GRU Utility Rates (070716)

Family Size and Rate Structure

April 17, 2008

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Outline

a) Presentation on data obtained from other municipal utilities
   - Public Service Commission
   - Bond Covenants

b) Review data on household size, energy level and income level;

Peer Inquiry

"The Gainesville City Commission has made a referral on utility rate design and family size. In Gainesville we have inverted blocks with tiers at 250 kWh and 750 kWh. There has been some discussion that this makes it difficult for large families to conserve.

Does anyone have any sort of special consideration or rate design for large families?"

Reponses representing over 70 municipal utilities

- FL, Midwest, CO, OR, CA, NY, SC,
- **No utility with rates of this sort**

"EWEB also has tiered rates (3 tiers). Cutoff for the first tier is 800 kWh and 1700 kWh for the second (3000 kWh in winter). There is no consideration for large families, other than low income treatment as appropriate. Large families are not the only ones that can be significantly impacted--e.g. older folks on fixed incomes with larger, energy beast homes may also suffer." John Yanov

One potential consideration

- "Colorado Springs does not have inverted blocks or any special consideration for large families. Blocks were considered a few years ago but rejected at that time. *I believe the topic will come up again in the next couple of years.*"
- Henry H. Henderson
  Principal Pricing Analyst

Florida

- No rate categories or special considerations for family size
- Key West – HAD a special rate for retirees on fixed incomes, however this was discontinued in 2007.

Programs in Florida
(Customer Donations)

GRU	Project Share - assistance for the elderly, handicapped and those in financial hardship due to illness, who have difficulty paying a utility bill
JEA	Neighbor to Neighbor Program helps disabled, elderly, and low-income citizens pay for emergency energy-related needs
Clay Electric	Seniors Plan extended payment plan which provides extra 21 days without penalty. Must be at least 62 years old or disabled.

Programs in Florida
(Customer Donations)

FPL	Emergency Home Energy Assistance for financially eligible experiencing an energy-related crisis. Maximum of twice a year
Lakeland Electric	PROJECT CARE - customers who are disabled or 60 and older are eligible
Gulf Power	Project SHARE - Emergency assistance for the disabled, the sick, the elderly, and others who are experiencing financial hardship for energy bills, repairs to heating and air-conditioning equipment

Programs in Florida
(Customer Donations)

Ocala	Program to bill at the beginning of month for Customers on Social Security or disability
Progress	Preference Pay - customers on social security, retirement or disability, aged 55 years or older, have option to delay electric bill by seven calendar days.
OUC, Tallahassee, Fort Pierce	None
Tampa Electric	SHARE helps senior customers who are low-income and/or medically disabled pay their energy-related bills.

Public Service Commission Jurisdiction

- Jurisdiction of the PSC over municipal electric utilities - Florida Statute 366.04 (2)(a)-(f), (5) and (6).
- Includes rate structure, conservation and reliability of the grid, approval of territorial agreements, resolution of territorial disputes, requiring the filing of periodic reports.
- Structure of rates must ensure fairness of cost distribution among classes.

Public Service Commission concerns..

- "The Commission policy is to standardize rates to bring about lowest possible rates for most people" John Baxter, FPSC Analyst
- Historically Florida had business specific rates- chicken coop, hotel rates — eliminated because no cost justification and other customers had to pick up costs of "special" rates
- Not aware of ever having a family rate

Public Service Commission concerns..

- Concerned with the characteristics of each rate class
- Within each class, intergroup transfer is "frowned upon"
- Program Administration costs – certification of number of children, verification, continuation of customers on rate
- Direction is to keep rates simple, which holds down cost for entire group
- FPSC actively attempts to promote conservation – direction from Federal and State levels. A lower rate for higher useage would not encourage conservation

GRU Bond Covenants

- Section 711(2). No free service or service otherwise other than in accordance with the established rates, fees and charges shall be furnished by the System, which rates, fees and charges shall not permit the granting of preferential rates, fees and charges among the users of the same class of customers

