

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Request for approval of
survey instrument to be used to
collect residential end-use data
by Florida Public Service
Commission staff.

DOCKET NO. 971602-EU
ORDER NO. PSC-98-0135-FOF-EU
ISSUED: January 26, 1998

The following Commissioners participated in the disposition of
this matter:

JULIA L. JOHNSON, Chairman
J. TERRY DEASON
SUSAN F. CLARK
JOE GARCIA
E. LEON JACOBS, JR.

NOTICE OF PROPOSED AGENCY ACTION
ORDER APPROVING 1998 RESIDENTIAL
END-USE SURVEY INSTRUMENT

BY THE COMMISSION:

NOTICE is hereby given by the Florida Public Service Commission that the action discussed herein is preliminary in nature and will become final unless a person whose interests are substantially affected files a petition for a formal proceeding, pursuant to Rule 25-22.029, Florida Administrative Code.

Rule 25-17.006, Florida Administrative Code, specifies that an end-use survey of residential customers will be performed every four years by all utilities subject to the Florida Energy Efficiency and Conservation Act (FEECA). In December 1994, FEECA was revised, reducing the number of utilities required to perform these surveys from twelve to six. The utilities required to participate in the 1998 survey are Florida Power Corporation, Florida Power and Light Company, Gulf Power Company, Tampa Electric Company, Jacksonville Electric Authority, and Orlando Utility Commission.

We note that we have proposed amendments to Rule 25-17.006, Florida Administrative Code, which may become effective before the

DOCUMENT NUMBER-DATE

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FPSC-RECORDS/REPORTING

1998 survey data is filed. However, the proposed amendments, if adopted, would not affect the requirement that we develop and issue a survey instrument designed to collect data regarding appliance stock, housing characteristics, household demographic characteristics, and twelve months of kilowatt hour billing history.

We find that the attached survey instrument, proposed by our staff, will enable this Commission to effectively analyze consumption trends, demographics, and appliance stock. The survey instrument is nearly identical to the one that we approved for use in the most recent survey conducted pursuant to Rule 25-17.006 in 1994; the only change is the addition of questions requesting the approximate ages of the refrigerator and freezer.

The information that will be collected in the 1998 survey can be compared to similar data gathered in past surveys performed in 1986, 1990, and 1994. This information has been useful in a variety of ways. The Department of Community Affairs has used data from the 1990 survey in its evaluation of residential building codes. Synergic Resources Corporation used data from the 1990 survey as a starting point for its study of conservation potential in Florida. Data collected from the 1998 survey is anticipated to be used in new studies of conservation potential in Florida.

Based on the foregoing, it is


ORDERED by the Florida Public Service Commission that the attached survey instrument is approved and shall be used by all electric utilities required to conduct a residential customer end-use survey in 1998 pursuant to Rule 25-17.006, Florida Administrative Code. It is further

ORDERED that the provisions of this Order, issued as proposed agency action, shall become final and effective unless an appropriate petition, in the form provided by Rule 25-22.036, Florida Administrative Code, is received by the Director, Division of Records and Reporting, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, by the close of business on the date set forth in the "Notice of Further Proceedings or Judicial Review" attached hereto. It is further

ORDERED that in the event this Order becomes final, this Docket shall be closed.

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By ORDER of the Florida Public Service Commission this 26th
day of January, 1998.



BLANCA S. BAYÓ, ~~Director~~
Division of Records and Reporting

(S E A L)

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NOTICE OF FURTHER PROCEEDINGS OR JUDICIAL REVIEW

The Florida Public Service Commission is required by Section 120.569(1), Florida Statutes, to notify parties of any administrative hearing or judicial review of Commission orders that is available under Sections 120.57 or 120.68, Florida Statutes, as well as the procedures and time limits that apply. This notice should not be construed to mean all requests for an administrative hearing or judicial review will be granted or result in the relief sought.

Mediation may be available on a case-by-case basis. If mediation is conducted, it does not affect a substantially interested person's right to a hearing.

