



National Council on Competition and the Electric Industry
Consumer Research on
Tracking Approaches and
Product versus Supplier Labeling

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The Consumer Information Disclosure Series

Papers in the Series

Information Disclosure for Electricity Sales: Consumer Preferences from Focus Groups

Full Environmental Disclosure for Electricity: Tracking and Report Key Information

Disclosure of Fuel Mix and Emissions by Retail Electric Service Providers: Issues of Confidentiality vs. Public Right to Know

Information Disclosure for Electricity Sales: Consumer Preferences from Focus Groups - Rocky Mountain West

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Summary Report: Baseline Survey - Consumer Knowledge, Practices, and Attitudes

Information Consumers Want in Electricity Choice: Summary of Focus Group Research

Label Testing: Results of Mall Intercept Study

Model Electricity Consumer Protection Disclosures

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Forward

The National Council and Its Research Agenda

In November 1996, The National Council on Competition and the Electric Industry initiated its Consumer Information Disclosure Project to assist state regulators and legislators address consumer information needs in a competitive electricity environment. This effort followed on the heels of The National Association of Regulatory Utility Commissioners' November 1996 resolution calling for enforceable, uniform standards that would allow retail consumers to easily compare price, price variability, resource mix, and the environmental characteristics of their electricity purchases.

To implement this resolution, the National Council has initiated a multi-part research agenda. The research agenda is designed to identify and provide state regulators and legislators with technical information, consumer research and policy options. The tasks currently being undertaken are described below. A report, describing the result of the research, will be prepared for each of the tasks. Copies will be made available on the National Council's website as they become available.

Options Identification and Tracking Overview

This task identifies the major disclosure and labeling options for environmental and resource mix. Emphasis for the options focuses on information that is currently available for use in possible labels. The task also identifies the likely mechanisms that could be used to trace transactions from generators through sellers, aggregators, or marketers to retail buyers.

Price and Service Disclosure Generally

This task identifies the major disclosure options for items other than environmental and resource mix -- for example, pricing elements, price change formulas, service options, and fixed vs. variable rates. The task focuses on items that might be included in simple labels, (e.g., price) as well as other items such as risk, and important contract terms and conditions that might be provided to consumers in other forms.

Stakeholder Outreach

The National Council has held three regional meetings to collect input from stakeholders on a variety of issues with particular emphasis on suggested label content and format. Other issues included whether label information should be historical or prospective, the required level of accuracy, the treatment of energy efficiency, emission offsets, and allowances, the frequency and location of information, and enforcement.

Customer Focus Groups

This task involves customer focus groups in six states, including focus groups with consumers who have participated in retail competition pilot programs (e.g., New Hampshire). The groups provided feedback on how they perceive competition and on the categories of information consumers want before choosing among electricity suppliers. The groups were also asked for their reactions to different marketing materials.

Baseline Tracking Survey

This task consists of a nationwide telephone survey to collect information about knowledge, attitudes, and practices relevant to consumer decisions about electricity service. This task also establishes national and regional baseline data on the issues.

Disclosure Testing

The purpose of this research is to test labeling options for consumer acceptance, ease of use, comprehensibility, and task performance (i.e., ability to perform label use tasks). Labeling options will be tested in a controlled, experimental setting that simulates realistic use situations to assess label performance quantitatively.

New England Project

This task involves working with PUCs and stakeholders in the six New England states and making recommendations for uniform disclosure requirements.

Large-Scale Pilots

This task involves large-scale testing of disclosure in the context of retail pilot programs to help design and evaluate the testing of different aspects of disclosure. We have had several conversations with Commissions and utilities that are planning retail access pilot programs.

Regional Disclosure Projects

This task applies the experience on the process used in New England to develop proposed uniform disclosure requirements for other regions. In each region, the Council will work with commissions and all other stakeholders to develop uniform disclosure requirements that fit the needs of the regional market.

Consumer Acceptance of Alternative Tracking Approaches

There are two approaches to tracking information used for disclosing information to consumers on fuel mix and emissions. One approach is a contract or settlement approach and the other is tradable tags. Both approaches are described in detail in other National Council reports. A fundamental concern raised about the tradable tag approach is that it

will suffer from a lack of consumer acceptance. The purpose of this research task is to assess consumer acceptance of alternative tracking approaches and determine whether and to what extent using one approach over the other influences consumer choice.

