

**Supporting Statement for a Paperwork Reduction Act
Submission to OMB
Federal Trade Commission Study on Labeling for Lamp (Light Bulb) Products
(OMB Control No. 3084-NEW)**

Section 324 of the Energy Policy and Conservation Act of 1975 (“EPCA”), 42 U.S.C. §§ 6291- 6309, requires the Federal Trade Commission (“FTC” or “Commission”) to prescribe labeling rules for the disclosure of estimated annual energy cost or alternative energy consumption information for a variety of products covered by the statute, including home appliances (*e.g.*, refrigerators, dishwashers, air conditioners, and furnaces), lighting, and plumbing products. The Commission’s Appliance Labeling Rule (“Rule”), 16 CFR 305, implements these requirements by directing manufacturers to disclose energy information about major household appliances, lighting, and plumbing products. This information enables consumers to compare the energy use or efficiency and operating costs of competing models.

A. JUSTIFICATION

1. & 2. Necessity for Information Collection and How the Data Will Be Used

For most consumer lamp (light bulb) products, the FTC’s current rules require disclosure of energy use (in watts), light output (in lumens), and life (in hours) on packaging.¹ In the Energy Independence and Security Act of 2007 (“EISA”), Congress directed the FTC to consider the effectiveness of these lamp labeling requirements² and alternative labeling disclosures. In particular, the Act calls on the Commission to consider whether alternative labeling approaches will help consumers better understand new high-efficiency lamp products and help them choose lamps that meet their needs. The FTC must complete the rulemaking by June 2010.

As a first step toward fulfilling this mandate, the Commission published an Advance Notice of Proposed Rulemaking on July 18, 2008 (73 FR 40988) that provided background about current FTC labeling rules for light bulbs, the recent Congressional mandate, the purpose of the FTC labeling requirements, and various labeling considerations. In the Notice and at a public roundtable held on September 15, 2008, the Commission sought comment concerning the effectiveness of current labeling requirements, as well as whether labeling alternatives would help consumers in their purchasing decisions. Specifically, the Commission asked for comment on whether lamp packages should disclose characteristics such as lamp brightness, energy use,

¹ See 16 CFR Part 305.

² Pub. L. 110-140, 121 Stat. 1492. See Section 321(b) of the EISA, amending § 324(a) of the EPCA. The current requirements do not impose a uniform disclosure format. Instead, the labeling requirements provide manufacturers flexibility regarding the size, font, and style in which the information is presented. See 16 CFR Part 305.

energy cost, color temperature, and lamp life. FTC staff, through its contractor, also asked a consumer focus group about various attributes of light bulb labels.³

The Commission also requested that commenters provide consumer research data related to lighting disclosures. No commenters, however, submitted or identified any recent, comprehensive consumer research. The Commission, therefore, is planning to conduct a consumer research study to aid in determining what revisions, if any, it should make to existing labeling requirements. The Commission announced this consumer research effort in a December 1, 2008 notice (73 FR 72800). The Commission received no comments in response to that notice. The Commission will use the consumer research results, along with other information gathered through the roundtable and written comments, to develop proposed changes to current lamp labeling requirements. This Notice provides additional details about the proposed research, an estimate of the burden hours associated with the collection of information for that activity, and an invitation for comment on these issues.

The FTC proposes to collect information from consumers to gather data on the effectiveness of current lamp labels and alternative label designs. The proposed study will involve a sample of approximately 5,600 respondents who are at least 18 years old and recent or likely future light bulb purchasers.⁴ The FTC and its contractor will administer questions to the respondents online over the Internet.⁵ The study will employ standard consumer survey methodologies, including copy testing and choice experiments, to explore how different label designs impact consumer decision-making regarding the purchase of light bulb products. The study will allow the FTC to explore the performance of various label formats, the labeling preferences of the respondents, and their understanding of relevant lighting concepts.

