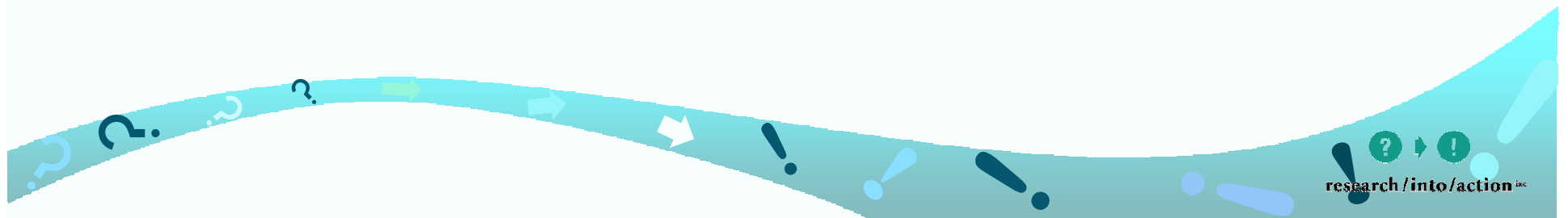


# Home Appliance Programs Hit the Wall

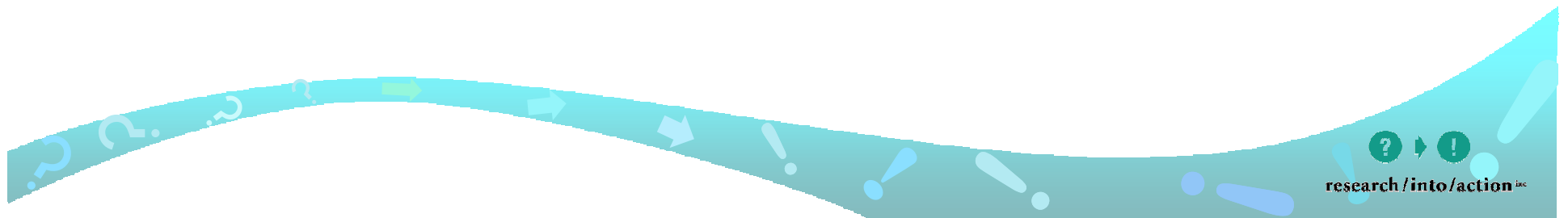
June, 2012  
IEPEC Rome

Jane Peters, Ph.D.  
Research Into Action



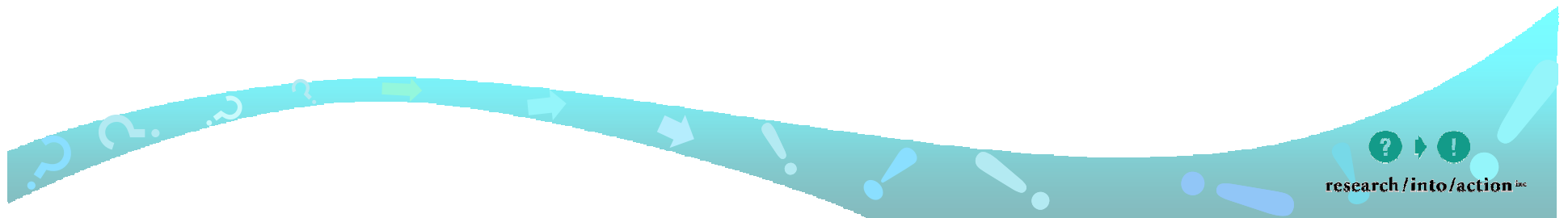
# Acknowledgements

- Caroline Chen, Southern California Edison
- Research Into Action staff
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- Program and evaluation staff of Southern California Edison and Pacific Gas and Electric
- CPUC Energy Division Evaluation team and evaluation consultant team