Reports are available on-line at the National Council's home page:

<http://eetd.lbl.gov/NationalCouncil>

1.0 Overview

Several disclosure issues relate to consumers' ability to understand or have confidence in the information provided in labels about competing energy companies. This study examines 1) consumers' ability to understand alternative explanations about how information in the disclosure labels is derived (tracking systems), 2) how different tracking systems affect consumer decisions, 3) consumer preference for one tracking system over another, and 4) consumers' ability to differentiate between company and product information. These questions were explored in a mall intercept study with 301 adults in Albany, NY and Los Angeles, CA.

There are two general approaches to tracking: contracts and tradable tags. (These tracking approaches are described more fully in other National Council on Competition and the Electric Industry Reports.) Both approaches have a number of variations, but from a consumer perspective, the primary distinctions are:

With the contract approach, attributes of power (fuel type and emissions) are based on the contracts for power. Thus, if one signs a contract for power produced by a coal plant, the fuel and emissions information provided in the label will reflect coal and emissions from a coal plant.

With tradable tags, the power and associated attributes can be sold and traded separately. Thus, one could buy power from a coal plant and "tags" (called certificates in this study) from a hydro facility. The label would reflect the "tags" (or certificates) the retail seller holds.

Both approaches are workable and achieve the desired economic outcome. (The tradable tag approach is generally thought of as being less costly to administer and more flexible, although the cost difference between the two may not be significant.) There is, however, a concern that consumers may have less confidence in labels based on the tradable tag approach and as a result, fewer might buy green products. This research was designed to gauge the extent to which consumer acceptance could be a problem.

The final part of the study assessed how well consumers understood and/or whether they preferred that the information on the label represent a particular product or the average characteristics of all the products sold by a particular supplier. With a supplier approach, a large firm such as American Electric Power (AEP) would have a single label reflecting its entire mix of plants and that single label would appear with all service offerings. With a product approach, AEP could sell many different products, each labeled with its own fuel mix and emissions profile. The weighted average of all of AEP products would be the same as the AEP label under the supplier approach.

The report is organized in the following manner: The key findings of the study are summarized in Section 2.0. Section 3.0 presents the study methodology. Because there are two main foci of the study, the results are presented in two sections: 4.0 Alternative

Tracking Systems: Certificate versus. Contract Verification Systems and 5.0 Product versus. Company. Section 6.0 offers the study conclusions.

2.0 Key Findings

Tracking Options: Certificate versus Contract Verification Systems

Over the course of the each interview, information about tracking systems was progressively meted out to participants (different information and orders to different groups). As a result of additional information, there were shifts in respondents' choice of energy product and in their confidence about their choices. Most notably among these were:

Respondents who were read information about the certificate verification system became less certain that the information would be useful in finding the product that was environmentally friendly. When given further information about certificate and contract systems via summary bullet points, certainty ratings declined in both groups.

Significantly more respondents changed their product choice from the environmentally-friendly product to either the cheaper product or answered "don't know" or "need more information" when hearing about the certificate verification system than upon hearing about the contract verification system.

The majority of respondents who learned about the certificate system indicated a preference for having electricity purchases and certificates coming from the same place.

The majority of respondents who were informed about the contract system did not like the idea of a less precise system, even if it costs less.

Product versus Company

When seeing a label for the first time, most respondents thought the information about fuel mix referred to the individual product, not the parent company.

When given a choice, most respondents thought label information should refer to the individual product.

3.0 Methodology

Chilton Research Services conducted 301 mall-intercept interviews with 150 respondents in Albany, NY and 151 people in Los Angeles, CA. Interviews were conducted with people who pay a separate electric bill, and were "environmentally friendly". The criteria for selection for being environmentally friendly was based on possessing at least two of the following three characteristics:

- buys products that cause little or no harm to the environment

- belongs to or regularly contributes to environmental organizations
- pays a little more for products known to be good for the environment

The study looked at two questions certificate versus contract verification systems and product versus company information.

Respondents were randomly placed into one of four groups. Each group was presented with the same four products -- Products A, B, C, and D (See Appendix A for product labels) and given identical product information. What differed was the order in which information was presented, whether interim explanatory information was given and what tracking system respondents learned about..

To do this, three variations on the interview took place.