The study will use a basic label design that includes certain information disclosures on the front of the package, as well as more comprehensive label disclosures on the rear or side panel (see sample labels at the end of this Notice). The test labels on the front of the package

³ A report on the seven-person focus group, prepared by FTC's contractor, Synovate, Inc., is available at <http://www.ftc.gov/os/comments/lightbulbs/index.shtm>.

⁴ The FTC expects to study a stratified sample of the adult United States population that is broadly representative of consumer group attributes (*e.g.*, geographic location, housing characteristics, gender, age, education, and race/ethnicity) based on the most recent Census Bureau's Current Population Survey and the Department of Energy's Residential Energy Consumption Survey. The contractor will identify respondents using any relevant, preexisting data in its Internet panel database and any necessary additional screener questions. The screener questions will help to ensure that the demographic composition of the sample reasonably matches that of the target population. Allowing for non-responses, up to approximately 15,000 respondents will answer screener questions. This number of respondents should enable the FTC to obtain its target sample size of 5,600 individuals.

⁵ The FTC also will pretest the study on approximately 25 individuals to ensure that all questions are understood. The pretest participants will be drawn from the target population.

will include four (or fewer) disclosures: light output (or “brightness”), energy (*e.g.*, efficiency, cost), life, and color temperature. The study will explore different approaches for making these disclosures. For instance, we will test respondents’ perception of energy use disclosures displayed in the form of annual energy (operating) cost, luminous efficacy (lumens/watt), and a five-star rating system. Table 1 below contains the list of variations to be tested. Given the small size of light bulb packaging and the associated space constraints, the information that can be included on the front of the package is limited. Therefore, we are not testing complex scales or similar graphical formats that would not fit easily on the front display panel.

The test label design will also include a “Lighting Facts” label on the rear or side panel. This label is similar in appearance to the “Nutrition Facts” label required by the Food and Drug Administration. The label drafted for this study includes a variety of information disclosures such as brightness, life, energy use in watts, voltage, luminous efficacy, and energy cost.⁶

The study results will allow the FTC to compare the effectiveness of various label approaches. In analyzing the results, the FTC will conduct a statistical comparison of respondent answers across different test label components. If there are differences in accuracy rates for particular label approaches, the direction and statistical significance of these differences will aid the FTC in assessing whether one type of label design is more comprehensible than alternative designs. The FTC will use the study results in conjunction with other information generated during this rulemaking proceeding to develop and propose changes to existing labeling requirements, if such changes are warranted.

3. Information Technology

Consistent with the aims of the Government Paperwork Elimination Act, 44 U.S.C. § 3504 note, the proposed study will use the Internet for data collection. The Internet was selected as the means to collect data, in part, to minimize burden on respondents and to collect data in a cost-efficient manner. For example, people who choose to participate in the study will be able to view the product labels and questionnaire, as well as submit their responses via computer at a time and location of their choosing.

4. Efforts to Identify Duplication/Availability of Similar Information

FTC staff’s efforts to identify duplicate sources of information included a review of studies, data, news articles, and information found through contacts with industry trade associations, consumer groups, governmental agencies, and academic researchers. We have not identified any duplicate studies. We have reviewed a study related to color temperature conducted by the

⁶ A “Lighting Facts” label also could contain additional information such as voluntary disclosures provided by the manufacturer (*e.g.*, minimum starting temperature), and other information mandated by state or federal requirements (*e.g.*, hazardous content disclosures or information required by the Federal Communications Commission). However, because such voluntary disclosures and state or federally mandated disclosures will vary by manufacturer and lamp technology, we are not including any such disclosures on the test labels.

Lighting Research Center, Rensselaer Polytechnic Institute (Leslie, R., and Rea, M., “A System for Communicating Color: What Do Consumers Think”).⁷ That study was limited in its focus.

5. Efforts to Minimize Small Organization Burden

Not applicable. The questions are being asked only of individual consumers.

