

**Supporting Statement for Requests for Approval under the
Paperwork Reduction Act and 5 CFR 1320**

Application for EnergyRight® Solutions Program, OMB #3316-0019

SECTION A. JUSTIFICATION:

1. Explain the circumstances that make the collection of information necessary.

The *EnergyRight*® Program (branded initially as the *EnergyRight*® *Solutions* Program) is a collection of services designed to help residential, commercial, and industrial customers solve energy use problems, provide a mechanism to properly manage growth of the electric power system and to effectively communicate advantages of selecting electricity as a dwelling's or business's primary energy source. The program produces positive benefits for customers by providing ways to save money and reduce wasteful consumption of scarce, non-renewable, natural resources. It also is within the broad directions of the TVA Act for the TVA Board of Directors "to make studies, experiments, and determinations to promote the wider and better use of electric power and it may cooperate with State governments, or their subdivisions or agencies, or other organizations, in the application of electric power to the fuller and better-balanced development of the resources of the region....." (TVA Act, section 10, copy attached).

The *EnergyRight* Program is a broad term that encompasses many activities that promote energy efficiency and electrification. The *EnergyRight* New Homes program promotes all-electric, energy-efficient new homes. The *EnergyRight* eScore program encourages the installation of energy-efficiency upgrades in existing, single-family homes. Program features include a certified contractor network, installation standards, incentives, and financing.

Installations from eScore and Self-Audit are reported through the eScore portal. All other *EnergyRight* Program installations are reported to TVA through an online database, –E-Tracker. An installation qualifying for the *EnergyRight* Program typically is eligible for a cash incentive, known as a rebate. The rebate is a cash incentive that is either paid to the participant or the Local Power Company (LPC), the distributor of power. Typically, distributors will use rebates received from TVA to offset the costs of inspection services and administration of the program, as well as for paying incentives to builders, contractors, or homeowners.

Under the *EnergyRight* Program eScore, participating distributors of TVA power may choose to offer loans for heat pumps and energy efficiency

improvements. The distributors offer low-interest loans of up to \$15,000 per individual, and a repayment period not to exceed 10 years.

The *EnergyRight* Program also encompasses *EnergyRight* for Business and Industry program which promotes electric technology efficiency improvements. The program has two possible paths the customer can take to obtain project support, Custom Solutions or Standard Solutions. The Custom Solutions path provides unbiased, reliable technical assistance and information to help identify custom facility and process electric savings opportunities at facilities. The program provides incentives to help minimize upfront costs to encourage business owners to follow through on energy efficiency upgrades. The Standard Solutions path provides pre-determined incentives for qualified energy-efficient measures allowing commercial customers to simplify their decision-making process regarding cost-effectiveness.

Measurement & Verification. Pre- and post-installation inspections are conducted to maintain a high standard of quality. This also ensures that incented measures are correctly installed and achieving the energy savings claimed as quantified by M&V reporting. Minimum percentage of inspections is required in the Business and Industry programs to assure measures that are being incentivized actually meet the program requirements. All projects that have a pre-inspection will also have a post-inspection performed. The inspection criteria currently applied to the program are noted in the table.

EnergyRight for Business and Industry participants receive a cash incentive to install energy efficiency measures. To obtain the cash incentive, the participant must fill out a Program application. The participant receiving the energy efficiency measure and therefore the cash incentive benefit can identify the recipient of the cash incentive within the application. In some cases, the recipient installing the energy efficiency measure may want to elect for the cash incentive to be made to the contractor or another third party. The recipient of said cash incentive must provide the appropriate TAX ID and where the Program will mail the cash payment.

As a separate function aside from the data collection for the *EnergyRight* Program, periodic surveys are conducted by the Strategy, Marketing & Support group. Information is collected as an independent measure of indirect program impact, the effectiveness of communication efforts, changing demographics, program administration, changes in the saturation of other fuels, potential interest in energy

| <u>Inspection Criteria</u> | |
|--------------------------------|--|
| Commercial Prescriptive | |
| <\$3,500 – No Inspection | |
| \$3,500-<\$10,000 – Sample 28% | |
| >\$10,000 – 100% Inspection | |
| Commercial Custom | |
| <\$2,000 – No Inspection | |
| \$2,000-<\$25,000 – Sample 60% | |
| \$25,000 – 100% Inspection | |
| Industrial Prescriptive | |
| <\$5,000 – No Inspection | |
| \$5,000-<\$40,000 – Sample 24% | |
| >\$40,000 – 100% Inspection | |
| Industrial Custom | |
| <\$2,000 – No Inspection | |
| \$2,000-<\$25,000 – Sample 80% | |
| \$25,000 – 100% Inspection | |

programs, drivers of energy efficiency and changes in saturation of other electrical equipment. Results are used both with the *EnergyRight* Program and power planning purposes at TVA. See the attached document *OMB Collection of Information Employing Statistical Methods.doc* for details related to this collection effort.

