

# Does How You Pay Your Energy Bill Affect How Much You Pay for Your Energy Bill?

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# Auto Bill Pay (ABP) and Budget Billing (BB) Evaluation - Background

- Auto bill pay (“ABP” or “auto-pay”) programs
  - Automate payments for recurring bills
  - Customer benefits - convenience and avoiding late payments
  - IOU benefits - minimizes late payments and labor hours required to process payments (like for checks through the mail or in-person payments)
- Budget billing (“BB”) programs
  - Flatten bill payment over a year
    - Predictability
    - Manageability

Sexton (2015) study on the effects on ABP and BB on electricity consumption

- 4-6% increase in consumption on ABP
- 7% increase in consumption on BB

## Theory behind analysis

# ABP

Loss of price salience

Information is available,  
but inattention changes  
its role in the decision

# BB

Could distort  
relationship between  
price and consumption

Flat bill could lead to  
inattention

Bounded rationality in action – insufficient information and attention that could lead to less than optimal decisions

# Impact evaluation

Time series cross-sectional analysis

Pooled fixed-effects regression model

2 waves of IOU's HER program – ABP and BB use

ABP/BB impacts  
ABP/BB impacts on HER

Short-term effects of ABP and BB use captured

# Customer Survey

Web survey

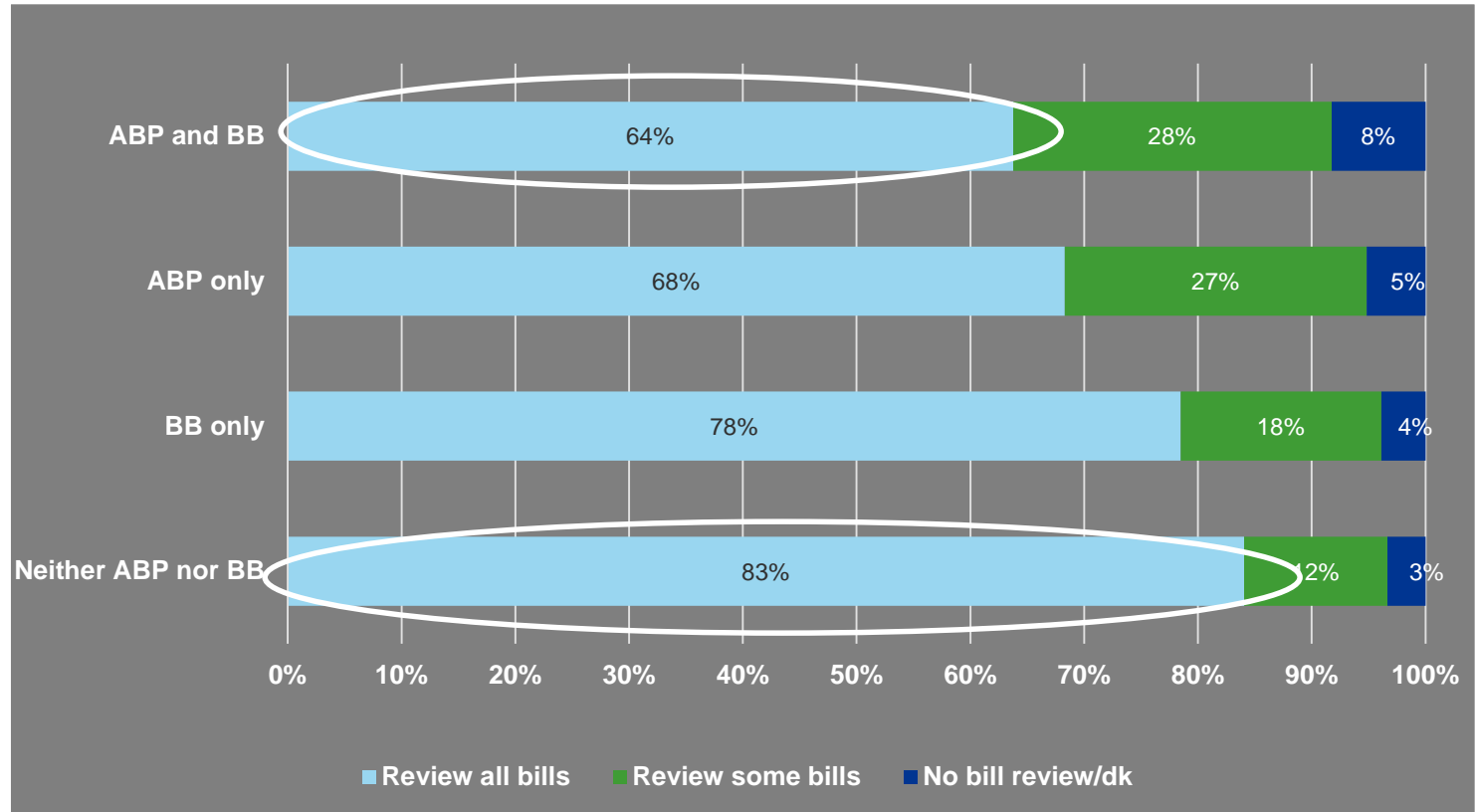
Sample frame - customers included in the impact analysis