The action proposed herein is preliminary in nature and will not become effective or final, except as provided by Rule 25-22.029, Florida Administrative Code. Any person whose substantial interests are affected by the action proposed by this order may file a petition for a formal proceeding, as provided by Rule 25-22.029(4), Florida Administrative Code, in the form provided by Rule 25-22.036(7)(a) and (f), Florida Administrative Code. This petition must be received by the Director, Division of Records and Reporting, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, by the close of business on February 16, 1998.

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In the absence of such a petition, this order shall become effective on the day subsequent to the above date as provided by Rule 25-22.029(6), Florida Administrative Code.

Any objection or protest filed in this docket before the issuance date of this order is considered abandoned unless it satisfies the foregoing conditions and is renewed within the specified protest period.

If this order becomes final and effective on the date described above, any party substantially affected may request judicial review by the Florida Supreme Court in the case of an electric, gas or telephone utility or by the First District Court of Appeal in the case of a water or wastewater utility by filing a notice of appeal with the Director, Division of Records and Reporting and filing a copy of the notice of appeal and the filing fee with the appropriate court. This filing must be completed within thirty (30) days of the effective date of this order, pursuant to Rule 9.110, Florida Rules of Appellate Procedure. The notice of appeal must be in the form specified in Rule 9.900(a), Florida Rules of Appellate Procedure.

CODING FORMAT FOR THE 1998 RESIDENTIAL CUSTOMER SURVEY

A. Survey Identification Number (5 digits):

B. Utility Identification

- 01 Florida Power Corporation
- 02 Tampa Electric Company
- 03 Gulf Power company
- 04 Jacksonville Electric Authority
- 05 Florida Power and Light
- 06 Orlando Utilities Commission

C. County Identification:

- | | | |
|---------------------|------------------------|----------------------|
| <u>01</u> Alachua | <u>23</u> Gulf | <u>45</u> Nassau |
| <u>02</u> Baker | <u>24</u> Hamilton | <u>46</u> Okaloosa |
| <u>03</u> Bay | <u>25</u> Hardee | <u>47</u> Okeechobee |
| <u>04</u> Bradford | <u>26</u> Hendry | <u>48</u> Orange |
| <u>05</u> Brevard | <u>27</u> Hernando | <u>49</u> Osceola |
| <u>06</u> Broward | <u>28</u> Highlands | <u>50</u> Palm Beach |
| <u>07</u> Calhoun | <u>29</u> Hillsborough | <u>51</u> Pasco |
| <u>08</u> Charlotte | <u>30</u> Holmes | <u>52</u> Pinellas |
| <u>09</u> Citrus | <u>31</u> Indian River | <u>53</u> Polk |
| <u>10</u> Clay | <u>32</u> Jackson | <u>54</u> Putnam |
| <u>11</u> Collier | <u>33</u> Jefferson | <u>55</u> St. Johns |
| <u>12</u> Columbia | <u>34</u> Lafayette | <u>56</u> St. Lucie |
| <u>13</u> Dade | <u>35</u> Lake | <u>57</u> Santa Rosa |
| <u>14</u> De Soto | <u>36</u> Lee | <u>58</u> Sarasota |
| <u>15</u> Dixie | <u>37</u> Leon | <u>59</u> Seminole |
| <u>16</u> Duval | <u>38</u> Levy | <u>60</u> Sumter |
| <u>17</u> Escambia | <u>39</u> Liberty | <u>61</u> Suwanee |
| <u>18</u> Flagler | <u>40</u> Madison | <u>62</u> Taylor |
| <u>19</u> Franklin | <u>41</u> Manatee | <u>63</u> Union |
| <u>20</u> Gadsden | <u>42</u> Marion | <u>64</u> Volusia |
| <u>21</u> Gilchrist | <u>43</u> Martin | <u>65</u> Wakulla |
| <u>22</u> Glades | <u>44</u> Monroe | <u>66</u> Walton |
| | | <u>67</u> Washington |