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

EnergyRight for Business & Industry - The installation of energy improvements results in energy savings to both the TVA power system and to the consumer of TVA power. Such installations result from the influence of the Programs cash incentive.

The application information collected is used for Program staff to perform on-site inspections as required by the program.

TVA and LPCs use the Strategy, Marketing & Support group's results to assess the program potential, the effectiveness of the programs, and determine potential program modifications. See the attached document *OMB Collection of Information Employing Statistical Methods.doc* for details related to this collection effort.

EnergyRight for Home - TVA and the local power companies cooperate in providing low-interest loans, and heat pump inspections to those consumers who heat or cool electrically and/or who need to make energy improvements to their residences.

The installation of energy improvements results in energy savings to both the TVA power system and to the consumer of TVA power. Such installations result from the consumer's access to low-interest financing, installation inspections, and the information provided to consumers.

EnergyRight Program - TVA and LPCs use the survey results to assess the program potential, the effectiveness of their residential programs, determine potential program modifications, and for comparative purposes of the LPCs service area to a specified geographic district and the Valley overall. See the attached document *OMB Collection of Information Employing Statistical Methods.doc* for details related to this collection effort.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

EnergyRight for Business & Industry - The program participant is required to fill out an application and provide appropriate information. The application is a web-based application and the data entered into the application is sent to the program via email in a CSV file. The data is digested into the Program database, reducing program processing time and transfer errors associated with paper applications.

EnergyRight for Home - The information on all forms is recorded by an energy services technician while in a residence inspecting installed improvements. TVA currently accepts electronic submission and paper submissions of audits and will allow electronic submission of all other forms if the residential energy services technicians obtain remote entry computer capability.

EnergyRight Program - Survey information is gathered by telephone, online, or by mail. Methods used are based on the audience being surveyed and the methodology that will ensure accurate results. Utilization of online surveys and online panels have significantly reduced the time needed to compile, collect, and analyze survey collected survey data.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.

All applications are unique, in that the participant is requesting a new energy efficiency measure be installed. As such, the program requires a new application for each new measure. Although the participant may have participated in the program in the past and provided the application information, the Program requires current information on each project. The current information is required to accurately identify the site address where the measure is being installed, the recipient of the cash incentive and to allow for LPC approval. There is no similar information currently available. Each installation inspection results in the collection of data that is only valuable to that particular dwelling.

TVA internal review staff periodically reviews the forms and surveys from statistical, marketing, and other perspectives. The forms and surveys are continually evaluated by these staff and others to determine any improvements that can be made that will make data collection easier and less time-consuming. TVA's legal staff reviews the forms and assists in

improving them when possible.

Surveys are closely monitored by TVA Business Insights and Reporting group to ensure the survey research does not duplicate existing efforts. Due diligence is exercised to ensure that survey questions are not needlessly duplicated.

All forms are coordinated and controlled by the staff that coordinates the *EnergyRight* Program. One staff member is responsible for the development of all forms and ensures there is no duplication of unnecessary information. Additionally, the forms are reviewed, approved, and assigned a control number by staff in the Federal Records Management Program under TVA's agency records officer. A large percentage of the information on the forms is entered into a central database, where once again, the data is evaluated to assure no duplication of entry. Efforts have been made to reduce burden where possible.

5. If the collection of information impacts small businesses or other small entities, describe any methods used to minimize burden.

The requirements imposed by this collection are applied equally to all firms regardless of the firm's size. The burden placed on small business is no greater than on any other respondent. Every effort is used to maximize technologies that minimize the impact of data collection on all respondents, including consumers and business respondents.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

The information collected in the application ensures that the proper tax documents are provided to the cash incentive recipient.

The information is collected on forms only once, and this is done at the customer's request. This information is necessary to manage the *EnergyRight* Program and to measure and verify the impact these programs have on TVA's power supply planning, the LPCs, and the consumers participating in these programs.

Surveys are administered on an approximate one and two year cycle.

7. Explain any special circumstances that would cause an information collection to be conducted in a manner:

- requiring respondents to report information to the agency more often than quarterly;
- requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;
- requiring respondents to submit more than an original and two copies of any document;
- requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records, for more than three years;
- in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;
- requiring the use of a statistical data classification that has not been reviewed and approved by OMB;
- that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or
- requiring respondents to submit proprietary trade secrets, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.

None of these special circumstances apply to any current activities.

8. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8(d), soliciting comments on the information collection prior to submission to OMB.

A copy of the Federal Register Notice is attached. There were no public comments. These forms are continually evaluated and discussed with numerous staff who are associated with some respect with the program collection needs. Staffs are regularly consulted and informed of data collection needs. It is through consultations and training sessions that teams learn from each other and generate the input that has allowed TVA to regularly simplify the forms and make them less burdensome to all.