1. Half of the respondents (Groups 1 and 3) saw Products A and B first and the other half (Groups 2 and 4) saw Products C and D first.
2. Half of the respondents (Groups 2 and 4) saw the one-sided (text-only) format for Products C and D before being given the two-sided versions.
3. Half of the respondents (Groups 1 and 2), after being given a general explanation about electricity tracking learned about the certificate system. The other half (Groups 3 and 4) learned the contract system .

Thus, the groups were configured in the following way:

	Task 1	Task 2
Group 1	Products A and B CERTIFICATE VERSION	Two-sided only Products C and D
Group 2	One-sided then two-sided Products C and D	Products A and B CERTIFICATE VERSION
Group 3	Products A and B CONTRACT VERSION	Two-sided only Products C and D
Group 4	One-sided then two-sided Products C and D	Products A and B CONTRACT VERSION

3.1 Specific methodology: Certificate versus Contract Verification Systems

For this portion of the study, respondents were given descriptions for Products A and B. Product A was more environmentally friendly than Product B, but Product B was less expensive than Product A. In Groups 1 and 2, the respondents were given a description for the certificate verification system. Groups 3 and 4 were given a description for the contract verification system. Although they received information on different tracking systems, all four groups were asked identical questions. (The exception to this is that there was one verification-system specific question.)

The interview began by handing all participants two-sided product information sheets. One side had written text about the product/company. The other side had specific information about the product -- price, contract terms and fuel mix. Respondents were asked general questions about their purchase preference and their opinion as to which product was more environmentally friendly. They were also asked to rate their confidence in making these choices (1: very uncertain and 10: very certain).

Respondents were then read the following, general explanation about the inability of electricity suppliers to send electricity directly to households and asked more questions based on this new information.

I'd like you to take a closer look at the fuel mix part of the label on Products A and B. Notice that it reports that 25 percent of the fuel mix for Product A comes from hydroelectric power (source was varied), and two percent of the fuel mix for Product B comes from hydroelectric Power. I'd like to explain to you how this number is calculated and then ask you a few questions.

It is not possible to trace power from any particular power plant to your home because all power is delivered through the power grid. The power grid is like a reservoir which supplies water to your house. The reservoir is fed by many streams, and it is not possible to say which particular stream is the source of your water. All power plants send their electricity to the grid, and all suppliers deliver electricity from the grid to the individual. While it is not possible to say which power plant powered your home, your choice can determine which power plants feed the grid on your behalf. That's like being able to decide which streams you want to flow into the reservoir.

Next, interviewers read information about one of the two verification systems. Interviewees were asked about their preference and environmental friendliness and asked to once again rate their confidence.

The descriptions read to consumers appears below. It is important to note that the descriptions were written to test the risk of eliciting a negative consumer reaction. Thus neither was as positive as a proponent might draft nor as negative as a hostile reporter might write. In the real world, we expect consumers will be unaware of the underlying tracking system. A consumer issue might arise if a disgruntled competitor, environmental group or investigative reporter decided to raise the issue.

Tradable Tag Version

An accurate verification system has been developed to assure that the sources of power shown in your label have been delivered to the grid. When a power plant delivers a unit of power to the grid, the power plant owner receives a certificate that shows the type of fuel the plant used to produce the unit of power. When your electricity supplier sells you power, it must do two things. First, it must contract with power plants to deliver power to the grid. Second, the supplier must also buy certificates for each unit of power it sells you. These certificates, however, may be bought separately from buying power. This means your supplier could buy power from any type of power plant and buy certificates from a hydro-electric power plant.

The sources of power shown in the label reflect the certificates that your supplier has purchased. It does not necessarily show where the supplier bought you power. So when the label says 25 percent hydro, it means that your supplier bought hydro certificates to match 25 percent of the power your supplier sells regardless of what type of plants your supplier bought power from. By buying certificates from the hydro plant, you are assured that the right amount of power was delivered by the hydro plant to the grid and that the hydro producer had an incentive to make more electricity using hydroelectric power.

Contract Version

Accurate verification systems have been developed which direct your electricity payments to individual power plants. The sources of power shown in the label use these verification systems which are based on a careful review of who your supplier buys power from. So when the label says 25 percent hydroelectric, it means that the supplier of product A has a contract with a hydroelectric plant to create enough electricity to equal 25 percent of all the power sold as product A.

As a final task, respondents were handed a written summary describing the same verification system about which they had previously had a statement read to them. The summary was in a bullet point format, with the bullet points accentuating the weakness of each approach. See Appendix ____ . Respondents again answered questions about the products and their choice and rated their confidence in the ability of the explanatory materials to inform them.

