturers and Trade at Least \$7M**



# SCENARIO 1 WASTE SPECIFICS



## Current

- Update Internal Systems (SAP).
- Update Estar Listing.
- Facilitate trade transition.
- Transition Manufacturing Materials.
- Create New Energy Tag.
- Create New POP Materials
- Update User Manual, Serial Tag, Product Documentation.
- Update Store Website
- Update Systems.
- Change brochures, catalog of products.
- Change POP Materials on Floor
- Change Floor Pricing Tag

*Activities with red text are WASTE*

- Perform Energy Test
- Create and Submit Certification Documentation
- Update Internal Systems (SAP).
- Facilitate trade transition.
- Transition Manufacturing Materials.
- Create New Energy Tag.
- Update Store Website
- Update Systems.
- Change POP Materials on Floor
- Change Floor Energy Tags

## Scenario 1

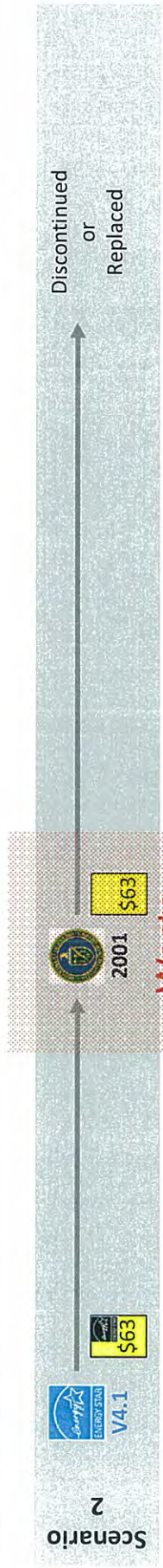
## Proposed

- Perform Energy Test
- Create and Submit Certification Documentation
- Update Internal Systems (SAP).
- Update Estar Listing.
- Facilitate trade transition.
- Transition Manufacturing Materials.
- Create New Energy Tag.
- Create New POP Materials

- Update User Manual, Serial Tag, Product Documentation.
- Update Store Website
- Update Systems.
- Change brochures, catalog of products.
- Change POP Materials on Floor
- Change Floor Pricing Tag
- Change Floor Energy Tags



# SCENARIO 2 WASTE SPECIFICS



## Current

- Update Internal Systems (SAP).
- Update Estar Listing.
- Facilitate trade transition.
- Transition Manufacturing Materials.
- Create New Energy Tag.
- Create New POP Materials
- Update User Manual, Serial Tag, Product Documentation.
- Update Store Website
- Update Systems.
- Change brochures, catalog of products.
- Change POP Materials on Floor (i.e. "most-efficient" claim) (x500)
- Change Floor Pricing Tag (x500)

*Activities with red text are WASTE*

- Update Internal Systems (SAP).
- Update Store Website
- Update Systems.
- Remove Floor Model