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

It does not apply to the EnergyRight for Business and Industry.

In the past, TVA offered to employees and retirees the ability to participate in the EnergyRight for the Home program and to take advantage of an awards program whereby each participating employee or retiree could choose an interest-free loan for *EnergyRight* services. Employees who participated in the program before its cancellation who retire must convert the loan to a retiree's status.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.

EnergyRight for Business & Industry - The program application states the following Program terms in conditions:

“TVA and Program Administrator will use commercially reasonable efforts to maintain the confidentiality of all data collected from the Company (collectively, "Company Data"). In the event that there is an unauthorized access to Company Data for which a security breach notification to consumers will be legally required under applicable state or federal law (a "Security Incident"), TVA's Program Administrator will (i) use commercially reasonable efforts to investigate the Security Incident and prevent further or ongoing unauthorized access to such information; and (ii) provide any legally necessary notifications to Applicant.”

EnergyRight for Home - Financing disclosures are included as part of each consumer financing package, and these disclosures include a Privacy Act Statement.

EnergyRight Program - In survey efforts, any information which could be construed to identify a specific respondent is kept in strict confidence. The anonymity of respondents is maintained in all analysis and reporting.

These forms are handled in accordance with TVA's procedures regarding restricted information. They are maintained in TVA's systems of record and accessed by identifying information; therefore, a privacy act system of records, TVA-29 is provided, copy attached.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.

Not applicable to any current activities.

12. Provide estimates of the hour burden of the collection of information. The statement should:

- *Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices. *** If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens.***

EnergyRight for Home.

Agreement to Participate – Homeowner (Financing) Form (TVA 17655)
Agreement to Participate – Landlord (Financing) Form (TVA 17656)
Repayment Agreement Form (TVA 17657)
Security Agreement Form (TVA 17658)
Notice of Right to Cancel Form (TVA 17659)

The responses for each inspection varies with the degree of participation in the program. All of the attached forms are not completed for each installation. The number and type of forms completed depend on the customer's status (owner, landlord, tenant) and the degree of participation in the program; however, an average of six (6) forms or responses will be used by each respondent.

EnergyRight for Business & Industry.

Survey of Commercial and Industrial Saturation customers served by TVA and the 154 local power companies (LPC) of TVA power. These customers reside in seven states within the Southeastern United States. Information about these customers is required for the commercial and industrial components of the TVA load forecast and to support TVA's program planning and development efforts, including interest and saturation of distributed generation, renewables, electrification, etc., across the service territory.

A total of 1,500 surveys are planned for a 3-year cycle, with an average of 500 per year.

EnergyRight Residential Program.

Responses for each survey (Residential Saturation Survey & Paper Audit) vary depending on household characteristics and electrical equipment used. Respondents do not complete every question in the surveys. A total of 12,000 surveys are planned for a 3-year cycle, with an average of 4,000 per year.

| | EnergyRight for Business & Industry | EnergyRight for Home | EnergyRight Program |
|----|-------------------------------------|---|---|
| | Online Surveys | Forms 17655, 17656, 17657, 17658, 17659 | Saturation Surveys - Telephone, Online & Mail |
| a) | Number of respondents | 500 | 29,000 |
| b) | Frequency of response | Once | Once |
| c) | Number of responses | 500 | 29,000 |
| d) | Hours per response | .16 | .25 (3 minutes per form x average of 5 forms = .25 hours) |
| e) | Annual burden hours | 80 | 7,250 |
| f) | Estimated annualized cost | \$2,223 | \$201,405 |

The total estimated annualized cost to respondents: \$240,298

- *Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here. Instead, this cost should be included under item 13.*

Annualized cost per applicant: The average hourly wage for the states in the TVA service area is \$27.78 and represents an increase in the average hourly wage from the previous approval. This estimate was calculated using a snapshot of data taken on 12-31-2021 from the 2021 Bureau of Labor Statistics National Compensation Survey on Wages from the following sources:

https://www.bls.gov/regions/southeast/news-release/countyemploymentandwages_mississippi.htm

https://www.bls.gov/regions/southeast/news-release/countyemploymentandwages_kentucky.htm

https://www.bls.gov/regions/southeast/news-release/countyemploymentandwages_alabama.htm

https://www.bls.gov/regions/southeast/news-release/countyemploymentandwages_alabama.htm

https://www.bls.gov/regions/southeast/news-release/countyemploymentandwages_tennessee.htm
https://www.bls.gov/regions/southeast/news-release/countyemploymentandwages_georgia.htm
https://www.bls.gov/regions/southeast/news-release/countyemploymentandwages_northcarolina.htm
https://www.bls.gov/regions/mid-atlantic/news-release/countyemploymentandwages_virginia.htm

13. Provide an estimate for the total annual cost burden to respondents or record keepers resulting from the collection of information. Do NOT include the labor cost (wage equivalent) of the burden hours described in Question 12 (above). The information required here corresponds to that in #14 on the 83-I (cost to the public).