# Overview

- The Program
- The Study
- Refrigerator Case Study
- Conclusions



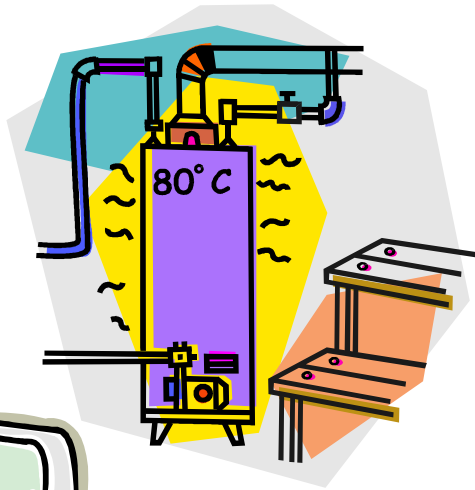
# The Program

## Home Energy Efficiency Rebate (HEER) Program

A California state-wide program that pays rebates to end-users and contractors for purchase/installation of energy efficient home appliances.

- **Appliances:** Refrigerators, clothes washers, dishwashers, water heaters
- **Space conditioning:** Room air conditioners, whole house fans, evaporative coolers
- **Other:** Pool pumps

# Home Energy Efficiency Rebate (HEER)



**20+** Years in operation - one of longest-running ee programs

**3%** Budget is only a small part of total ee portfolio



Great for customer relations



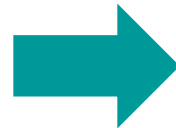
Declining savings, high free-ridership

# The Study

## A six-month, multi-modal process evaluation and market characterization

### Research methods

Literature review  
In-depth interviews  