Bill review behavior and demographics

# Final effects of ABP and BB

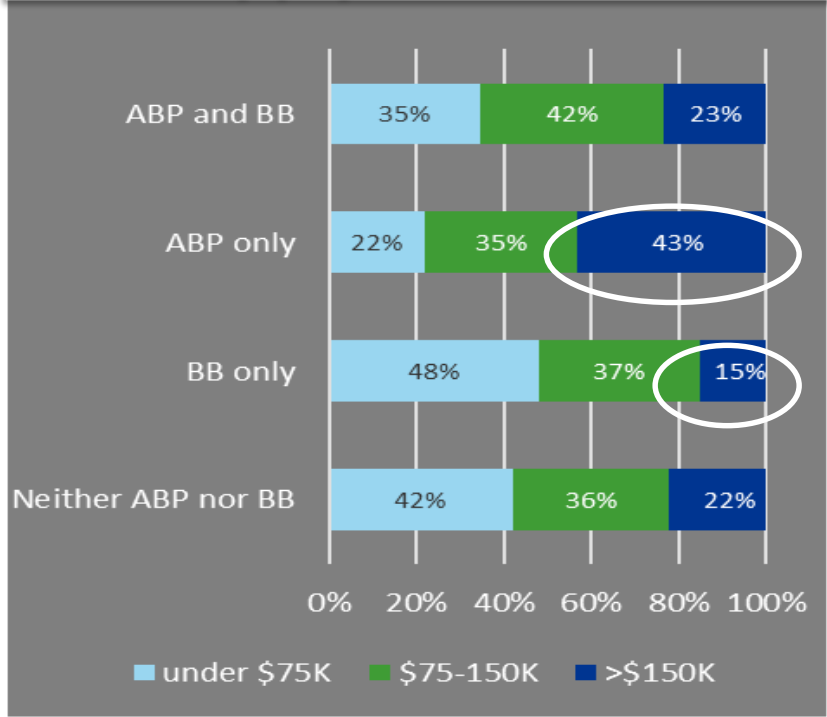
	HER Wave 3		HER Wave 4	
	Control	Treatment	Control	Treatment
no ABP/BB	100.0%	99.0%	100%	99.3%
ABP	101.6%	99.8%	101.1%	99.2%
BB	104.7%	103.8%	103.8%	102.5%