Analyses

- Family Size (Appliance Survey)
- Energy Usage (Appliance Survey, Billing data, DEED Survey)
- Income Level (US Census for DEED, self reported in Appliance Survey)

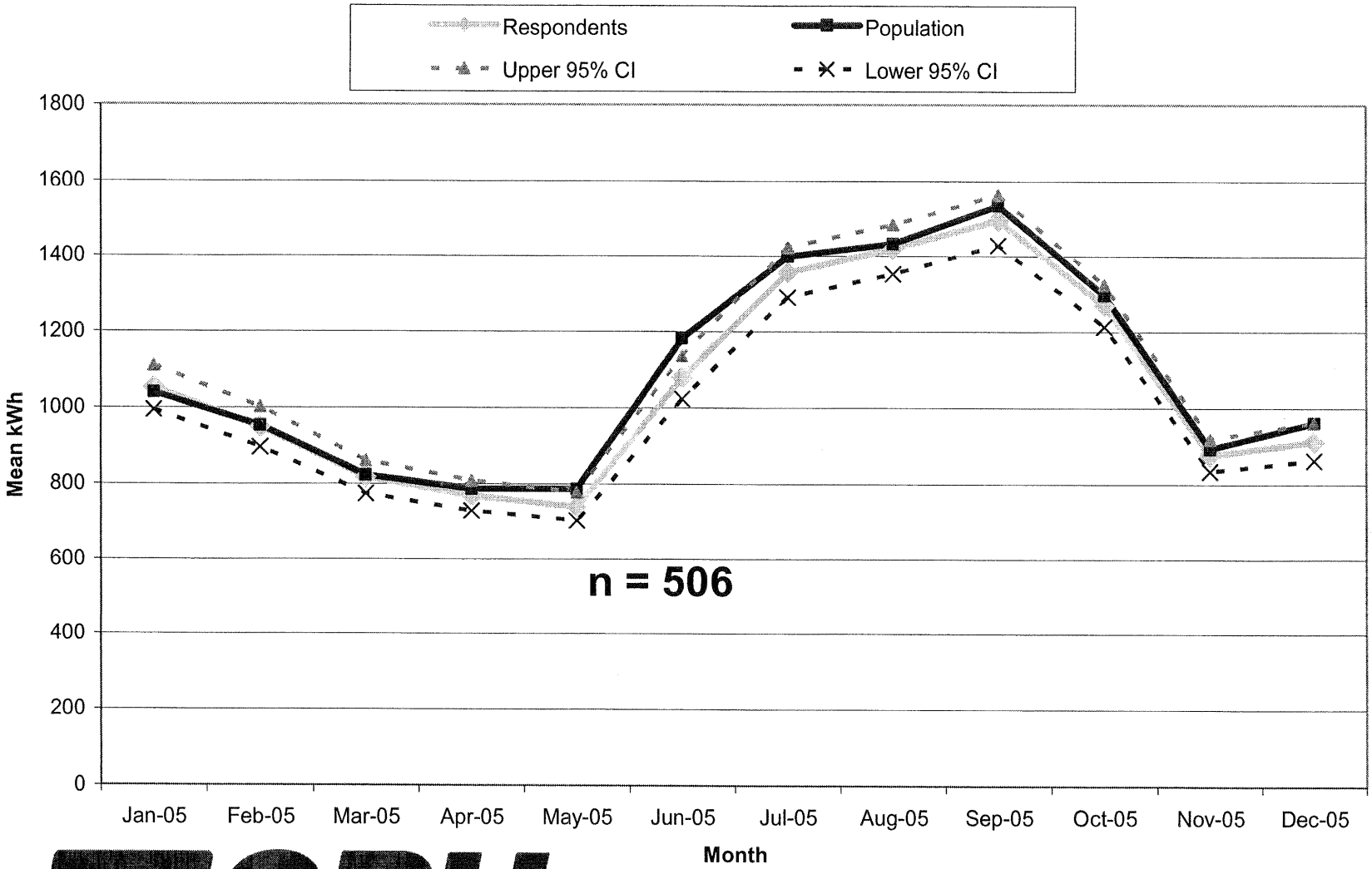
Interaction of Variables

- Use of multivariate analyses - importance. independence of variables
- Autocorrelation – association between variables that produces inaccurate results
- Additional variables may improve the *apparent* relationship