Phone surveys  
Data analysis

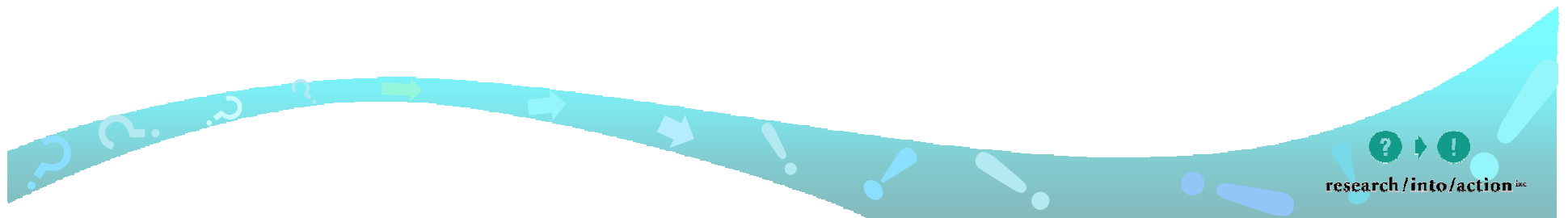


### Outputs

Program knowledge  
Market knowledge

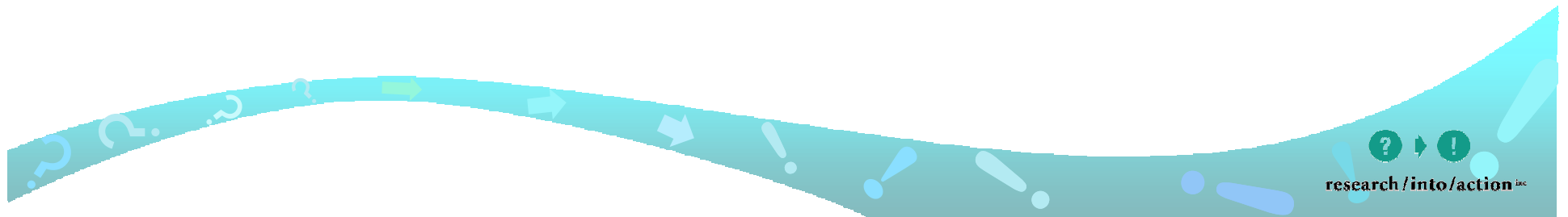


**Future program goals  
and strategies**



# The Study

**Future program goals  
and strategies**



# The Study

**Clients wanted program design ideas that:**

*Minimized transaction costs*

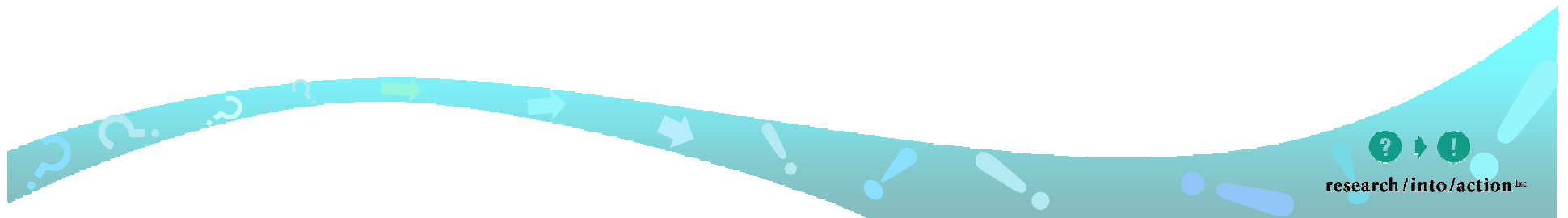
*Lowered free-ridership*

*Were voluntary*

*Were market-driven*



**Future program goals  
and strategies**





# Refrigerator Case Study

## Why was ENERGY STAR penetration below 50%?

### Good

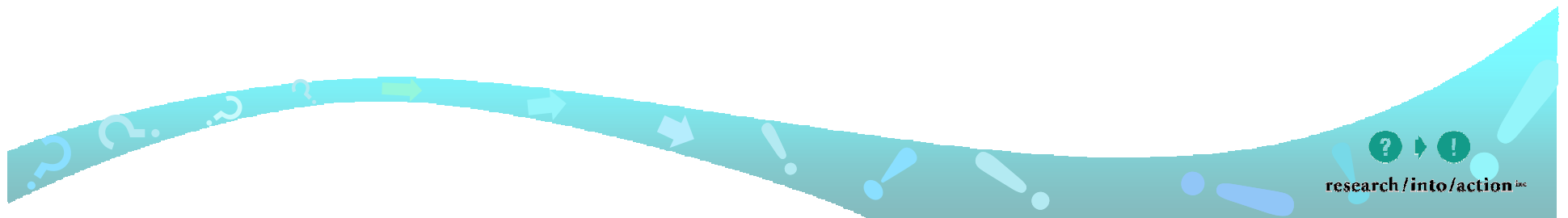
Available of EE models at retailers

### Few

Major barriers to adoption reported by interviewees

### High

Awareness of program rebates



# Refrigerator Case Study

## Why was ENERGY STAR penetration below 50%?

**Good**

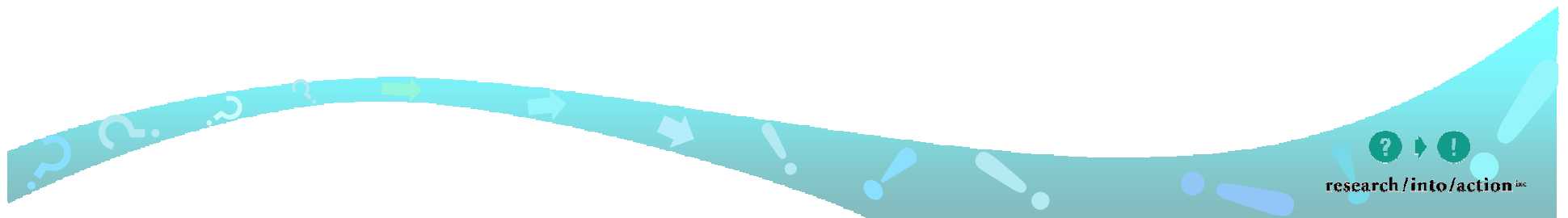
Availability of EE models  
at retailers