## Bill Review Behavior – by ABP and BB use

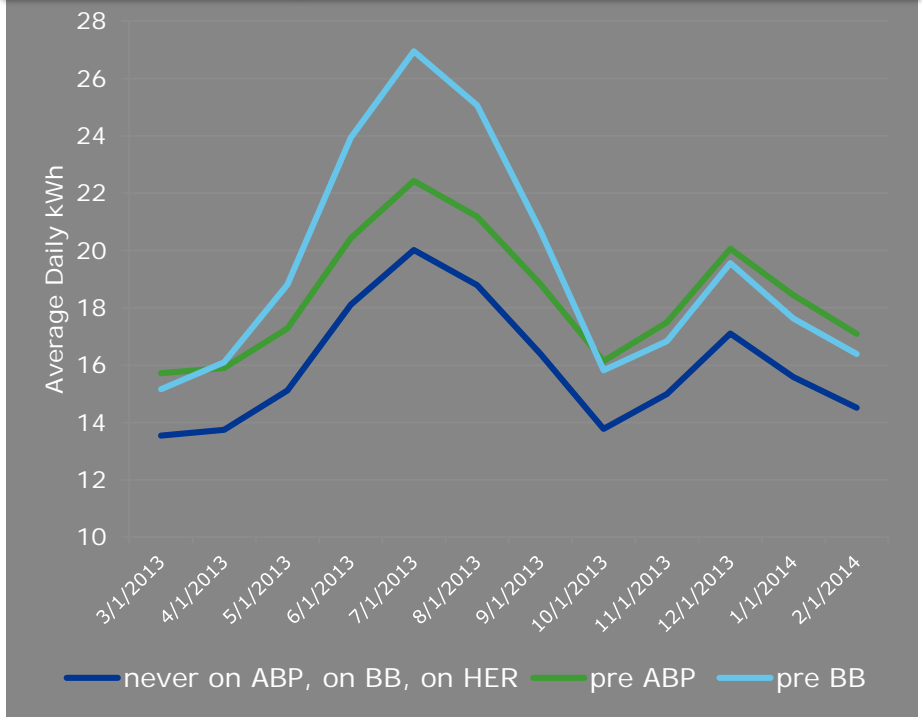


# Customer Profile

## Income by payment mode







## Pre-consumption data



ABP and BB users differ in terms of demographics and consumption patterns.

# Conclusions

Area of Research	Findings	Recommendations
 <p><b>ABP and BB impact</b></p>	<p>ABP - 1.1%-1.6% increase BB - 3.8%-4.7% increase</p>	<p>HER program or similar to combat loss of price salience</p>
 <p><b>ABP and BB impact within HER</b></p>	<p>ABP*HER - Dampens 100% of the increased consumption associated with ABP use. BB*HER - Dampens between 20% and 33% of the increased consumption that accompanies BB use.</p>	<p>Given higher summer consumption of BB customers, HVAC program options could be offered to BB customers with additional incentives</p>
 <p><b>Bill review behavior</b></p>	<p>Regularity of bill review is markedly higher for those who do not use either ABP or BB relative to those who use both.</p>	<p>Targeting education/marketing</p> <ul style="list-style-type: none"> <li>- Clearly communicate the potential for increased consumption</li> <li>- Take advantage of passive channels for BB communication (bill inserts)</li> </ul>
 <p><b>ABP and BB user profile</b></p>	<p>ABP users tend to be more affluent and educated. BB users have a higher prevalence of low-income customers.</p>	