## Scenario 2

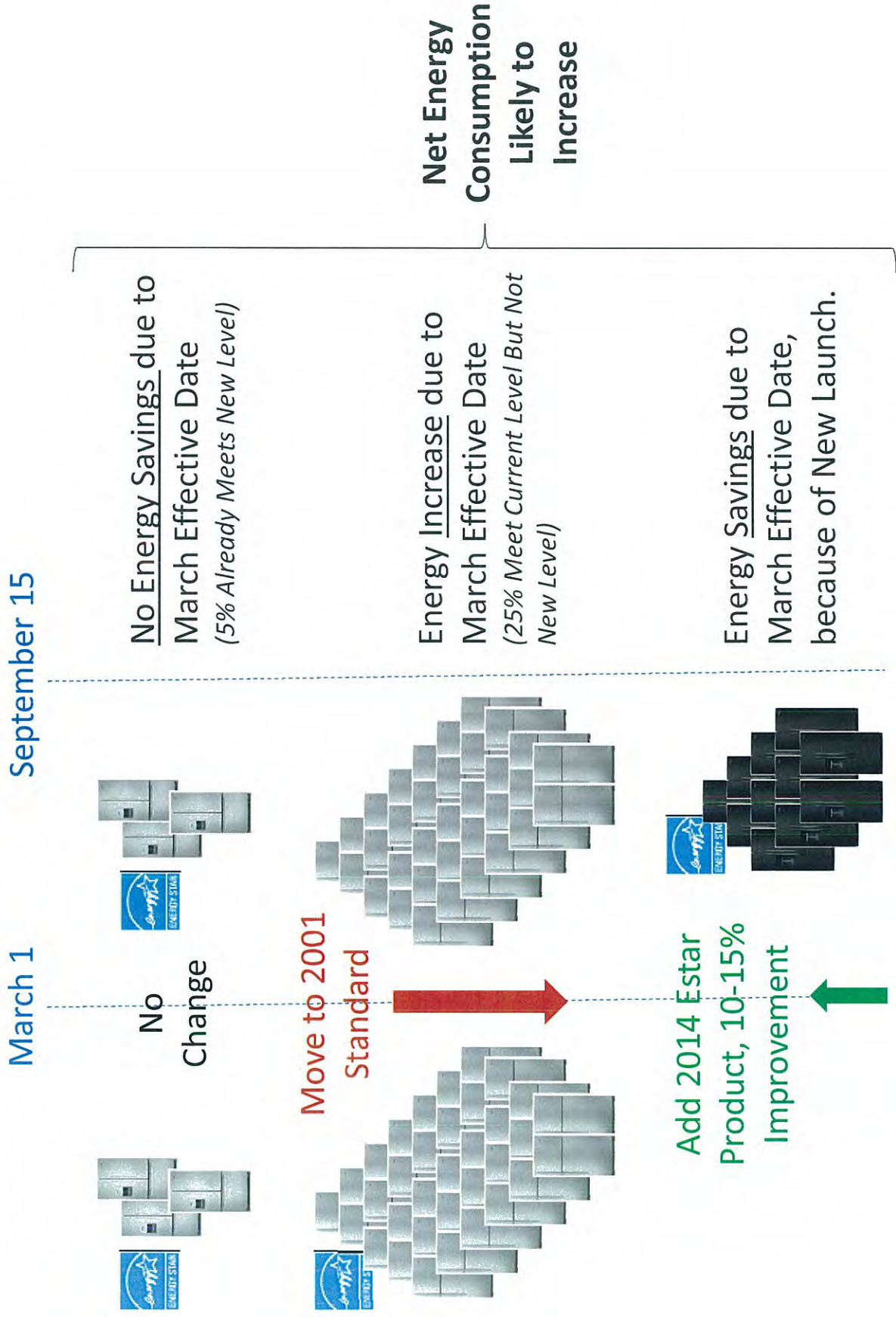


## Proposed

- Update Internal Systems (SAP).
- Update Estar Listing.
- Update Store Website
- Update Systems.
- Remove Floor Model



# NET ENERGY IMPACT OF MARCH EFFECTIVE DATE?





# CONSUMER CONFUSION BETWEEN MAR 1 AND SEPT 15: BOTTOM MOUNT R/F EXAMPLE

## Model A

Prior Energy Star Model

U.S. Government Federal law prohibits removal of this label before consumer purchase.

# ENERGYGUIDE

Refrigerator-Freezer  
 • Automatic Defrost  
 • Bottom-Mounted Freezer  
 • With Through-The-Door Ice Service

XYZ Corporation  
 Model: 12345°F  
 Capacity: 25 Cubic Feet

**Estimated Yearly Operating Cost**

**\$61**

Cost Range of Similar Models

Your cost will depend on your utility rates and use.

- Cost range based only on models of similar capacity with automatic defrost, bottom-mounted freezer, and with through-the-door ice
- Estimated operating cost based on a 2007 national average electricity cost of 10.65 cents per kWh.
- For more information, visit [www.ftc.gov/appliances](http://www.ftc.gov/appliances). (PIN W10542834 Rev. A)

Product Price: \$\$\$

Capacity: 25 Cubic Feet

## Model B (redesigned Model A)

Meets 2001 DOE standard

U.S. Government Federal law prohibits removal of this label before consumer purchase.

# ENERGYGUIDE

Refrigerator-Freezer  
 • Automatic Defrost  
 • Bottom-Mounted Freezer  
 • With Through-The-Door Ice Service

XYZ Corporation  
 Model: 12345°F  
 Capacity: 25 Cubic Feet

**Estimated Yearly Operating Cost**

**\$72**

Cost Range of Similar Models

Your cost will depend on your utility rates and use.