6. Consequences to Federal Program and Policy Activities/Obstacles to Reducing Burden

If this information is not collected, the FTC will lack the benefit of recent and comprehensive consumer research to further address important issues related to the development of energy labels for consumer products. This information is important for completing the congressionally mandated rulemaking.

The study has been designed to minimize burden on respondents, using cost-effective techniques, without sacrificing the statistical value of the information to be collected. For example, as discussed in Section A.3 of this document, respondents will be permitted to complete the questionnaire at a time most convenient to them.

7. Circumstances Requiring Collection Inconsistent with Guidelines

The collection of information in the proposed study is consistent with all applicable guidelines contained in 5 C.F.R. § 1320.5(d)(2).

8. Public Comments/Consultation Outside the Agency

In developing the proposed study, FTC staff sought informal input from staff at the Food and Drug Administration (which has conducted similar studies in the past), the Department of Energy, and the National Institute of Standards and Technology. Moreover, as required by 5 CFR 1320.8(d), the FTC published a Notice seeking public comment on the proposed collection of information. *See* 73 FR 72800 (December 1, 2008). No comments were received in response to that Notice. Pursuant to the OMB regulations (5 CFR 1320) that implement the PRA, the FTC is providing a second opportunity for public comment while seeking OMB approval for the proposed consumer research.

Additionally, the FTC held a public roundtable on September 15, 2008, to discuss multiple issues regarding the rulemaking proceeding for the Rule. *See* 73 FR 40988 (July 18, 2008). As part of that workshop, the FTC invited and received written comments that provided suggestions

⁷ See <http://www.lrc.rpi.edu/programs/lightingTransformation/colorCommunication/pdf/whatDoConsumersThink.pdf>. The study was conducted with funding from the Department of Energy and Environmental Protection Agency.

for various changes to existing disclosures.⁸

9. Payments or Gifts to Respondents

FTC staff expects that the contractor will provide participants a customary and usual incentive for their participation in the experiment. More specifically, the contractor will give qualified respondents (*i.e.*, those who complete the questionnaire) payments or gifts valuing approximately one dollar and the contractor will give other respondents (*i.e.*, those who participate in the study, but do not complete the questionnaire) payments or gifts valuing less.

10. & 11. Assurances of Confidentiality/Matters of a Sensitive Nature

Responses to the study questionnaire provided to the FTC will not include any information about the identity of individual respondents. In addition, the contractor will be required to have sufficient procedures in place to prevent unauthorized access to respondent information, such as storing personally identifying information on separate servers from questionnaire response data; using firewalls to secure its servers; and maintaining audit records of log-ins, file accesses and other security incidents. Finally, this data collection would not include sensitive questions. A draft of the questionnaire accompanies this submission.

12. Estimated Annual Hours Burden

The Commission estimates that the cumulative total burden hours for the study will be approximately 2,971 hours. This total estimate is derived as follows. First, the FTC plans to conduct a pretest of approximately 25 persons that will take approximately 30 minutes on average per person, resulting in a total of approximately 13 burden hours (25 respondents x 30 minutes). Second, once the pretest is complete, the FTC and its contractor will ask screener questions of approximately 15,000 respondents in order to obtain the FTC's target sample size of 5,600 individuals. The FTC estimates that it will take respondents one minute to respond to the screener questions. Thus, the total burden related to the screener questions will be approximately 250 hours (15,000 respondents x 1 minute). Finally, those respondents that pass the screener questions will answer the entire questionnaire. Using a conservative estimate of 6,500 individuals,⁹ the FTC further estimates that participating in the study will require an additional 2,708 hours as a whole (6,500 respondents x 25 minutes). Finally, the cost per respondent should be negligible. Participation is voluntary and will not require start-up, capital, or labor expenditures by respondents.

⁸ See <http://www.ftc.gov/os/comments/lightbulbs/index.shtm>.

⁹ Although the target sample is 5,600 individuals, the procedures used by the contractor may result in collection of information from a slightly higher number of individuals.