3.2 Specific methodology: Product versus Company

For this portion of the study, respondents were given two products, C and D. (Product C was more environmentally-friendly than Product D, but Product D was cheaper than Product C.) In Groups 2 and 4, respondents were first given and asked questions about the text-only portion of the label and then were given the two-sided prop. Groups 1 and 3 were only given the two-sided prop. With the exception of questions that were specific to the one-sided prop, the remaining questions were identical for all four groups.

Interviewers then showed respondents the fuel mix portion of the label and pointed out the percentage of each product that came from hydroelectric power. Interviewers gave the following explanation about the fuel mix portion of the label and asked the questions again:

Product (C/D) is one of several products that Company (C/D) sells. The other electricity products that Company (C/D) sells are produced using less hydroelectric and more nuclear and coal than Product (C/D). A similar diagram may apply to Product (C/D) and any other electricity product you see. That is, Product (C/D) may not be the only product that is owned by a parent company.

4.0 Findings: Certificate versus Contract Verification Systems

4.1 General Product Questions

The majority of respondents would buy the more environmentally-friendly product (71 percent) Product A over the less expensive Product B. This percentage increased to 82 percent for the respondents who met all three of the environmental screening criteria. Of those who chose Product A, most said they did so because it was environmentally safer/better (74 percent) or because of the fuel mix/renewable resources/solar/wind/hydroelectric (60 percent).

Of those who chose Product B, the majority (88 percent) said they did so because of price. When asked to rate how certain they were about their choice, there was a difference between those who chose Product A and those who chose Product B (Means = 7.52 and 6.82, respectively). Most respondents thought that Product A was more environmentally-friendly and were certain of this choice (Mean rating=7.48). When asked to rate the amount of information they had just been given, 70 percent said that it was not enough information, 24 percent said it was the right amount of information, and two percent said it was more than enough information.

There was no difference in responses between the certificate and contract groups, as would be expected since the initial information was identical. The order in which Products A and B were presented did not have an impact on responses.

4.2 General Verification System Information

Introductory information about the power grid did not affect respondents' opinions. Again, since the information was identical, differences between groups would not be expected.

After hearing the explanation about how the power grid operated, 14 percent of respondents said the information would change their product choice. Seventy-seven percent said it would not change their choice, and nine percent did not know.

4.3 Certificate versus Contract Verification Systems

There was a concern about how well respondents comprehended information about the verification systems. Respondents did not understand the certificate system explanation as well as respondents understood the contract system explanation. When asked to rate, on a scale from 1 to 10 (1: very poor job and 10: a very good job) how good a job the explanation did, respondents hearing the contract explanation gave a higher score than those hearing certificate explanation (7.15 versus 6.61). On a scale of 1 to 10 in terms of how well they understood the main message in the explanation, again the respondents hearing the contract version gave a higher score than those hearing the certificate version (7.45 versus 7.07). Holding factors such as education, income and presentation order constant via regression analysis, these difference in rating were considered significant.

The majority of respondents (65 percent) said that the additional information did not change their confidence in the information on the label. The percentage who said this did not change their confidence was higher for the contract group (74 percent) than the certificate groups (55 percent).

When the respondents rated how confident they were in their certainty to choose the more environmentally-friendly product, the mean rating for all respondents dropped by one point. The drop in certainty was larger for respondents who heard about the certificate system. The following table shows the shift:

	Total	Certificate	Contract
Before Information	7.48	7.43	7.45
After Information	6.54	6.10	6.98

For the respondents in the certificate group, about 20 percent made no change in rating. In the contract group, 37 percent made no change.

The majority of respondents (69 percent) still chose Product A, especially the most environmentally-conscious respondents (76 percent). Shifts in responses went in all directions. Twenty-three percent of those who switched went from A to B, 26 percent from B to A, 36 percent from A or B to Not Enough Information, and 15 percent from Not Enough Information to A or B. Significantly more respondents in the certificate group changed their choice of product, usually away from the environmentally-friendly Product A, than did respondents in the contract group. Of respondents in the certificate group, 21 percent overall and 12 percent who initially chose Product A, changed their product choice. Of respondents in the contract group, only 11 percent overall and five percent who initially chose Product A changed their mind .