- Cost range based only on models of similar capacity with automatic defrost, bottom-mounted freezer, and with through-the-door ice
- Estimated operating cost based on a 2007 national average electricity cost of 10.65 cents per kWh.
- For more information, visit [www.ftc.gov/appliances](http://www.ftc.gov/appliances). (PIN W10542834 Rev. A)

Product Price: \$\$

Capacity: 25 Cubic Feet

## Model C

2014 ENERGY STAR-qualified

U.S. Government Federal law prohibits removal of this label before consumer purchase.

# ENERGYGUIDE

Refrigerator-Freezer  
 • Automatic Defrost  
 • Bottom-Mounted Freezer  
 • With Through-The-Door Ice Service

XYZ Corporation  
 Model: 12345°F  
 Capacity: 24 Cubic Feet

**Compare to other labels with yellow numbers.**

Appliances that have labels with black numbers were tested differently to estimate cost and electricity used.

**Estimated Yearly Energy Cost**

**\$80**

Cost Range Not Available

**670 kWh**  
 Estimated Yearly Electricity Use

Your cost will depend on your utility rates and use.

- Cost range based only on models of similar capacity with automatic defrost, bottom-mounted freezer, and with through-the-door ice service.
- Estimated energy cost based on national average electricity cost of 12 cents per kWh.



Product Price: \$\$\$\$

Capacity: 24 Cubic Feet

Model C actually uses 13% less energy than Model A, and 26% less than model B.



# CONSUMER CONFUSION BETWEEN MAR 1 AND SEPT 15: TOP MOUNT R/F EXAMPLE

**Model A**  
Prior Energy Star Model

U.S. Government Federal law prohibits removal of this label before consumer purchase.

## ENERGYGUIDE

Refrigerator-Freezer  
 • Automatic Defrost  
 • Top-Mounted Freezer  
 • Without Through-The-Door Ice Service

XYZ Corporation  
 Model: 12345-01  
 Capacity: 25 Cubic Feet

**Estimated Yearly Operating Cost**

**\$48**

Cost Range of Similar Models

**452 kWh**  
Estimated Yearly Electricity Use

Your cost will depend on your utility rates and use.

- Cost range based only on models of similar capacity with automatic defrost, top-mounted freezer, and without through-the-door ice
- Estimated operating cost based on a 2007 national average electricity cost of 10.65 cents per kWh.
- For more information, visit [www.ftc.gov/appliances](http://www.ftc.gov/appliances). (PIN W1054-2834 Rev. A)

Product Price: \$\$\$  
Capacity: 25 Cubic Feet

**Model B (redesigned Model A)**  
Meets 2001 DOE standard

U.S. Government Federal law prohibits removal of this label before consumer purchase.

## ENERGYGUIDE

Refrigerator-Freezer  
 • Automatic Defrost  
 • Top-Mounted Freezer  
 • Without Through-The-Door Ice Service

XYZ Corporation  
 Model: 12345-01  
 Capacity: 25 Cubic Feet

**Estimated Yearly Operating Cost**

**\$62**

Cost Range of Similar Models

**565 kWh**  
Estimated Yearly Electricity Use

Your cost will depend on your utility rates and use.

- Cost range based only on models of similar capacity with automatic defrost, top-mounted freezer, and without through-the-door ice
- Estimated operating cost based on a 2007 national average electricity cost of 10.65 cents per kWh.
- For more information, visit [www.ftc.gov/appliances](http://www.ftc.gov/appliances). (PIN W1054-2834 Rev. A)

Product Price: \$\$  
Capacity: 25 Cubic Feet

**Model C**  
2014 ENERGY STAR-qualified

U.S. Government Federal law prohibits removal of this label before consumer purchase.

## ENERGYGUIDE

Refrigerator-Freezer  
 • Automatic Defrost  
 • Top-Mounted Freezer  
 • Without Through-The-Door Ice Service

XYZ Corporation  
 Model: 12345-01  
 Capacity: 25 Cubic Feet

**Compare to other labels with yellow numbers.**  
 Appliances that have labels with black numbers were tested differently to estimate cost and electricity used.

**Estimated Yearly Energy Cost**

**\$62**

Cost Range Not Available

**515 kWh**  
Estimated Yearly Electricity Use

Your cost will depend on your utility rates and use.

- Cost range based only on models of similar capacity with automatic defrost, top-mounted freezer, and without through-the-door ice service.
- Estimated energy cost based on national average electricity cost of 12 cents per kWh.