13. Estimated Annual Cost Burden

The cost per respondent should be negligible. Participation is voluntary, and will not require any labor expenditures by respondents. There are no capital, start-up, operation, maintenance, or other similar costs to the respondents.

14. Estimate of Cost to Federal Government

The total cost to the Federal Government for the information collection will be approximately \$150,000. This estimate includes the costs paid to the contractor to develop an online data collection procedure, draw the sample, collect the data, create a database of the results, perform simple data analyses, and prepare a methodological report. This cost also includes FTC staff time to design the study, manage the study, analyze the data, and draft a report. The cost of FTC staff time is necessarily an estimate because several factors in this calculation may vary, including the number of staff involved and the actual amount of time required. Clerical and other support services and costs of conducting the study are included in this estimate.

15. Program Changes or Adjustments

This is a new data collection. Thus, FTC staff requests a program change increase of 2,971 hours.

16. Plans for Tabulation and Publication

FTC staff intends to use the results of the study to help assess whether current FTC labeling requirements should be changed and, if they should, to guide recommendations for such changes. The collection of the information would begin after the completion of the OMB review process. The projected duration of the information collection is approximately eight weeks. The estimated date for the completion of the report is Spring of 2009. The underlying rulemaking must be completed by June 2010.

17. Display of Expiration Date for OMB Approval

Not applicable.

18. Exceptions to Certification

Not applicable.

B. COLLECTION OF INFORMATION EMPLOYING STATISTICAL METHODS

1. Description of Sampling Methodology

The study will help FTC staff understand how recent and likely future light bulb purchasers comprehend information on existing and alternative labels and the likely usefulness of that information in making purchase decisions. The study will use a nationwide Internet panel to obtain

a sample of recent and likely future light bulb purchasers who broadly reflect the diversity of the American population of such purchasers. The FTC will work with its contractor, Synovate, Inc., which has substantial experience assessing consumer communications using Internet protocols and alternative protocols. This expertise should be helpful in designing the research, administering the study, and drawing appropriate conclusions based on the results. By using random assignment across treatments, FTC staff believes the research will provide useful information on the effects of alternative label designs in a cost-effective manner and help guide the FTC in its efforts to examine the effectiveness of its energy labeling regulations.

After considering the costs and benefits of various data collection methods, FTC staff determined that an Internet panel with nationwide coverage is the most efficient way to collect data to meet the research objectives within a feasible budget. The study will use procedures recognized in the marketing research industry as appropriate for consumer research via the Internet. For example, in order to ensure that the respondents broadly reflect the diversity of the American population of recent or likely future light bulb purchasers, the FTC will consult with its contractor regarding methods developed to minimize potential differences between an Internet panel study and a study based on a probability sample, and with the advice of the contractor develop quotas or employ other appropriate techniques. Moreover, the results of the research will be appropriately qualified.

The sample for the study will be drawn from Synovate's Internet panel, which has more than 1 million members throughout the nation derived through a variety of methods. Panel members typically receive about one invitation per month to participate in research projects. As discussed above, in consultation with its contractor, FTC staff has determined that a screening sample of up to 15,000 respondents will be needed to ensure 5,600 completed responses. The sampling procedure will utilize the contractor's Internet panel as efficiently as possible. FTC staff will work with the contractor to identify demographic characteristics of light bulb purchasers. If the contractor has prior data on screening criteria, such as age, gender, education, race/ethnicity, homeowner status or purchase behavior, then potential respondents will be screened initially based on this prior information. If such data are not available, staff will develop a screener, in consultation with the contractor, to collect needed screening data.