4.4 Certificate versus Contract Verification Systems Summary Bullet Points

After reviewing the bullet point summary for the same verification system they had already heard about (See Appendix B), 44 percent said it changed their understanding of the verification system. (51 percent of the certificate group and 36 percent of the contract group.)

For the certificate group, the main reasons given for how the bullet points changed their understanding were:

- opportunity to misrepresent true source of power (21%)
- certificates purchased separately/not necessarily representative of power purchase (21%)

For the contract group, the main reasons were:

- cannot be certain of power sources within this system/ this will not necessarily represent where electricity is generated (39%)
- opportunity to misrepresent true source of power (19%)

Respondents were split as to whether the additional information from the summary bullet points changed their confidence in the information on the label. Fifty percent said it did, and 45 percent said it did not. (58 percent of the certificate group and 41 percent of the contract group.)

Rating their confidence in being able to choose a more environmentally-friendly product once they had an even greater understanding of the verification systems, there was another, albeit slightly smaller, downward shift in confidence ratings. The shift in the certificate group was larger than the shift in the contract group.

	Total	Certificate	Contract
Before Information	7.48	7.43	7.45
After Information	6.54	6.10	6.98
After Bullet Points	5.69	5.17	6.21

The most common response for both groups was no change. (39 percent of the certificate group and 45 percent of the contract group.) For the certificate group, the next most common response was a one point confidence rating decrease. For the contract group, the next most common response was a one point rating increase.

Sixty percent of respondents still chose Product A as their electricity supplier. The following tables shows the shift in this choice with further information:

	A	B	Not enough information/ Don't know
Before Information	71%	22%	7%
After Information	69%	21%	10%
After Bullet Points	60%	22%	19%

Of those respondents who changed, the majority (78 percent) changed from A or B to Not Enough Information/ Don't know. The main reasons they changed were:

- Not sure about accuracy of supplier information/no way to be sure (36%)
- Seems to be too confusing/ too many variables (30%)

There was not a difference between the two groups in terms of who changed their product choice. Of respondents who chose Product A before given the summary information, 11 percent of the certificate group and ten percent of the contract group changed their minds. A total of 17 percent of the certificate group respondents and 15 percent of contract group respondents changed their initial choice.

Of those in the certificate group, when asked if the verification system was modified so that a firm had to buy certificates and electricity from the same plant, 75 percent preferred this change (41 percent strongly). Seventeen percent did not care either way, and five percent opposed the change.

When asked if a simpler approach was used that was cheaper but less precise, 78 percent of the contract group said they would not like it, indicating that if people were going to pay for cleaner forms of electricity, they should get what they pay for.

4.5 Regressions Analysis

4.5.1 Certificate versus Contract Understanding

When holding presentation order and all personal characteristics constant via regression analysis, significant differences emerged between the certificate and contract groups with regard to understanding information about their respective verification systems. Using an understanding of the information as a control variable, the questions and differences between the groups were reexamined, and many of the differences between the groups could be explained by a difference in an understanding of the materials. The group continued to be a significant determinant in terms of the magnitude of the change in confidence ratings.

Regression analyses also revealed that when respondents learned about the certificate system, they were more likely to lose confidence in the veracity of the label information. As summarized below, during another portion of the experiment, all respondents were given information about other electricity products that the same company might sell.

Interviewers suggested that these other electricity products could have less desirable environmental attributes and asked respondents if that information affected how they viewed the product's environmental profile. If the respondents had previously been exposed to the certificates explanation, they were more likely to say they were less confident in the environmental qualities of the product than if respondents had been exposed to the contracts explanation. R wp="br2">

4.5.2 Overall Look at Questions versus Covariates

The table below shows the results of regression analyses for three major covariates:

1. in the groups who read about the certificate verification system
2. in the groups 1 and 3 who read about the certification verification system before undertaking the Product versus Company task
3. belong /donate to environmental organizations

Other covariates controlled for in these regressions were income, education, race, city and gender.