Product Price: \$\$\$  
Capacity: 25 Cubic Feet

**Model C actually uses 15% less energy than Model A, and 32% less than model B.**



# CONSUMER CONFUSION BETWEEN MAR 1 AND SEPT 15 : SIDE MOUNT R/F EXAMPLE

**Model A**  
Prior Energy Star Model

U.S. Government Federal law prohibits removal of this label before consumer purchase.

## ENERGYGUIDE

Refrigerator-Freezer  
 • Automatic Defrost  
 • Side-Mounted Freezer  
 • With Through-The-Door Ice Service

XYZ Corporation  
 Model: 12345 0\*  
 Capacity: 25 Cubic Feet

**Estimated Yearly Operating Cost**

**\$60**

Cost Range of Similar Models

**560 kWh**  
Estimated Yearly Electricity Use

Your cost will depend on your utility rates and use.

- Cost range based only on models of similar capacity with automatic defrost, side-mounted freezer, and with through-the-door ice.
- Estimated operating cost based on a 2007 national average electricity cost of 10.65 cents per kWh.
- For more information, visit [www.ftc.gov/appliances](http://www.ftc.gov/appliances). (P/N W10542634 Rev A)

Product Price: \$\$\$  
Capacity: 25 Cubic Feet

**Model B (redesigned Model A)**  
Meets 2001 DOE standard

U.S. Government Federal law prohibits removal of this label before consumer purchase.

## ENERGYGUIDE

Refrigerator-Freezer  
 • Automatic Defrost  
 • Side-Mounted Freezer  
 • With Through-The-Door Ice Service

XYZ Corporation  
 Model: 12345 0\*  
 Capacity: 25 Cubic Feet

**Estimated Yearly Operating Cost**

**\$75**

Cost Range of Similar Models

**700 kWh**  
Estimated Yearly Electricity Use

Your cost will depend on your utility rates and use.

- Cost range based only on models of similar capacity with automatic defrost, side-mounted freezer, and with through-the-door ice.
- Estimated operating cost based on a 2007 national average electricity cost of 10.65 cents per kWh.
- For more information, visit [www.ftc.gov/appliances](http://www.ftc.gov/appliances). (P/N W10542634 Rev A)

Product Price: \$\$  
Capacity: 25 Cubic Feet

**Model C**  
2014 ENERGY STAR-qualified

U.S. Government Federal law prohibits removal of this label before consumer purchase.

## ENERGYGUIDE

Refrigerator-Freezer  
 • Automatic Defrost  
 • With Through-The-Door Ice Service

XYZ Corporation  
 Model: 12345 0\*  
 Capacity: 24 Cubic Feet

**Compare to other labels with yellow numbers.**

Appliances that have labels with black numbers were tested differently to estimate cost and electricity used

**Estimated Yearly Energy Cost**

**\$73**

Cost Range Not Available

**612 kWh**  
Estimated Yearly Electricity Use

**ENERGY STAR**

Your cost will depend on your utility rates and use.  
 • Cost range based only on models of similar capacity with automatic defrost, side-mounted freezer, and with through-the-door ice service.  
 • Estimated energy cost based on national average electricity cost of 12 cents per kWh.

Product Price: \$\$\$  
Capacity: 24 Cubic Feet

**Model C actually uses 17% less energy than Model A, and 34% less than model B.**



## NET ENERGY IMPACT CALCULATION

[# of annual shipments between ES and ES2014 to achieve penetration level during the first year] / [4, avg of 6 month period] * [Energy difference between current and ES2014] + [annual energy * 14.5 years, for 15 year life]	Energy Saving – Lifetime (kwh)
5% ENERGY STAR Penetration in March	0
15% ENERGY STAR Penetration in March	367M
25% ENERGY STAR Penetration in March	976M
[# of annual shipments between ES and ES2014] / [2 for 6 month period] * [40%, models that will be discontinued] * [Energy difference between current and federal minimum] * [30, # of 6 month periods for 15 year life]	Energy Gain – Lifetime (kwh)*
50% Redesigned	1,600M
25% Redesigned	804M
10% Redesigned	322M

*\* Does not include any energy gains from consumer confusion*

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## SUMMARY – REAL IMPACT OF MARCH EFFECTIVE DATE

Net Increase in Energy Consumption Possible on the Grid

Net Increase in Average Energy Costs Possible for Consumers

Significant Consumer Confusion in Retail; ENERGY STAR Significantly Increasing the Confusion and Damaging ENERGY STAR Brand

Multi-Million Dollar Increase in Burden to Manufacturers and Retail Overwhelm Any Consumer/Energy Efficiency Benefit