The cost estimate should be split into two components:

- a. a total capital and start-up cost component (annualized over its expected useful life) and
- b. a total operation and maintenance and purchase of services component. The estimates should take into account costs associated with generating, maintaining, and disclosing or providing the information. Include descriptions of methods used to estimate major cost factors including system and technology acquisition, expected useful life of capital equipment, the discount rate(s), and the time period over which costs will be incurred. Capital and start-up costs include, among other items, preparations for collecting information such as purchasing computers and software; monitoring, sampling, drilling and testing equipment; and record storage facilities.

If cost estimates are expected to vary widely, agencies should present ranges of cost burdens and explain the reasons for the variance. The cost of purchasing or contracting out information collections services should be a part of this cost burden estimate. In developing cost burden estimates, agencies may consult with a sample of respondents (fewer than 10), utilize the 60-day pre-OMB submission public comment process and use existing economic or regulatory impact analysis associated with the rulemaking containing the information collection, as appropriate.

Generally, estimates should not include purchases of equipment or services, or portions thereof, made: (1) prior to October 1, 1995, (2) to achieve regulatory compliance with requirements not associated with the information collection, (3) for reasons other than to provide information or keep records for the government, or (4) as part of customary and usual business or private practices.

None.

14. Provide estimates of annualized costs to the Federal government.

Include here a description of the method used to estimate costs to the Federal government, which should show the quantification of hours, operational expenses (such as equipment, overhead, printing, and staff support), and any other expense which would not have been incurred without this collection of information. If there will be no costs beyond the normal labor costs for staff, state so.

The *EnergyRight* Program is funded by power revenues under TVA's Commercial Energy Solutions organization.

Estimated annualized costs: processing: 1.5 FTE x \$50,000 x 1.3 for benefits/other = \$97,500.

15. Explain the reasons for any program changes or adjustments reported on the burden worksheet.

The decrease in burden is the result of reduced sample sizes for surveys and the elimination of several program related forms

TVA has eliminated two forms since the previous approval. Forms Heat Pump Plan Work Completion Form (TVA 17650), Water Heater Plan Work Completion Form (TVA 17652), Program Implementation Plan Form (TVA 17654), and New Homes Plan Work Completion Form (TVA 17651) were outdated and are no longer used by the program.

16. For collections of information whose results will be published, outline plans for tabulation and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.

Not applicable. There are no plans to publish this collection of information.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

Not applicable. TVA is not requesting an exemption for display of the OMB expiration date.

18. Explain each exception to the topics of the certification statement identified in "Certification for Paperwork Reduction Act Submissions,"

Not applicable. TVA is not requesting an exception to Certification for the Paperwork Reduction Act Submissions.

Section B. Collections of Information Employing Statistical Methods

EnergyRight for Business & Industry.
EnergyRight for Home.

These information collections do not employ statistical methods.

EnergyRight Program.

1. To collect this information, TVA employs telephone, online, and mail surveys of residential households and businesses residing in the service area of one of the 154 local power companies (LPCs) that purchase power from TVA. This survey is conducted as an independent measure of indirect program impact, effectiveness of communication efforts, evolving household demographics, program administration, changes in the saturation of non-electric fuels, potential interest in distributed energy, possible adoption of demand response programs, interest in electrification programs, drivers of energy efficiency, and changes in saturation of electrical equipment. This information is not available from other public sources and must be gathered by TVA. The results of this survey aid groups such as TVA's Enterprise Planning as well as Products and Services managers in assessing the effectiveness of TVA's energy efficiency and demand response programs, planning improvements to existing programs, and designing new programs. Local power company staffs also use these results to determine ways to better meet the needs of their residential and commercial customers.

The respondent universe is comprised of households and businesses residing in the TVA service area. From this universe, sample sizes are calculated based on each LPCs total customer base and the proportion of overall TVA service area (Valley) customer base represented. TVA has developed a three-tiered approach to ensure that each LPCs survey sample size is sufficient for minimal analysis and based on customers served. More information on this approach can be found in **Section B.2.**

Samples sizes are calculated to attain representation with a minimum sample size of 30 for each LPC. Since reaching 30 completes per LPC is

difficult, local power company samples are summed to the seven TVA geographically dispersed District levels. The total sample is designed for achieving a margin of error less than 2 percent at the 95 percent confidence level for the overall TVA service area. With sufficient sample sizes, statistical analysis can be completed down to the individual LPC service area for many LPCs. Results are summarized down to the LPC level; however, in most cases, TVA recommends using District or TVA level results when making substantive decisions from the data. **Table 1** contains the overall framework using this sampling method.