# Questions?

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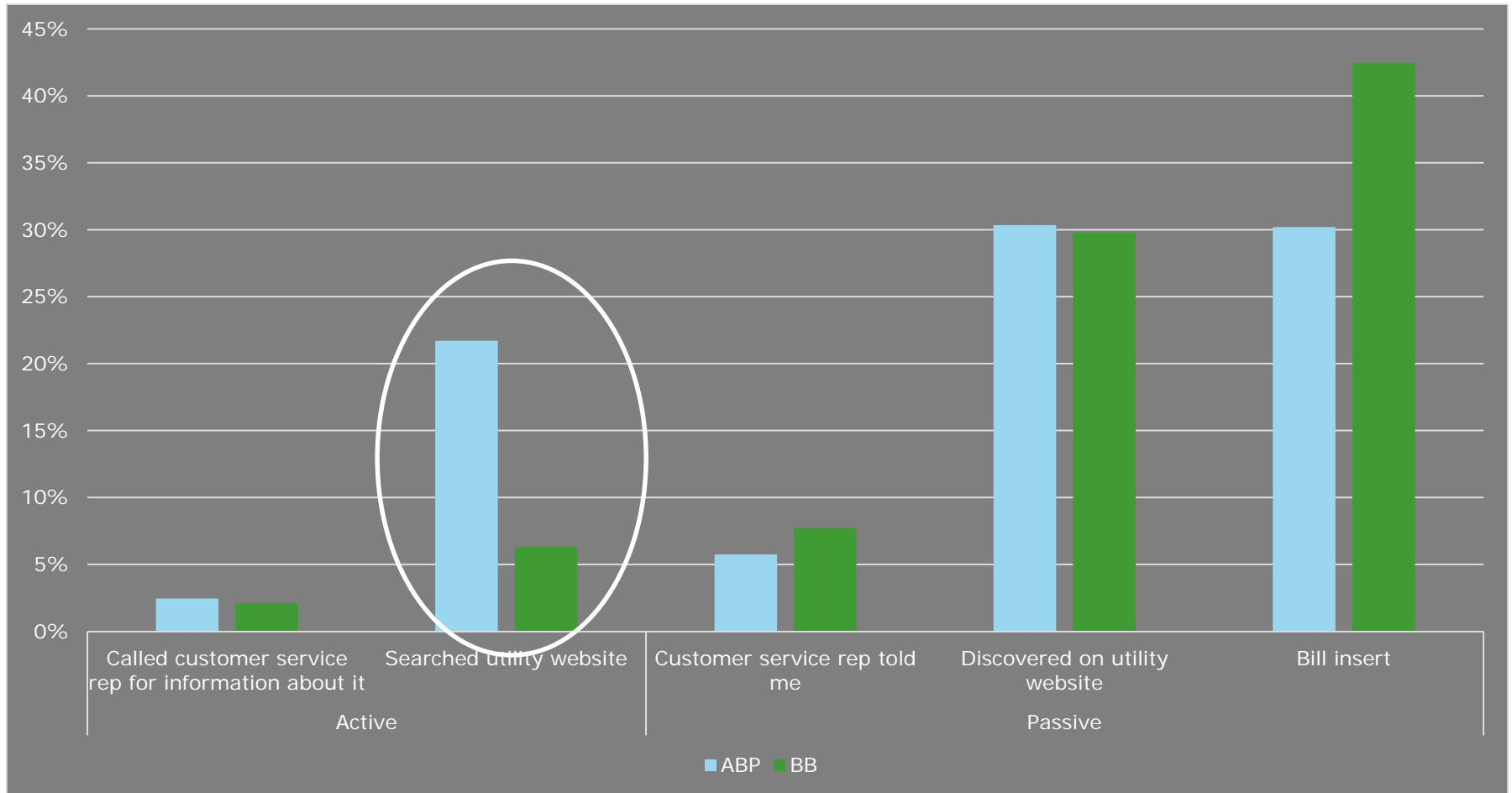
**SAFER, SMARTER, GREENER**

## 2015 PGE electric ABP, BB and total customer counts

	Customers	Percent of total
ABP	601,125	13%
BB	220,367	5%
ABP/BB	779,978	16%
Total electric customers	4,758,236	