Appliance Survey

- Appliance Survey (2006)
  - 1,200 Sampled
  - 506 Final Sample Size
  - 362 Single Family
  - Represents General Customer Base

Comparison of Electric Usage Calendar Year 2005



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Family Size (Dwelling Occupancy) and Energy Use (Cost)

Total Occupants	n	Annual Cost $
1	135	910
2	215	1,140
3	69	1,097
4	52	1,342
5	14	1,282
6 or more	14	1,482

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Dwelling Size and Energy Use (Cost)

SqFt of Dwelling	n	Annual Cost $	Annual Cost $ / SqFt*
0-499	13	933	1.87
500-999	60	824	0.82
1,000-1,499	145	952	0.64
1,500-1,999	106	1,141	0.57
2,000-2,499	73	1,318	0.53
2,500-2,999	32	1,523	0.51
3,000-3,999	26	2,046	0.51
> 4,000	7	1,776	0.44

* SqFt = Top of range

Income Level and Energy Use (Cost)

Income Level	n	Annual Cost $	Annual Cost / Annual Income*
< $10,000	31	912	9.1%
$10-14,999	31	930	6.2%
$15-$24,999	56	971	3.9%
$25-$34,999	71	957	2.7%
$35-$49,999	68	1,050	2.1%
$50-$74,999	91	1,150	1.5%
$75-$99,999	50	1,283	1.3%
$100-$149,999	43	1,308	0.9%
> $150,000	31	1,667	1.1%

* Annual Income = top of range

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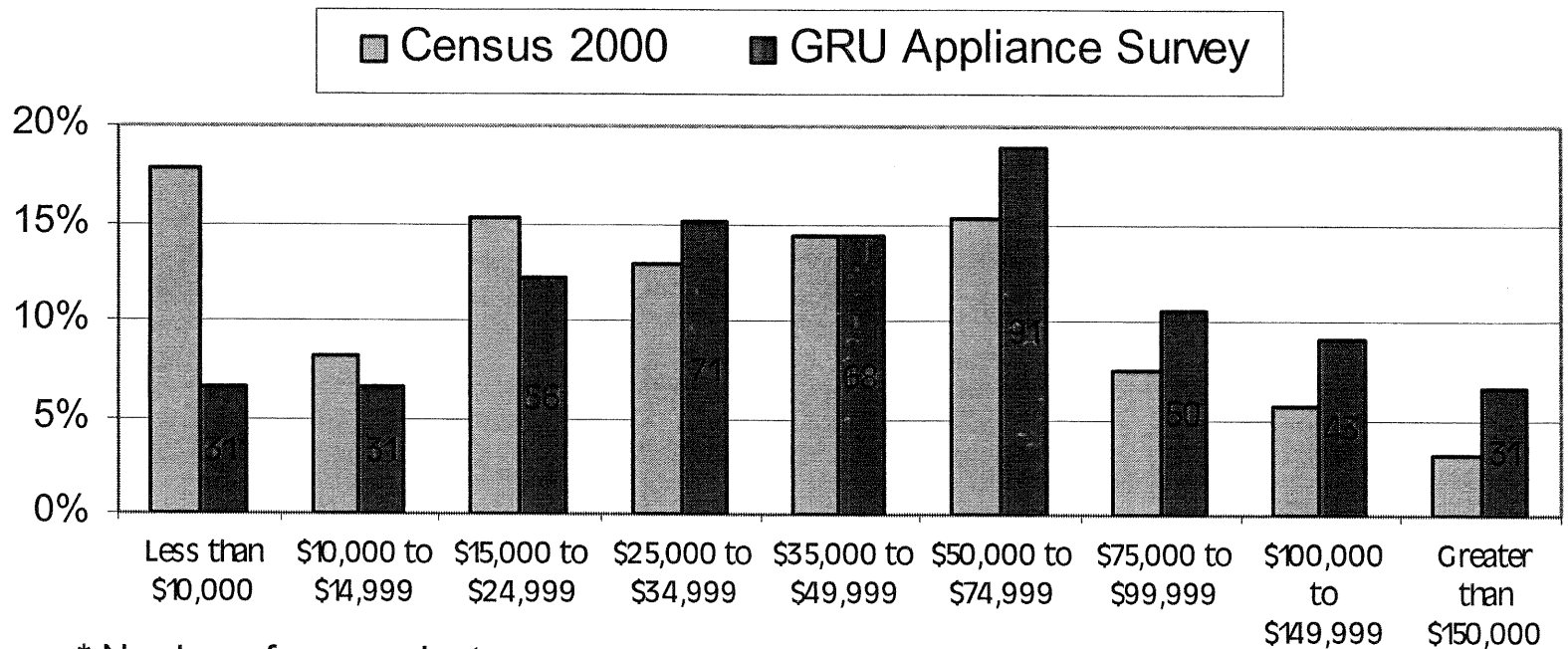
Income Comparison