D. Billing History (Oldest month first):

			<u>Example</u>
a.	1st month beginning billing date	Month/day/yr	<u>0 4 / 1 0 / 9 3</u>
b.	1st month ending billing date	Month/day/yr	<u>0 5 / 0 7 / 9 3</u>
c.	1st month's KWH consumption		<u>0 1 8 7 2</u>
d.	2nd month ending billing date	Month/day/yr	_ _ / _ _ / _ _
e.	2nd month's KWH consumption		_ _ _ _ _
f.	3rd month ending billing date	Month/day/yr	_ _ / _ _ / _ _
g.	3rd month's KWH consumption		_ _ _ _ _
h.	4th month ending billing date	Month/day/yr	_ _ / _ _ / _ _
i.	4th month's KWH consumption		_ _ _ _ _
j.	5th month ending billing date	Month/day/yr	_ _ / _ _ / _ _
k.	5th month's KWH consumption		_ _ _ _ _
l.	6th month ending billing date	Month/day/yr	_ _ / _ _ / _ _
m.	6th month's KWH consumption		_ _ _ _ _
n.	7th month ending billing date	Month/day/yr	_ _ / _ _ / _ _
o.	7th month's KWH consumption		_ _ _ _ _
p.	8th month ending billing date	Month/day/yr	_ _ / _ _ / _ _
q.	8th month's KWH consumption		_ _ _ _ _
r.	9th month ending billing date	Month/day/yr	_ _ / _ _ / _ _
s.	9th month's KWH consumption		_ _ _ _ _
t.	10th month ending billing date	Month/day/yr	_ _ / _ _ / _ _
u.	10th month's KWH consumption		_ _ _ _ _
v.	11th month ending billing date	Month/day/yr	_ _ / _ _ / _ _
w.	11th month's KWH consumption		_ _ _ _ _
x.	12th month ending billing date	Month/day/yr	_ _ / _ _ / _ _
y.	12th month's KWH consumption		_ _ _ _ _

- E. Date survey was performed: Month/day/yr __/__/__
- F. Time survey was performed Hour
(Military Time) ____

ON-SITE VISIT

[INTRODUCTION - Each utility will customize as needed.]

1. About how many years have you lived here? (ROUND UP) (TAKE MIDPOINT OF RANGE) (OFFER REFERENCE IF NECESSARY BASED ON PERCEIVED AGE OF RESPONDENT - FOR EXAMPLE "Have you lived here more than five years?" CHANGE BY 5 YEAR INCREMENTS) (DK=99)

__ __ Years

2. About what year was your residence built? (ROUND UP) (TAKE MIDPOINT OF RANGE) (IF NECESSARY OFFER A REFERENCE POINT BASED ON YOUR ESTIMATE OF THE AGE - FOR EXAMPLE "Do you think it was built before or after 1980?" CHANGE BY 5 YEAR INCREMENTS) (PROVIDE ESTIMATE IF NECESSARY)

1 ____ Year Built

(CODE 0 IF CUSTOMER PROVIDED RESPONSE, CODE 1 IF INTERVIEWER ESTIMATED)

0 Customer provided response
1 Interviewer estimated

3. (FOR MULTI-FAMILY DWELLINGS ONLY; IF NOT MULTI-FAMILY DWELLING, CODE 8 AND CONTINUE WITH Q5) → Does your central air conditioner serve more than one residence?

1 Yes
2 No
8 Not a multi-family dwelling
9 Don't know

4. During a typical summer weekday, at what temperature do you set your central air conditioner during the: (READ EACH) (OFF=00; DK=99) (TAKE MIDPOINT OF RANGE)

___ °F Day
___ °F Night

LET'S NOW TALK ABOUT YOUR HEATING SYSTEM

5. What is the primary fuel used to heat your home? (BEGIN TO READ) (CODE ONLY ONE)

<u>01</u> Electricity	<u>07</u> Solar
<u>02</u> Natural Gas	<u>08</u> Kerosene
<u>03</u> Propane or bottled gas	<u>09</u> Other, _____
<u>04</u> Wood	<u>10</u> None (SKIP TO Q10)
<u>05</u> Oil	<u>99</u> Don't know
<u>06</u> Coal	