**TABLE 1
2020 RESIDENTIAL SATURATION MARGIN OF ERROR SUMMARY**

| Local Power Company | 2020 Residen ts | District | Regio n | 2020 Sampl e | 2020 Margi n of Error (95%) |
|--|--------------------------------|-----------------|--------------------|-----------------------------|--|
| Alcoa Electric Department, City of | 25,243 | Northeas t | East | 36 | 16.32 % |
| Appalachian Electric Cooperative | 39,633 | Northeas t | East | 55 | 13.21 % |
| Athens Utilities Board | 10,948 | Southea st | East | 23 | 20.41 % |
| Blue Ridge Mountain Electric Membership Corporation | 39,964 | Southea st | East | 37 | 16.10 % |
| Bristol Tennessee Essential Services | 28,797 | Northeas t | East | 51 | 13.71 % |
| BVU Authority | 13,605 | Northeas t | East | 25 | 19.58 % |
| Chickamauga Electric System | 848 | Southea st | East | 0 | n/a |
| Cleveland Utilities | 26,600 | Southea st | East | 37 | 16.10 % |
| Clinton Utilities Board | 25,311 | Northeas t | East | 35 | 16.55 % |
| City of Dayton Electric Department | 8,617 | Southea st | East | 7 | 37.03 % |
| Elizabethton Electric Department, City of | 22,952 | Northeas t | East | 32 | 17.31 % |
| EPB | 153,982 | Southea st | East | 211 | 6.74% |
| Erwin Utilities Authority | 7,592 | Northeas t | East | 9 | 32.65 % |
| Etowah Utilities | 4,387 | Southea st | East | 7 | 37.02 % |
| Fort Loudoun Electric Cooperative | 27,552 | Southea st | East | 46 | 14.44 % |
| Greeneville Energy Authority | 30,970 | Northeas t | East | 38 | 15.89 % |
| Harriman Utility Board | 9,256 | Northeas t | East | 12 | 28.27 % |
| Holston Electric Cooperative | 24,901 | Northeas t | East | 36 | 16.32 % |
| Jellico Utilities | 3,702 | Northeas t | East | 5 | 43.80 % |
| BrightRidge | 66,762 | Northeas t | East | 98 | 9.89% |
| Knoxville Utilities Board | 179,100 | Northeas | East | 286 | 5.79% |

| | | | | | |
|---|------------------|-----------|-------|--------------|--------------|
| LaFollette Utilities | 19,022 | Northeast | East | 25 | 19.59% |
| Lenoir City Utilities Board | 52,145 | Northeast | East | 71 | 11.62% |
| Loudon Utilities | 10,055 | Southeast | East | 19 | 22.46% |
| Maryville Electric Department, City of | 18,114 | Northeast | East | 32 | 17.31% |
| Morristown Utilities Commission | 11,862 | Northeast | East | 20 | 21.90% |
| Mountain Electric Cooperative | 27,455 | Northeast | East | 24 | 20.00% |
| Murphy Electric Power Board | 3,431 | Southeast | East | 6 | 39.98% |
| Newport Utilities | 18,575 | Northeast | East | 15 | 25.29% |
| North Georgia Electric Membership Corporation | 84,406 | Southeast | East | 85 | 10.62% |
| Oak Ridge Electric Department | 13,096 | Northeast | East | 24 | 19.99% |
| Plateau Electric Cooperative | 13,891 | Northeast | East | 17 | 23.75% |
| Powell Valley Electric Cooperative | 25,978 | Northeast | East | 22 | 20.89% |
| Rockwood Electric Utility | 11,550 | Southeast | East | 24 | 19.98% |
| Sequachee Valley Electric Cooperative | 29,653 | Southeast | East | 38 | 15.89% |
| Sevier County Electric System | 35,546 | Northeast | East | 47 | 14.29% |
| Sweetwater Utilities Board | 7,096 | Southeast | East | 15 | 25.28% |
| Tri-State Electric Membership Corporation | 15,378 | Southeast | East | 17 | 23.76% |
| Volunteer Energy Cooperative | 95,534 | Southeast | East | 108 | 9.42% |
| East Total | 1,243,509 | | | 1,695 | 2.38% |
| Benton Electric System | 1,847 | Kentucky | North | 1 | 98.00% |
| Bowling Green Municipal Utilities | 24,775 | Kentucky | North | 34 | 16.80% |
| Caney Fork Electric Cooperative, Inc. | 27,029 | Middle TN | North | 30 | 17.88% |
| Clarksville Department of Electricity dba CDE Lightband | 60,290 | Middle TN | North | 80 | 10.95% |
| Columbia Power & Water Systems | 22,496 | Middle TN | North | 38 | 15.88% |
| Cookeville Electric Department | 14,029 | Middle TN | North | 20 | 21.90% |