Synovate has used a variety of techniques, including demographic weighting, propensity scoring, and quota sampling to obtain accurate projections of national sentiment based on samples drawn from its Internet panel. Accordingly, FTC staff will work with Synovate to ensure that the sample is as representative of the nation as possible. Additionally, quotas may be developed, in consultation with the contractor, to ensure as much as possible that the sample reflects the target population. Although quota sampling will ensure that the respondents share characteristics similar to the target population, and although the panel will include nationwide coverage, FTC staff does not expect this Internet sampling procedure to yield a national probability sample. As such, FTC staff does not intend to generate nationally representative results or precise estimates of population parameters from this study. However, an attempt will be made to match the study's sample to known demographic characteristics of the target population of recent or likely light bulb purchasers. The matching will be used to produce samples with a reasonable degree of diversity and realism for key demographic characteristics.

The study will rely primarily on a between-subjects experimental design. Different subjects will review different label treatments, including a control (current label) design. The design will promote internal validity through random assignment to treatment conditions (label designs). Random assignment should ensure similar populations across treatments, and that differences in outcome measures between the groups reflect differences in label executions. Respondents will answer objective questions about how well they understand information on energy labels. Differences in consumer comprehension, measured by the accuracy of answers to these objective questions, will be used to distinguish between label executions.

Standard statistical techniques, such as t-tests and chi-square tests, will be used to assess potential differences in label executions. Although respondents will view one type of label for the comparative comprehension tests, they will view labels for several products. The order of the exposure to the labels for these two products will be rotated to counterbalance any possible order effects. Although the primary analysis is based on a between-subjects design, respondents will also be asked questions to determine which types of label information are most useful to them. These data will be used to gauge which labels respondents find most useful. In addition, the design may include a few follow-up questions at the end of the study based on exposure to other label executions.

The sample size will consist of 5,600 consumers. This sample size was determined based on a number of considerations, including the funds available for the study and the cost of different sample size configurations, the number of label designs to be tested, and a power analysis. We plan to have a sample size of 5,600 and will use 15 to 20 label execution for a total of approximately 280-373 respondents per cell. A table summarizing the power analysis appears below. In this table, p1 is the true proportion in population 1 (treatment group 1), p2 is the true proportion in population 2 (treatment group 2), and alpha equals .05.

Table 3

Power Analysis for n1=n2=300, alpha=.05			
p1	p2	Power for two-sided test	Power for one-sided test
.65	.75	.73	.83
.70	.80	.78	.86
.75	.85	.84	.91
.80	.90	.91	.95

2. Description of the Information Collection Procedures

As discussed in section A above, the FTC has selected Synovate, Inc. a consumer research firm, to recruit 5,600 individuals 18 years of age or older for the study. The FTC’s questionnaire will include questions to understand the importance of the light bulb disclosures in consumer

purchase decisions and to determine if alternative label formats are more effective than the current label. The questionnaires will consist primarily of closed-ended questions and include no more than four open-ended questions.

The procedure for administering the questionnaire will be determined in consultation with the contractor. It is expected that the contractor will develop an online program that will allow respondents to view appropriate questions and materials based on their answers to prior questions. In this way, an Internet methodology can be an improvement over mail questionnaires, where respondents can preview questions and materials that are best asked in a controlled sequence.

The contractor will provide the FTC with raw data, as well as tabulated data, simple graphical representations of the data, and simple significance test results. For example, it is expected that the contractor will provide a graphical depiction of the percentage of respondents who answer individual questions correctly under each labeling scenario and present results of appropriate tests to determine if the differences are statistically significant.

As discussed in more detail below, the study will assign respondents into groups (*i.e.*, cells), each of which will be assigned a different label design (*i.e.*, treatment). The study will use approximately six to twelve hypothetical test light bulbs, each with different performance characteristics such as brightness, energy use, life, and color temperature. While each cell will answer the questionnaire while reviewing disclosures for all hypothetical bulbs, the label treatment will vary. The underlying questions for every respondent, however, will remain the same regardless of which label treatment they view.

a. Label Variables and Respondent Cells

The study will arrange respondents into 15 to 20 cells of approximately 300 respondents each. Respondents in each cell will view one of 15 to 20 randomly-assigned treatments. For example, one group will answer the questionnaire while viewing labels displaying the current disclosure format, while another group will view labels with an alternative format.