6. Do you have a backup or supplemental fuel that you use to heat your home? What is it? (CODE ONLY ONE)

<u>01</u> Electricity	<u>07</u> Solar
<u>02</u> Natural Gas	<u>08</u> Kerosene
<u>03</u> Propane or bottled gas	<u>09</u> Other, _____
<u>04</u> Wood	<u>10</u> None (SKIP TO Q10)
<u>05</u> Oil	<u>99</u> Don't know (SKIP TO Q10)
<u>06</u> Coal	

7. Is there any other fuel you use to heat your home? (CODE ONLY ONE)

<u>01</u> Electricity	<u>07</u> Solar
<u>02</u> Natural Gas	<u>08</u> Kerosene
<u>03</u> Propane or bottled gas	<u>09</u> Other, _____
<u>04</u> Wood	<u>10</u> None
<u>05</u> Oil	<u>99</u> Don't know
<u>06</u> Coal	

8. (FOR MULTI-FAMILY DWELLINGS ONLY; IF NOT MULTI-FAMILY DWELLING, CODE 8 AND CONTINUE WITH Q10) → Does your heating system serve more than one residence?

- 1 Yes
2 No
8 Not a multi-family dwelling
9 Don't know

9. During a typical winter weekday, at what temperature do you set your heating system during the (READ EACH) (OFF=00; NOT APPLICABLE/NO THERMOSTAT=01; DK=99) (TAKE MIDPOINT OF RANGE)

- ___ °F Day
___ °F Night

NEXT, WE'RE GOING TO TALK ABOUT YOUR APPLIANCES.

10. Please tell me how many (READ EACH) you have at your residence. (NONE=0; 8 OR MORE=8; DK=9)

- ___ Electric wall oven
___ Gas wall oven
___ Electric cooktop
___ Gas cooktop
___ Electric ranges
___ Gas ranges
___ Microwave ovens
___ Convection or toaster ovens
___ Dishwashers
___ Auto defrost refrigerators
___ Manual defrost refrigerators
___ Stand alone auto defrost freezers (separate from refrigerator)
___ Stand alone manual defrost freezers (separate from refrigerator)
___ Washing machines
___ Electric clothes dryers
___ Gas clothes dryers
___ Color TVs
___ Black and white TVs
___ VCRs
___ Home computers

- Ceiling fans
- Portable electric space heaters
- Water beds with electric heater
- Water well pumps
- Electrically heated hot tub or sauna (not oversized bathroom tub with jets)
- Dehumidifier
- Irrigation or sprinkler pump
- Swimming pool pumps
- Swimming pool pump timers
- Electric swimming pool heaters
- Solar swimming pool heaters

11.1 How old is the newest frost free refrigerator/freezer? (CODE 99 IF DON'T KNOW;
CODE NUMBER OF YEARS WITH 00 FOR LESS THAN 1 YEAR OLD.)

Years Old

11.2 How old is the newest frost free stand alone freezer? (CODE 99 IF DON'T KNOW;
CODE NUMBER OF YEARS WITH 00 FOR LESS THAN 1 YEAR OLD.)

Years Old

12. Is natural gas available on your street?

- 1 Yes
- 2 No
- 9 Don't know

13. Do you own or rent your residence?

- 1 Own/purchasing
- 2 Rent
- 3 Other

14. If you pay common charges, maintenance fees, or rent on your residence, do they include the energy costs of running your: (READ EACH) (CODE 1 IF INCLUDED, CODE 0 IF NOT INCLUDED, CODE 7 IF SYSTEM NOT PRESENT, CODE 8 IF COMMON CHARGES NOT PAID, CODE 9 IF DON'T KNOW)