**Few**

Barriers to adoption  
reported by interviewees

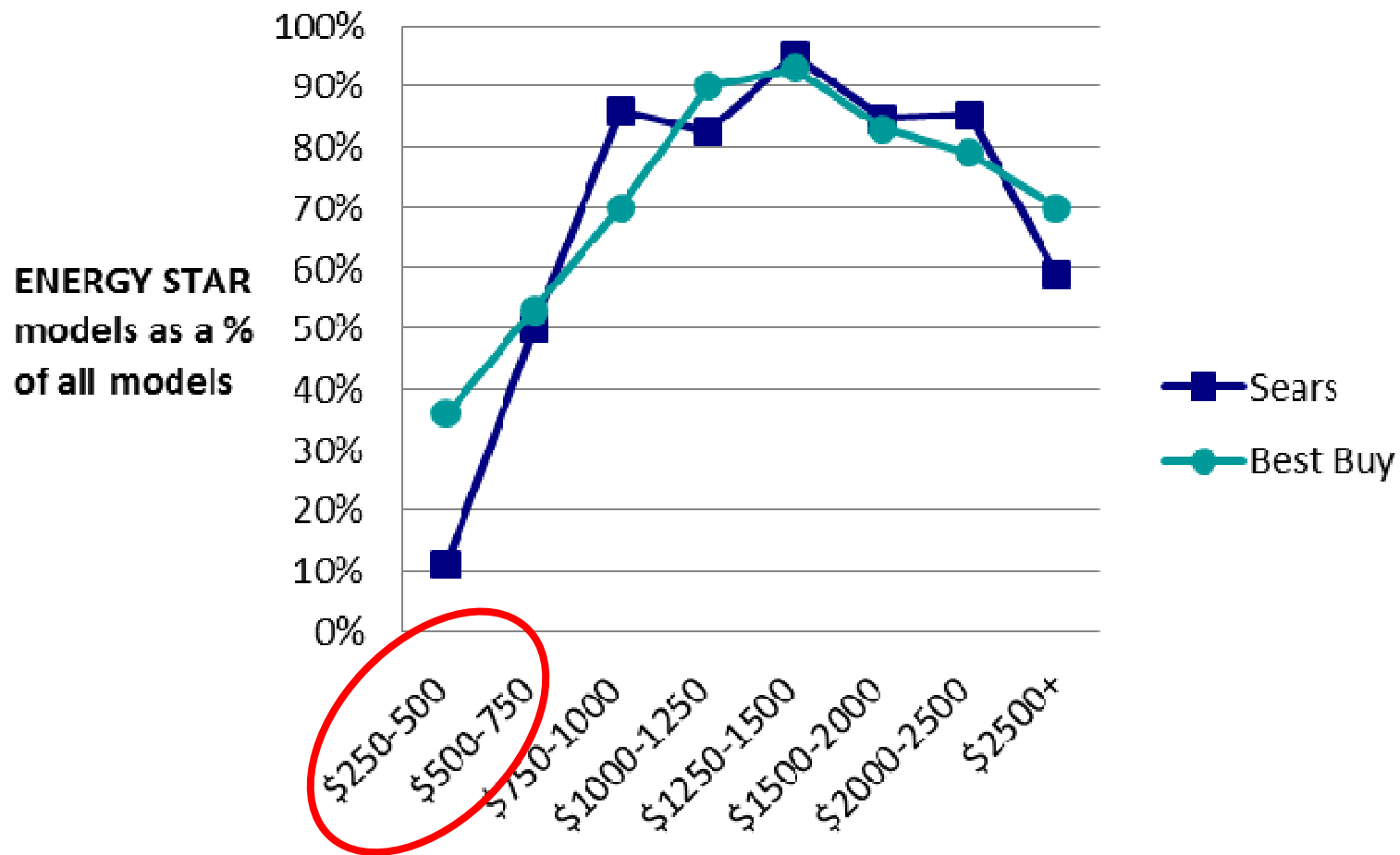
**High**

Awareness of program  
rebates



# Refrigerator Case Study

**Low availability at the lowest price points!**



# Refrigerator Case Study

**Low availability at the lowest price points!**

*If you pay . . .*

*The number of ENERGY STAR models you can choose from is . . .*

\$500

3

\$1,000

99