Examples of the variables we will use to create the treatments appear in Table 1 below. The planned treatments appear in Table 2. The variables include:

Color Temperature: The study will explore three principal ways of communicating color temperature on the front package panel. One approach involves the use of standard terms to describe color temperature such as “soft white” and “daylight.” The terms used in the study are consistent with those in existing industry consensus standards and also previous ENERGY STAR efforts.¹⁰ The second approach will include a label that provides information on color temperature

¹⁰ The color temperature descriptors used in the study are based on ANSI C78.376-2001 and draft ENERGY STAR Program Requirements for CFLs (Fourth Draft, Feb. 27, 2007) (http://www.energystar.gov/ia/partners/prod_development/revisions/downloads/cfls/Criteria_CFLs_Version4.0_draft4.pdf). The Consortium for Energy Efficiency also suggested such a system in their comments. See <http://www.ftc.gov/os/comments/lightbulbs/536795-00011.pdf>. The

through six color-coded boxes, similar to a system considered in previous consumer research.¹¹ The third approach will include a basic “Cool-Warm” scale as illustrated in Example Label C at the end of this Notice. In addition to these three approaches on the front package panel, the “Lighting Facts” label, on the back panel will include information about color temperature (*e.g.*, 2700 K). Sample labels appear as a supplementary document attachment to this instant submission.

Five-Star Efficiency Rating: The study will include some label designs that display a five-star rating system for energy efficiency.¹² In assigning ratings to the test models, the study uses the rating system proposed by the Natural Resources Defense Council (NRDC).¹³

Yearly Energy Cost Information: The front package panel for some treatments will include a yearly energy cost estimate based on a 2008 national average residential electricity cost of 10.8 cents/kWh and a usage rate of 3 hours per day.¹⁴

Watt-Equivalent Information: Several treatments will include information on the rear-panel “Lighting Facts” label that provides the brightness (in lumens) of typical incandescent bulbs at various wattages. This wattage-equivalent numbers are consistent with information provided by the ENERGY STAR program.¹⁵

descriptors are as follows: 2700K (“Soft White”), 3000K (“Warm White”), 3500K (“White”), 4100K (“Cool White”), 5000K (“Natural”) and 6500K (“Daylight”).

¹¹ See *supra* note 7.

¹² In response to the 2008 ANPR, several commenters urged the FTC to consider a 5-star rating system. See Natural Resources Defense Council comments (<http://www.ftc.gov/os/comments/lightbulbs/536795-00003.pdf>); American Council for an Energy-Efficient Economy comments (<http://www.ftc.gov/os/comments/lightbulbs/536795-00012.pdf>); and Joint Comments from Pacific Gas and Electric Company, Southern California Edison, Sempra Energy Utilities, and Ecos Consulting comments (<http://www.ftc.gov/os/comments/lightbulbs/536795-00010.pdf>).

¹³ See NRDC comments (<http://www.ftc.gov/os/comments/lightbulbs/536795-00003.pdf>). In particular, we have consulted NRDC’s proposed “Curved Efficacy Boundaries” system as illustrated in Appendix 1 of its comments. This rating system relies on luminous efficacy (lumens/watt) weighted by lumens to create five efficiency categories for lamps. For example, under this system, a typical incandescent (60-watts, 800 lumens) receives 1 star; a typical compact fluorescent (CFL) bulb (13 watts, 800 lumens) receives 4 stars; and a typical LED (light-emitting diode) bulb (7 watts, 800 lumens) receives 5 stars.

¹⁴ See 73 FR 11406 (March 3, 2008) (DOE national average energy cost figures for 2008). Similarly, yearly bulb life information in the study will be based on a usage rate of 3 hours per day.