- _____ Air conditioning system
 _____ Heating system
 _____ Hot water system

15. Beginning with the respondent, please tell me the members of the households' sex, age, employment status and education. (SLASH THROUGH UNUSED LINES)

Person	Sex (1) male (2) female (9) no response	Age (00) less than six months old (98) 98 years or older (99) no response	Employment (1) full-time (2) part-time (3) not employed (4) retired (9) no response	Education (1) grade 11 or lower (2) high school graduate (3) some college (4) college graduate (5) graduate school (9) no response
1 (Respondent)				
2				
3				
4				
5				
6				
7				
8				

16. What months do you live in this residence? (ABSENT = 0; PRESENT = 1)

0/1 January
0/1 February
0/1 March
0/1 April
0/1 May
0/1 June

0/1 July
0/1 August
0/1 September
0/1 October
0/1 November
0/1 December

17. And finally, which letter in this list represents the total annual 1997 income for your household before taxes? (SHOW CARD) (CODE LETTER FROM CARD)
- _____

1998 RESIDENTIAL CUSTOMER SURVEY
SALARY KEY FOR QUESTION 17

<u>CATEGORY</u>	<u>TOTAL INCOME</u>
Q	Less than \$5,000
D	\$5,000 to \$9,999
R	\$10,000 to \$14,999
M	\$15,000 to \$19,999
F	\$20,000 to \$24,999
S	\$25,000 to \$29,999
K	\$30,000 to \$34,999
G	\$35,000 to \$39,999
A	\$40,000 to \$44,999
B	\$45,000 to \$49,999
L	\$50,000 to \$54,999
O	\$55,000 to \$59,999
C	\$60,000 to \$64,999
N	\$65,000 to \$69,999
I	\$70,000 to \$74,999
H	\$75,000 to \$79,999

J	\$80,000 to \$99,999
E	\$100,000 and over
P	No response

Thank you. That conducts this part of the survey. I need to verify some information about your heating and cooling systems and your water heater. Will you please tell me where these are located?

18. CENTRAL AIR CONDITIONER

18a. Are there any central air conditioning systems present?

- 1 Yes
2 No (SKIP TO Q19)

18b. Does the central air conditioning system serve more than one household?

- 1 Yes (SKIP TO Q19)
2 No

18c. Matrix

Data Accuracy

- 1 Estimated
- 2 Actual
- 3 Unavailable (Make or Model # only)

Clock Controlled Thermostat

- 1 Yes
- 2 No
- 9 Don't know

Air Handler Location

- 1 Conditioned space
- 2 Unconditioned space (includes garage)
- 3 Unconditioned attic
- 4 Outdoors
- 9 Don't know

System Type

- 1 Central electric, straight cool/package
- 2 Central electric, straight cool/split
- 3 Central heat pump/air-package
- 4 Central heat pump/air-split
- 5 Central heat pump/water or ground source
- 6 Central gas

Location of majority of duct work

- 1 Conditioned space
- 2 Unconditioned space
- 3 Unconditioned attic
- 4 Outdoors
- 5 No ducts

	Primary System	Data Accuracy	Supplemental System 1	Data Accuracy	Supplemental System 2	Data Accuracy
System Type						
BTUH						
Age of Compressor						
SEER						
Percent of living space cooled						
Clock controlled thermostat						
Location of duct						
Air handler						

19. WINDOW / WALL AC

19a. Is there at least one window / wall air conditioning unit present?

- 1 Yes
- 2 No (SKIP TO Q20)

19b. Matrix

Unit Type

- 1 AC only
- 2 AC with heat pump
- 3 AC with strip heat
- 9 Don't know

Data Accuracy

- 1 Estimated
- 2 Actual

	Unit 1	Data Accuracy	Unit 2	Data Accuracy	Unit 3	Data Accuracy
Unit Type						
BTUH						
EER						
Age of Compressor						
Percent of living space cooled						

20. HEATING SYSTEM

20a. Are there any heating systems present?

- 1 Yes
- 2 No (SKIP TO Q21)

20b. Does the heating system serve more than one household?