## Sources of Awareness – ABP and BB

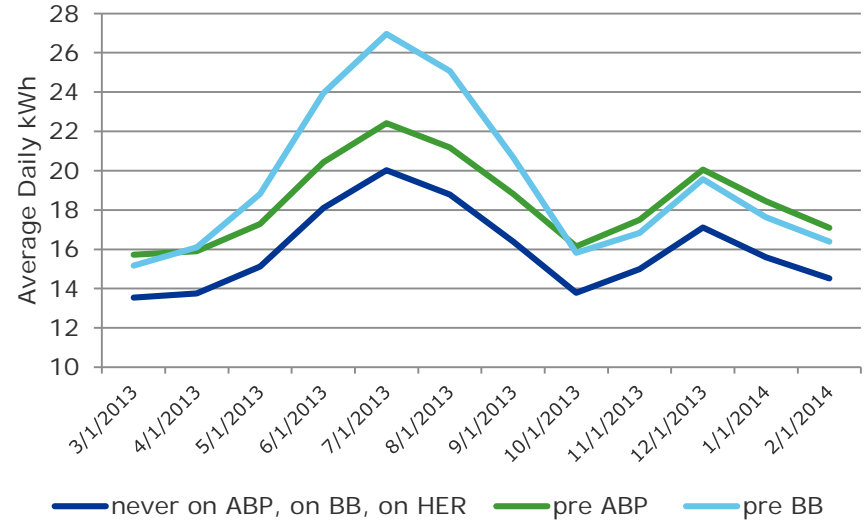
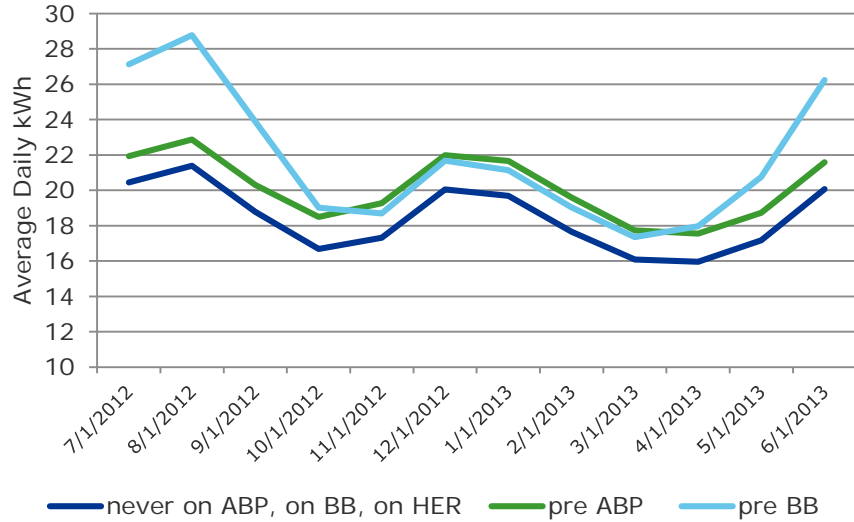


## Pooled fixed effects model estimates

parameter	Wave 3 Model Estimates			Wave 4 Model Estimates		
	Coefficient Estimate	Standard Error	P value	Coefficient Estimate	Standard Error	P value
Post HER treatment	-0.010	0.001	0.000	-0.007	0.001	0.000
on ABP	0.016	0.004	0.000	0.011	0.004	0.006
On BB	0.047	0.004	0.000	0.038	0.004	0.000
Post HER treatment on ABP	-0.008	0.002	0.000	-0.012	0.002	0.000
Post HER treatment on BB	0.001	0.002	0.650	-0.006	0.002	0.008

parameter	Wave 3 Model Estimates			Wave 4 Model Estimates		
	Coefficient Estimate	Standard Error	P value	Coefficient Estimate	Standard Error	P value
Total HER effect on ABP	-0.018	0.002	-0.015	-0.019	0.002	0.000
Total HER effect on BB	-0.010	0.002	-0.006	-0.013	0.002	0.000

## Average pre-program consumption for waves 3 and 4



Pre-HER treatment period reflects electricity usage for waves 3 and 4 respectively that is unaffected by any of the programs under consideration in this study