¹⁵ See ENERGY STAR information at http://www.energystar.gov/index.cfm?c=cfls.pr_cfl (*e.g.*, 800 lumens=60-watt incandescent; 1110 lumens=75-watt incandescent). The disclosures of such “watt-equivalence” (*i.e.*, the light output expressed by reference to the energy use of standard

TABLE 1 - Examples of Label Variables

Location/ Descriptor	Variable	Variable	Variable	Variable
<i>Front Panel- Light Output</i>	Light Output in lumens	Brightness in lumens		
<i>Front Panel - Energy</i>	Annual energy costs	Energy efficiency in lumens/watt	Energy efficiency based on 5-star rating	Energy in watts
<i>Front Panel- Life</i>	Life in years	Life in hours		
<i>Front Panel- Color Temperature</i>	Word descriptor (e.g., “soft white” “daylight”)	Six colored-coded boxes	Cool-Warm Scale	
<i>Rear Panel</i>	“Lighting Facts” label with watt equivalent information	“Lighting Facts” label without watt equivalent information	No information on rear panel	

TABLE 2 - Draft Treatments

Label Treatment	Front - Light Output	Front - Energy	Front - Life	Front - Color Temperat ure	Back - Lighting Facts	Other
1 (current)	Light Output - Lumens	Watts	Hours	—	no lighting facts	front explanatory statement req by current rule
2 (current)	Light Ouput - Lumens	Watts	Hours	—	lighting facts w/o watt equiv. chart, with color word descriptor	front explanatory statement req by current rule

incandescent bulbs). is currently standard practice on CFL packages as manufacturers seek to help consumers understand the light output of CFLs in the context of an incandescent bulb’s energy use. Due to space constraints, the study will not test such information on the front panel. We anticipate, however, that, regardless of any final FTC labeling requirements, manufacturers of CFL’s will continue to provide information about watt-equivalence on their packaging as long as such information is useful to consumers.

3 (current)	Light Output - Lumens	Watts	Hours	—	lighting facts with watt equiv. chart, with color scale	front explanatory statement req by current rule
4	Brightness-Lumens	Energy Cost	Years	Word Descriptor	lighting facts w/o watt equiv. chart	
5	Light Output - Lumens	Energy Cost	Years	Color Boxes	lighting facts w/o watt equiv. chart	
6	Brightness-Lumens	Energy Cost	Years	Color Scale	lighting facts w/o watt equiv. chart	
7	Brightness-Lumens	5 Star Rating	Years	Word Descriptor	lighting facts w/o watt equiv. chart, with stars	
8	Brightness-Lumens	5 Star Rating	Years	Color Scale	lighting facts w/o watt equiv. chart, with stars	
9	Brightness-Lumens	Lumens/watt	Years	Word Descriptor	lighting facts w/o watt equiv. chart	
10	Brightness-Lumens	Lumens/watt	Years	Color Scale	lighting facts w/o watt equiv. chart	
11	Brightness-Lumens	Lumens/watt	Years	Color Boxes	lighting facts w/o watt equiv. chart	
12	Brightness-Lumens	Energy Cost	Years	Color Scale “temperature” not “appearance”	lighting facts w/o watt equiv. chart	
13	Brightness-Lumens	5-Star Rating	Years	Color Scale	lighting facts with watt equiv. chart, with stars	
14	Brightness-Lumens	5-Star Rating + Energy Cost	Years	Color Scale	lighting facts w/o watt equiv. chart, with stars	

15					lighting facts w/o watt equiv. chart, with color scale, with both appearance and temperature descriptors	*Note that “lighting facts” will appear as the “front” in this treatment. The rear label will not have any bulb attributes.
16	Brightness-Lumens	Energy Cost	Years	Color Scale	no lighting facts	

c. Test Lamp Models

The study will employ six to twelve different hypothetical lamp models, each with different brightness, energy use, life, and color temperature characteristics. Several of these hypothetical models will be marked as ENERGY STAR products where the hypothetical criteria meet the ENERGY STAR criteria.¹⁶ The various characteristics of several hypothetical models appear in Table 3. Because we are considering a labeling approach that will convey uniform information to consumers regardless of the bulb type, the hypothetical labels will not identify the technology of the enclosed lamp (*e.g.*, incandescent, compact fluorescent, or solid-state). However, the hypothetical characteristics (*e.g.*, lumens, energy use, and life) of the test models will be consistent with the characteristics of available bulb technologies.