- 1 Yes (SKIP TO Q21)
- 2 No

20c. Matrix

Data Accuracy

- 1 Estimated
- 2 Actual

Fuel

- 1 Electricity
- 2 Natural gas
- 3 Propane or bottled gas
- 4 Wood
- 5 Oil
- 6 Coal
- 7 Solar
- 8 Kerosene
- 9 Other

Air Handler Location

- 1 Conditioned space
- 2 Unconditioned space (includes garage)
- 3 Unconditioned attic
- 4 Outdoors
- 5 No air handler
- 9 Don't know

Type System

- 1 Central furnace or boiler
- 2 Central heat pump - air
- 3 Central heat pump - water
- 4 Built-in electric room units with individual room controls (includes baseboards)
- 5 Room/wall AC with heat pump or strip
- 6 Permanent, non-electric room heaters
- 7 Whole house wall or floor furnace
- 8 Portable electric heater
- 9 Portable kerosene heater
- 10 Wood or coal burning stoves
- 11 Solar collectors
- 12 Fireplace

Location of majority of duct work

- 1 Conditioned space
- 2 Unconditioned space
- 3 Unconditioned attic
- 4 Outdoors
- 5 No ducts

	Primary System	Data Accuracy	Supplemental System 1	Data Accuracy	Supplemental System 2	Data Accuracy
Type System						
Fuel						
Output capacity (BTUH, watts)						
Input capacity (BTUH, watts)						
Percent of living space heated						
Air handler location						
Duct work						
For heat pumps: COP	--					
HSPF						
Backup strip kw						
Age of compressor						

21. WATER HEATING SYSTEM

21a. Are there any domestic water heating systems present?

- 1 Yes
2 No (SKIP TO Q22)

21b. Matrix

Fuel Type

- 1 Electric
2 Natural gas
3 LP gas
4 Fuel oil
5 Solar
6 None
9 Don't know

Insulation Type

- 1 External blanket
2 Super insulated tank
3 Standard insulated tank
9 Don't know

Water Heating System	Unit 1	Unit 2	Unit 3
Primary fuel type			
Back-up fuel type			
Age in years			
Capacity in gallons			
Insulation type			
Location 1-Conditioned 2-Unconditioned			
Timer? 1-Yes 2-No			
Does unit serve more than one residence? 1-Yes 2-No			
Existing waste heat recovery? 1-Yes 2-No			
Waste heat recovery feasible? 1-Yes 2-No			
Dedicated heat pump? 1-Yes 2-No			

22. How many instantaneous (tankless) water heater(s) are present? (NONE=0; 8 OR MORE=8; DK=9)

_____ Instantaneous (tankless) water heaters

23. Interior square footage (NONE=00000) (EXCLUDING PATIO, PORCHES, UNFINISHED GARAGE)

___ ___ ___ ___ ___ Basement
___ ___ ___ ___ ___ First floor (level where you enter front door)
___ ___ ___ ___ ___ Second floor
___ ___ ___ ___ ___ Third floor

24. Predominant type of floor construction:

- 1 Concrete slab
- 2 Crawl space enclosed and above ground
- 3 Crawl space open to the outside
- 4 Basement
- 9 Don't know

25. Predominant type of exterior construction:

- 1 Concrete block
- 2 Stucco over wood panel
- 3 Brick or brick veneer
- 4 Wood
- 5 Wood & brick/block combination
- 6 Aluminum
- 7 Vinyl
- 8 Other _____

26. Average wall insulation (R-VALUE): (NONE=00; DK=99)

___ ___

27. Average attic insulation (R-VALUE): (NONE=00; COMMON CEILING=88; DK=99)

___ ___

28. Dwelling type:

- 1 Single family detached
- 2 Multi-family (2-4 units)
- 3 Multi-family (5+ units, 1 story)
- 4 Multi-family (5+ units, 2+ stories)

- 5 Manufactured (mobile) home, single-wide
- 6 Manufactured (mobile) home, multi-wide
- 7 Other _____