# Refrigerator Case Study

## Why was ENERGY STAR penetration below 50%?

**Good**

Availability of EE models  
at retailers

**Few**

Barriers to adoption  
reported by interviewees

**High**

Awareness of program  
rebates



Efficiency important

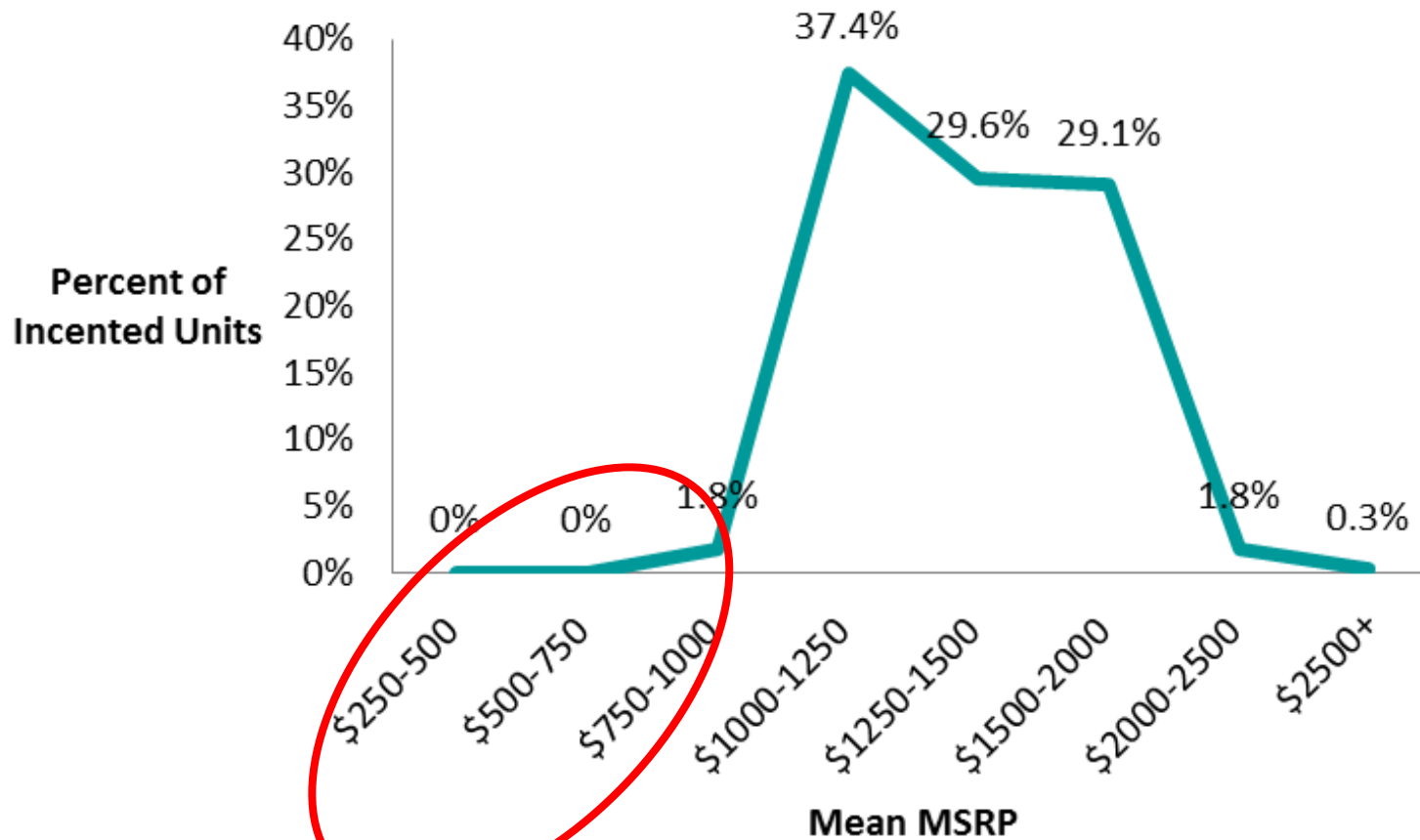
Not aware of ENERGY STAR

First cost



# Refrigerator Case Study

**98% of incented units sold for > \$1,000**



# Refrigerator Case Study

## Are HEER participants different?

**Good**

Availability of EE models  