| | | | | | |
|--|---------|-----------|-------|-----|---------|
| Cumberland Electric Membership Corporation | 84,034 | Middle TN | North | 98 | 9.89% |
| Dickson Electric System | 27,745 | Middle TN | North | 43 | 14.93 % |
| Duck River Electric Membership Corporation | 62,606 | Middle TN | North | 74 | 11.39 % |
| Fayetteville Public Utilities | 15,688 | Middle TN | North | 13 | 27.17 % |
| Franklin Electric Plant Board | 3,773 | Kentucky | North | 8 | 34.62 % |
| Fulton Electric System | 1,244 | Kentucky | North | 1 | 98.00 % |
| Gallatin Department of Electricity | 15,197 | Middle TN | North | 19 | 22.47 % |
| Glasgow Electric Plant Board | 5,466 | Kentucky | North | 13 | 27.15 % |
| Hickman Electric System | 870 | Kentucky | North | 1 | 98.00 % |
| Hopkinsville Electric System | 10,300 | Kentucky | North | 16 | 24.48 % |
| Lawrenceburg Utility Systems | 17,011 | Middle TN | North | 21 | 21.37 % |
| Lewisburg Electric System | 4,535 | Middle TN | North | 11 | 29.52 % |
| Mayfield Electric and Water Systems | 4,434 | Kentucky | North | 6 | 39.99 % |
| McMinnville Electric System | 6,360 | Middle TN | North | 3 | 56.57 % |
| Meriwether Lewis Electric Cooperative | 28,390 | Middle TN | North | 34 | 16.80 % |
| Middle Tennessee Electric | 237,502 | Middle TN | North | 327 | 5.42% |
| Mt. Pleasant Power System | 3,181 | Middle TN | North | 10 | 30.95 % |
| Murray Electric System | 6,398 | Kentucky | North | 9 | 32.65 % |
| Nashville Electric Service | 345,517 | Middle TN | North | 481 | 4.47% |
| Pennyrile RECC | 42,525 | Kentucky | North | 45 | 14.60 % |
| Pulaski Electric System | 11,812 | Middle TN | North | 12 | 28.28 % |
| Russellville Electric Plant Board | 3,214 | Kentucky | North | 6 | 39.98 % |
| Shelbyville Power System | 8,493 | Middle TN | North | 11 | 29.53 % |
| Smithville Electric System | 2,053 | Middle TN | North | 2 | 69.28 % |
| Sparta Electric & Public Works | 2,180 | Middle TN | North | 2 | 69.28 % |
| Springfield Electric | 6,290 | Middle TN | North | 9 | 32.65 % |

| | | | | | |
|--|------------------|-----------|-------|--------------|--------------|
| Tri-County Electric Membership Corporation | 41,875 | Kentucky | North | 46 | 14.44 % |
| Tullahoma Utilities Authority | 8,746 | Middle TN | North | 24 | 19.98 % |
| Upper Cumberland Electric Membership Corporation | 41,587 | Middle TN | North | 47 | 14.29 % |
| Warren Rural Electric Cooperative Corporation | 52,588 | Kentucky | North | 67 | 11.97 % |
| West Kentucky Rural Electric Cooperative Corporation | 30,436 | Kentucky | North | 27 | 18.85 % |
| Winchester Utility System | 4,671 | Middle TN | North | 5 | 43.81 % |
| East Total | 1,287,187 | | | 1,694 | 2.38% |
| Albertville Municipal Utilities Board | 7,902 | Alabama | South | 7 | 37.03 % |
| Arab Electric Cooperative | 12,458 | Alabama | South | 16 | 24.49 % |
| Athens Utilities | 34,227 | Alabama | South | 37 | 16.10 % |
| Bessemer Electric Service | 9,476 | Alabama | South | 13 | 27.16 % |
| Cherokee Electric Cooperative | 17,330 | Alabama | South | 20 | 21.90 % |
| Courtland Electric Department | 652 | Alabama | South | 0 | n/a |
| Cullman Electric Cooperative | 35,273 | Alabama | South | 28 | 18.51 % |
| Cullman Power Board | 6,511 | Alabama | South | 9 | 32.65 % |
| Decatur Utilities | 22,517 | Alabama | South | 27 | 18.85 % |
| Florence Utilities | 40,482 | Alabama | South | 46 | 14.44 % |
| Fort Payne Improvement Authority | 6,464 | Alabama | South | 4 | 48.99 % |
| Franklin Electric Cooperative | 6,530 | Alabama | South | 3 | 56.57 % |
| Electric Board of Guntersville | 4,681 | Alabama | South | 4 | 48.98 % |
| Hartselle Utilities | 4,300 | Alabama | South | 3 | 56.57 % |
| Huntsville Utilities | 160,556 | Alabama | South | 205 | 6.84% |
| Joe Wheeler Electric Membership Corporation | 34,756 | Alabama | South | 36 | 16.33 % |
| Marshall-DeKalb Electric Cooperative | 14,808 | Alabama | South | 16 | 24.49 % |
| Muscle Shoals Electric Board | 6,311 | Alabama | South | 7 | 37.02 % |
| North Alabama Electric Cooperative | 13,041 | Alabama | South | 20 | 21.90 % |
| Russellville Electric Board | 3,927 | Alabama | South | 3 | 56.57 % |
| Sand Mountain Electric Cooperative | 25,158 | Alabama | South | 31 | 17.59 % |