* Number of respondents

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Sources of Data

- DEED:
  - 4,628 Sampled
  - 169 Final Sample Size
  - 169 Single Family
  - Represents Low Income Specifically
- Appliance Survey:
  - 1,200 Sampled
  - 506 Final Sample Size
  - 362 Single Family
  - Represents General Customer Base

HUD 2005 Gainesville, FL MSA
Low Income Criteria

Household Size (number of residents)	Low Income (80% MFI*)
1	$30,000
2	$34,300
3	$38,600
4	$42,900
5	$46,300
6	$49,750
7	$53,150
8	$56,600

*Fiscal Year 2005 Median Family Income (MFI) = $53,550

Comparison Low Income vs. Customer Sample

Summary Statistics for Total Energy Use and Energy Intensity (169 DEED Households vs. 362 Randomly Sampled GRU Customer Single Family Detached Households)

	Low Income Mean	Customer Mean
kWh Total (kWh/month)	**1118**	**1134**
kWh Intensity (kWh/month/1000ft^2)	**878**	**680**
Therm Total (therm/month, DEED N=103)	**28.1**	**26.6**
Therm Intensity (therm/month/1000ft^2, DEED N=103)	**21.5**	**15.3**
Btu Total (MMBtu/month)	**5.5**	**5.5**
Btu Intensity (MMBtu/month/1000ft^2)	**4.3**	**3.3**
Household Square Footage (conditioned area, ft^2)	**1333**	**1901**

Dwelling Size Comparison

DEED Survey vs 2006 Appliance Saturation Survey

Question	DEED	Appliance Survey
SqFt of Dwelling		
0-499	-	1.5%
500-999	18.9%	4.8%
1,000-1,499	54.7%	29.0%
1,500-1,999	16.0%	26.3%
2,000-2,499	5.7%	19.4%
2,500-2,999	2.8%	9.6%
3,000-3,999	1.9%	7.8%
> 4,000	-	1.8%

Primary Cooling Systems

DEED Survey vs 2006 Appliance Saturation Survey

Question	DEED	Appliance Survey
Primary Cooling Systems		
Electric Central AC	72.8%	96.0%
Natural Gas Central AC	1.8%	0.0%
Window AC	18.9%	3.1%
None	1.2%	-
Other	5.3%	0.9%

Primary Heating

DEED Survey vs 2006 Appliance Saturation Survey

Question	DEED	Appliance Survey
Primary Heating Systems		
Electric Resistance	22.5%	5.5%
Electric Heat Pump	27.2%	37.3%
Natural Gas	36.1%	47.1%
Liquid Propane	2.4%	1.7%
Other	11.8%	8.4%

Recommendation

The Equal Opportunity Committee:

a) Hear a presentation from staff on data obtained from other municipal utilities;

b) Review data on household size, energy level and income level;

c) Continue discussion of information relevant to help with comparisons