at retailers

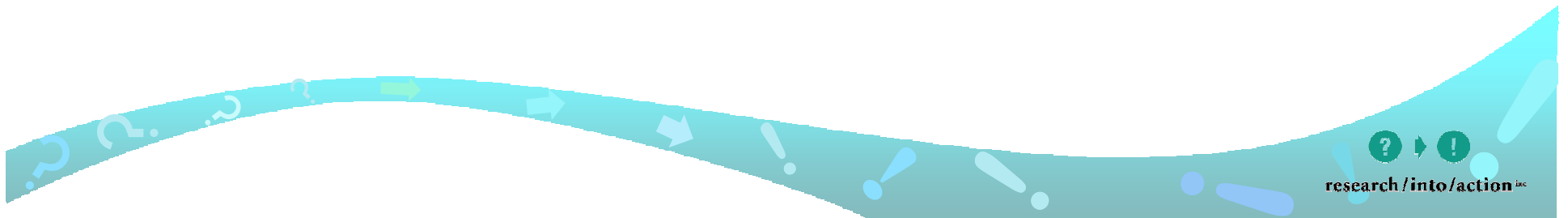
**Few**

Barriers to adoption  
reported by interviewees

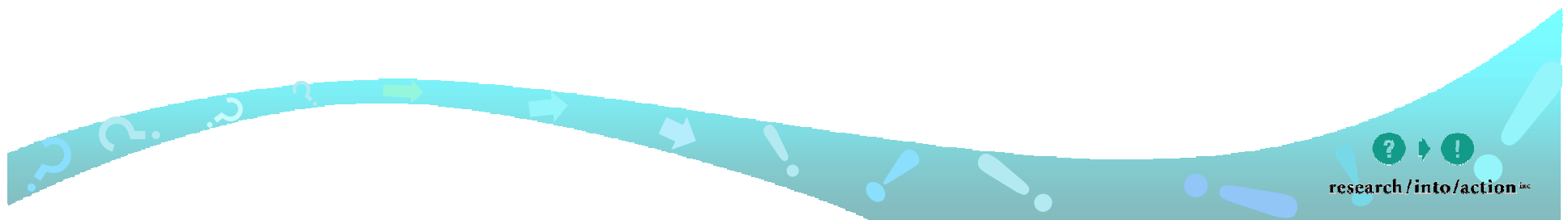
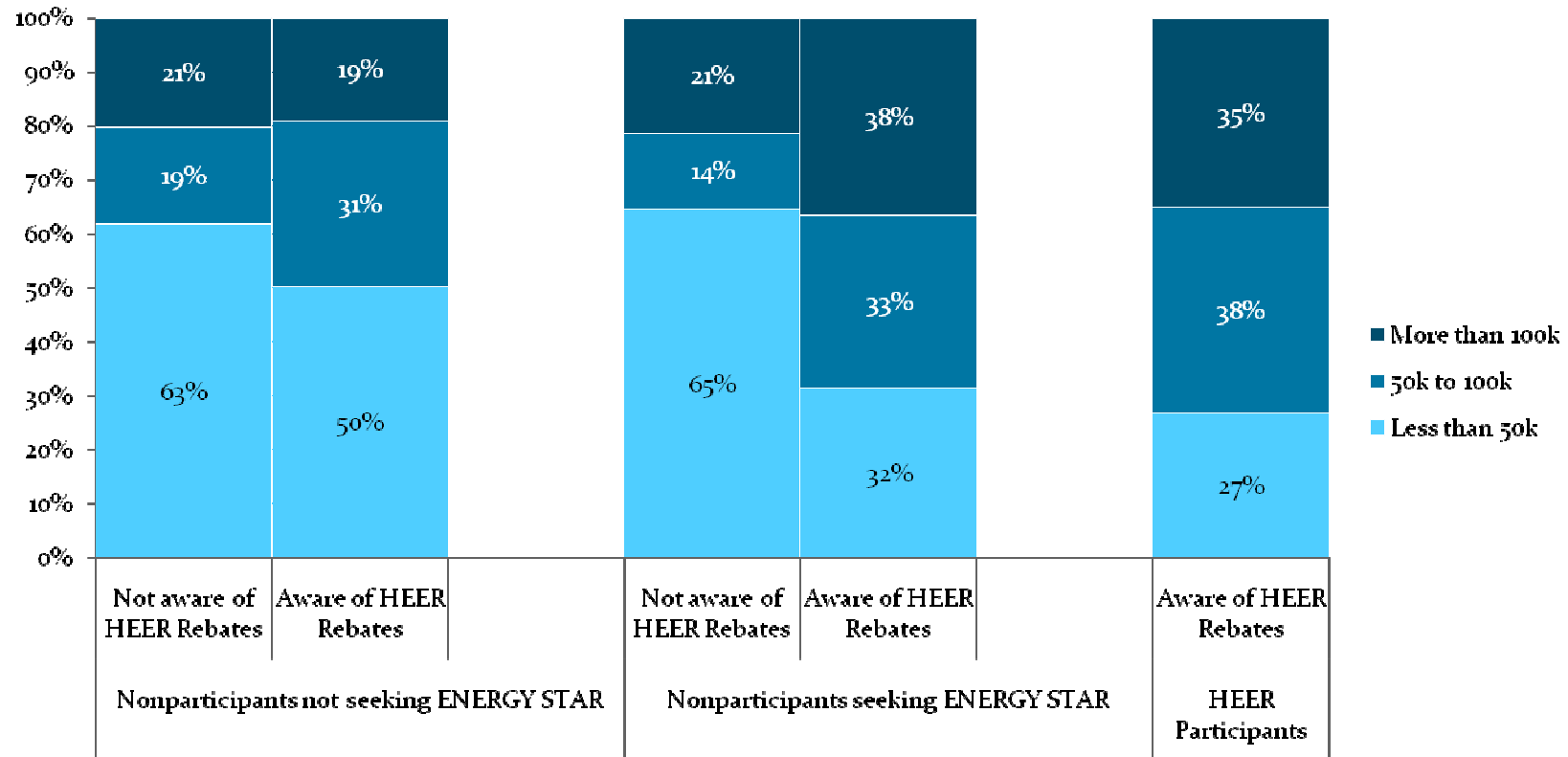
**High**

Awareness of program  
rebates

- 50% aware
- Lower income less aware



# Demographic/Behavior Segments Show Differences Across Purchasers





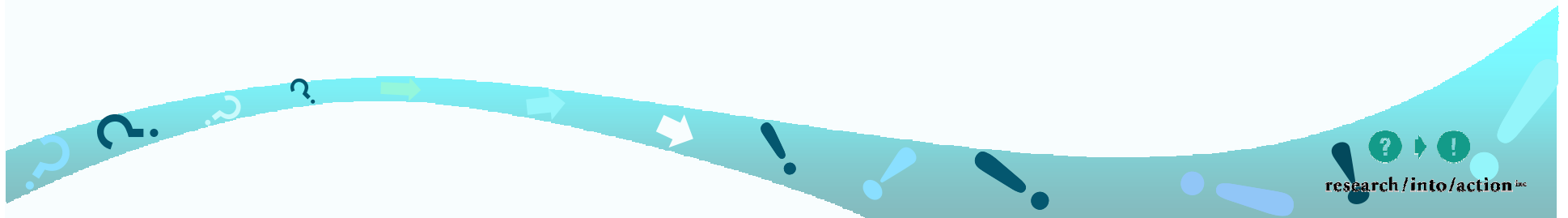
# Conclusions

- About 50% of refrigerator purchases are not qualified products (not ENERGY STAR)
- End users with lower income are less aware of HEER rebates and less aware of ENERGY STAR and availability is lowest at the lowest price points
  - *Use incentives to reduce incremental cost and increase availability of qualified refrigerators at the lowest price points (under \$500)*
- Retailers are important to the appliance purchase
  - *Improve retailer training to ensure qualified models in all price levels are known*