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|--|----------------|-----------------|-------|------------|--------------|
| Scottsboro Electric Power Board | 6,706 | Alabama | South | 9 | 32.65 % |
| Sheffield Utilities | 15,337 | Alabama | South | 14 | 26.18 % |
| Tarrant Electric Department | 2,156 | Alabama | South | 1 | 98.00 % |
| Tuscumbia Electricity Department | 3,940 | Alabama | South | 1 | 98.00 % |
| East Total | 495,499 | | | 560 | 4.14% |
| 4-County Electric Power Association | 38,457 | Mississip pi | West | 23 | 20.43 % |
| Aberdeen Electric Department, City of | 2,782 | Mississip pi | West | 1 | 98.00 % |
| Alcorn County Electric Power Association | 14,716 | Mississip pi | West | 15 | 25.29 % |
| Amory Utilities, City of | 3,086 | Mississip pi | West | 2 | 69.29 % |
| Benton County Electric System | 8,494 | West TN | West | 13 | 27.16 % |
| Bolivar Energy Authority | 8,767 | West TN | West | 7 | 37.03 % |
| Brownsville Energy Authority | 4,241 | West TN | West | 6 | 39.98 % |
| Carroll County Electric Department | 12,211 | West TN | West | 27 | 18.84 % |
| Central Electric Power Association | 29,673 | Mississip pi | West | 20 | 21.91 % |
| Chickasaw Electric Cooperative | 16,110 | West TN | West | 19 | 22.47 % |
| Columbus Light and Water Department | 9,369 | Mississip pi | West | 10 | 30.98 % |
| Covington Electric System | 3,724 | West TN | West | 4 | 48.98 % |
| Dyersburg Electric System | 9,407 | West TN | West | 11 | 29.53 % |
| East Mississippi Electric Power Association | 32,284 | Mississip pi | West | 8 | 34.64 % |
| Forked Deer Electric Cooperative | 8,305 | West TN | West | 10 | 30.97 % |
| Gibson Electric Membership Corporation | 31,713 | West TN | West | 40 | 15.49 % |
| Holly Springs Utility Department | 8,686 | Mississip pi | West | 6 | 40.00 % |
| Humboldt Utilities | 3,488 | West TN | West | 7 | 37.01 % |
| Jackson Energy Authority | 29,187 | West TN | West | 55 | 13.20 % |
| Lexington Electric System | 17,897 | West TN | West | 9 | 32.66 % |
| Louisville Utilities | 2,535 | Mississip pi | West | 0 | n/a |
| Macon Electric Department, City of | 930 | Mississip | West | 1 | 98.00 % |

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|---|---------|------------|---------|------|-----|--------|
| Memphis Light, Gas and Water Division | 360,916 | pi | West TN | West | 407 | 4.85% |
| Milan Department of Public Utilities | 6,769 | West TN | West | West | 7 | 37.02% |
| Monroe County Electric Power Association | 10,796 | Mississipi | pi | West | 7 | 37.03% |
| Natchez Trace Electric Power Association | 12,434 | Mississipi | pi | West | 5 | 43.82% |
| New Albany Light, Gas & Water, City of | 7,875 | Mississipi | pi | West | 9 | 32.65% |
| Newbern Electric Water and Gas | 1,429 | West TN | West | West | 0 | n/a |
| North East Mississippi Electric Power Association | 23,589 | Mississipi | pi | West | 12 | 28.28% |
| Northcentral Electric Cooperative | 24,908 | Mississipi | pi | West | 24 | 19.99% |
| Okolona Electric Department, City of | 4,167 | Mississipi | pi | West | 1 | 98.00% |
| Oxford Utilities | 7,407 | Mississipi | pi | West | 2 | 69.29% |
| Paris Board of Public Utilities | 15,472 | West TN | West | West | 28 | 18.50% |
| Philadelphia Utilities | 2,806 | Mississipi | pi | West | 6 | 39.97% |
| Pickwick Electric Cooperative | 16,424 | West TN | West | West | 18 | 23.09% |
| Pontotoc Electric Power Association | 15,227 | Mississipi | pi | West | 19 | 22.47% |
| Prentiss County Electric Power Association | 10,808 | Mississipi | pi | West | 9 | 32.65% |
| Ripley Power & Light | 5,337 | West TN | West | West | 5 | 43.81% |
| Southwest Tennessee Electric Membership Corporation | 42,127 | West TN | West | West | 53 | 13.45% |
| Starkville Utilities | 11,376 | Mississipi | pi | West | 9 | 32.66% |
| Tallahatchie Valley Electric Power Association | 21,387 | Mississipi | pi | West | 17 | 23.76% |
| Tennessee Valley Electric Cooperative | 15,935 | West TN | West | West | 23 | 20.42% |
| Tippah Electric Power Association | 10,406 | Mississipi | pi | West | 5 | 43.82% |
| Tishomingo County Electric Power Association | 10,891 | Mississipi | pi | West | 3 | 56.58% |
| Tombigbee Electric Power Association | 35,338 | Mississipi | pi | West | 39 | 15.68% |
| Trenton Light & Water Department | 1,945 | West TN | West | West | 4 | 48.96% |
| Tupelo Water & Light Department, City of | 10,591 | Mississipi | pi | West | 17 | 23.75% |
| Union City Energy Authority | 5,241 | West TN | West | West | 9 | 32.64% |