TABLE 3 - Examples of Test Models

Model	Lumens	Watts	Life in hours	Life in years	Yearly Energy Cost	5 Star Energy Rating	ENERGY STAR	Lumens/Watt	Color Temp (in K)	Color Temp (name)
A	820	60	1500	1.4	\$7.10	1	No	14	2700	Soft White
B	1690	100	750	0.7	\$11.83	2	No	17	2700	Soft White
C	825	13	6000	5.5	\$1.54	4	Yes	63	6500	Daylight
D	870	13	6000	5.5	\$1.54	4	Yes	67	2700	Soft White
E	870	13	6000	5.5	\$1.54	4	Yes	67	4100	Cool White
F	1199	20	10000	9.1	\$2.37	4	No	60	6500	Daylight

¹⁶ For the purposes of the study, it will be assumed that high efficiency bulbs consistent with LED performance qualify for ENERGY STAR even though the ENERGY STAR program has not finalized criteria for LED bulbs at this time.

G	1500	23	10000	9.1	\$2.72	4	Yes	65	3500	White
H	1750	26	6000	5.5	\$3.07	4	Yes	67	2700	Soft White
I	870	7	25000	22.8	\$0.83	5	Yes	124	2700	Soft White
J	870	14	25000	22.8	\$1.66	4	Yes	62	2700	Soft White
K	800	40	3000	2.7	\$4.73	3	No	20	3000	Warm White

All respondents will answer a series of questions about the characteristics of the products described in the labels and their preferences pertaining to those products. The questionnaire also will seek information about respondents' understanding of different lighting concepts such as lumens (*i.e.*, light output) and color temperature (*i.e.*, the color characteristics of a light source). Finally, the study will seek to gauge whether respondents have preferences regarding how certain types of information are communicated.¹⁷

3. Methods to Maximize Response Rates/Reliability of Sample Data

This study would use an existing Internet panel to draw a sample. The panel includes people who have expressed interest in sharing their opinions via the Internet and do so regularly. Seventy-five percent of those who receive the questionnaire are expected to qualify for the study and twenty-five percent of those who receive an invitation to participate are expected to agree to complete the questionnaire. To help ensure that the participation rate is as high as possible, FTC staff and/or the FTC's contractor will:

- Design an experimental protocol, in consultation with the contractor, that minimizes burden (short in length, clearly written, and with appealing graphics);
- Test the draft protocol with a pretest to ensure that the protocol does minimize burden and refine the protocol as appropriate;
- Administer the experiment to individuals who have expressed interest in participating in Internet studies; email reminders to respondents who do not complete the protocol soon after the original invitation to participate is sent; and
- Provide contact information on where to get help for respondents who may have questions as they complete the study.

4. Testing of Procedures or Methods Undertaken

Staff will pretest the questionnaire in the online format by sampling approximately 25

¹⁷ The study also will contain questions related to respondents' experiences with current light bulb labels.

respondents to ensure that all questions are easily understood and that the online procedure is sufficient to generate reliable data. This pretest is part of the collection of information for which staff seeks OMB approval.

5. Individuals Consulted on Statistical Aspect of the Study

The study design has been reviewed internally by Manoj Hastak, a faculty member in the Business School at American University. Dr. Hastak has served as a consultant on experimental and survey studies for the FTC on numerous occasions. The contractor, Synovate, Inc, is experienced in conducting statistically rigorous internet-based studies.