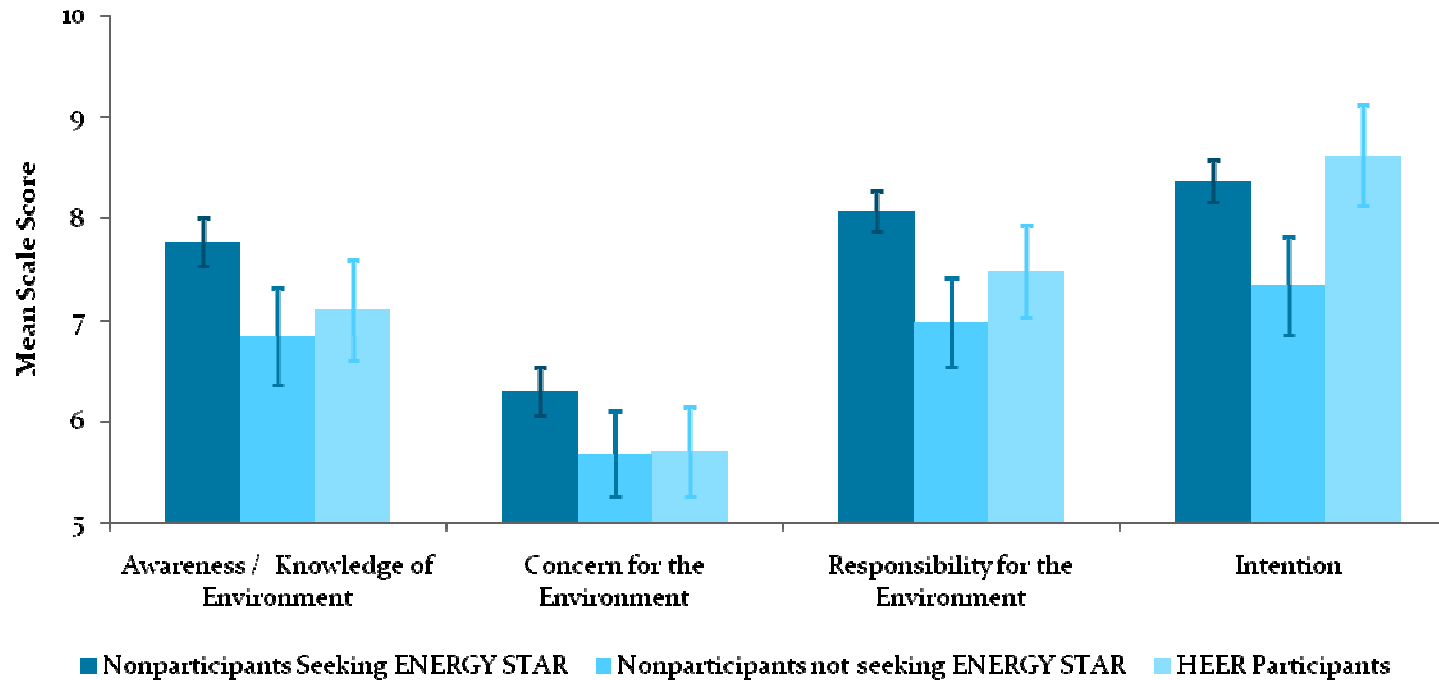
# Grazie!

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# Attitudes to the Environment Differ for Appliance Purchasers



HEER participants = nonparticipants NOT seeking ENERGY STAR

Except for Intention scale (HEER participants = nonparticipants seeking ENERGY STAR)