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|---|------------------|-------------|------|--------------|--------------|
| Water Valley Electric Department, City of | 1,555 | Mississippi | West | 1 | 98.00% |
| Weakley County Municipal Electric System | 15,765 | West TN | West | 21 | 21.37% |
| West Point Electric System, City of | 3,178 | Mississippi | West | 3 | 56.56% |
| West Total | 1,008,161 | | | 1,057 | 3.01% |
| Valley Totals | 4,034,356 | | | 5,006 | 1.38% |

U.S. Postal Service (USPS) zip codes are used to define the sample frame

2. The survey population is comprised of all residential households or businesses residing in the TVA service area. From this population, sample sizes are calculated based on each local power company's total customer base and the proportion of overall TVA service area residential customers represented. Sample sizes are determined based on a pooled proportion formula and have a goal of attaining 30 responses for each local power company. Individual LPC samples are summed to the seven TVA geographically dispersed District levels. The total sample is designed for achieving a margin of error less than 2 percent at the 95 percent confidence level for the overall Valley. See **Table 1** above.

When this method of sampling is used, local power companies within each stratum remain relatively stable due to similar growth patterns over time. While TVA would like to have this information annually with error margins of less than one percent, this is not practical from a cost standpoint or from a response burden. Attaining an overall margin of error of 1.3 percent to 1.8 percent provides sufficient differentiation that TVA can reasonably determine whether the *EnergyRight*® programs are having an indirect impact on Valley residents. While error margins at the local power company and District level vary, trends and differences can be seen for the larger power companies and the Districts. Also, TVA offers local power companies the opportunity to request some data by local power company groups. These may be groups of power companies that wish to aggregate service areas for some reason. Reasons might include pooling advertising resources due to a viewing or listening area boundary and the need to determine appropriate messages for these boundaries. A frequency of two to three years provides data at sufficient intervals that trends and changes can be seen without overburdening residents with surveys. This is also possible since this is an indirect measure of the *EnergyRight*® programs' effectiveness.

Due to the quota sampling method described earlier, it is also necessary to weight responses by local power company. This weighting is designed to account for the over-representation of the samples for smaller power companies

Weights are determined by dividing the proportion of the overall Valley residential customer base represented by a local power company's residential customers by the proportion of the overall Valley residential sample represented by a local power company's sample.

Local Power Company Weight = Local Power Company Proportion of Residential Customers

Local Power Company Proportion of Sample

For simplicity, weights are rounded to the nearest hundredth for analysis. Residential results are also weighted by data from the American Community Survey (ACS). Five-year trend results are used from data on all counties which comprise TVA's market area. Weights are based on homeownership, age of the residence, units in structure, and age of householders.

Commercial and industrial studies are weighted to D&B counts by TVA District, building type, and square footage.

4. The survey instrument used may be modified slightly between iterations depending upon changes in language usage, appliance availability, and appliance usage patterns. However, most questions remain consistent over time to enhance reliability. Modifications to the survey are carefully considered by various TVA staff that will use the information and are tested by the contractor before launching the fieldwork for the survey. These interviews, as well as the training, are monitored by TVA staff members. Also, as interviews begin, calls are monitored closely in a further effort to ensure the reliability of the data gathered.

5. When questions regarding statistical aspects of the survey methodology and analysis arise, TVA relies on our contractor staff. For the most recent study, KANTAR was the contractor. KANTAR is a full-service global strategy and research organization specializing in public policy and opinion surveys, banking and finance, telecommunications, media, energy, transportation, insurance, and health care.