Those belonging/donating to an environmental organization have very similar responses to the other participants. Regression results featuring an interaction term between the certificate version and belonging/donating to an environmental organizations showed no significant coefficients for such a term. BR wp="br2">

	Certificate Version	Saw Certs/ Contracts First	Belong/ Donated to Env. Org
Decrease in Env. Cert. Rating (Q14-Q21)	+	0	0
Decrease in Env. Cert. Rating (Q21-Q26)	0	0	0
Change Confidence in Info (Q20=Yes)	+	neg	0
Change Confidence in Info (Q25=Yes)	+	0	0
Info. Change understanding? (Q23=yes)	+	0	0
Change your choice (Q17=yes)	0	0	+
Change Original Choice=Yes(Q22 v. Q10)	+	0	0
Choice No Longer A =Yes(Q22 v. Q10)	+	0	+

Change 2nd Choice=Yes(Q22 v. Q27)	0	0	0
Choice No Longer A=Yes(Q22 v. Q27)	0	0	0
Rate: Understand Explanation (Q19)	neg	0	0
Prefer Tags/Elec Bundled (Q28)	NA	0	0
Not Like Less Precise Acct. (Q29)	NA	0	0

Note: Read line 1 as follows: The decrease in the certainty rating once the specific accounting information passage was read was significantly larger for those who were read the certificate version. There was no difference between those who saw the certificates/contracts issue first (before company/product) or between those who belonged/donated to an environmental organization.

5.0 Detailed Findings: Product versus Company

5.1 One-sided Props(Groups 2 and 4 only)

When given the one-sided, text-only information about Products C and D, respondents were split on which product to choose. Fifty six percent chose Product C and 32 percent chose Product D. Of those who chose Product C, most said they did so because it was environmentally safer/ better (70 percent) or because of the fuel mix/renewable resources/solar/wind/hydro-electric (26.4 percent). Of those who chose Product D, the majority (94 percent) said they did so because of price. When asked to rate how certain they were about their choice, there was little difference between those who chose Product C and those who chose Product D (Means = 7.02 and 6.78 respectively). Most respondents thought Product C was more environmentally-friendly and were pretty certain of this choice (Mean rating=7.15). When asked if the amount of information they had just been given was adequate, most respondents (77 percent) said that it was not enough information.

5.2 Two-sided Props (All 4 groups)

When given two-sided information about Products C and D, the respondents from all groups were more likely to pick the more environmentally-friendly Product C (67 percent). There was little difference between the Groups 1 and 3, and Groups 2 and 4. Of those who chose Product C most said they did because it was environmentally safer/ better (69 percent) or because of the fuel mix/renewable. Of those who chose Product D, almost all (91 percent) said they did so because of price. When asked to rate how certain they were about their choice, there was little difference between those who chose Product C and those who chose Product D. The mean confidence was higher for Product D. (Means = 7.17 and 7.28 respectively). The mean confidence for Groups 1 and 3 was lower for Product C than Groups 2 and 4; but more notably, Groups 2 and 4 gave a mean confidence rating one point higher when choosing Product D (7.75 versus. 6.62). Most respondents (83 percent) thought that Product C was more environmentally-friendly and were pretty certain of this choice (Mean rating=7.27).

5.3 Product versus Company Information

After interviewers showed respondents the fuel mix portion of the label, pointed out the percentage of each product that came from hydroelectric power and read the explanation about the label, respondents were split between those who thought the additional information changed their opinion as to how environmentally-friendly the product they chose was (43 percent) and those who did not think the information changed their opinion (50 percent).

When asked to choose which set of fuel mix information should appear on all labels, 39 percent preferred to see the company fuel mix and 52 percent preferred to see the product fuel mix. This may be in part due to their expectations. When asked what they thought the information on the label referred to when they first saw the label, 34 percent thought the information was about the company whereas 57 percent thought the information was about the individual product.

Regression analyses of the responses also revealed some systematic differences among respondents' answers. First, those who belonged to or recently made contributions to an environmental organization were more likely to desire product-level information than those without similar environmental affiliations. Also, if respondents had first been exposed to the part of the experiment that dealt with the certificates or contracts information, they were more likely to want the label to reveal company information than those who saw the product/supplier questions first (40 percent versus 36 percent). This same group was also more likely to say that, at first viewing, they did not know whether the label referred to the product or the supplier.

6.0 Conclusions

Whether respondents learned about certificate or contract verification systems had an impact on their response. Before given information, both groups preferred the environmentally-friendly product. After hearing about the verification system, there were different reactions in each group in terms of product choice and confidence in being able to identify the product with better environmental attributes. Respondents from the certificate group were more likely to change their product choices away from the environmentally-friendly product, express less confidence in their choices and question the veracity of label information.

Based on the regression analysis, this difference may be due in part to the lack of understanding as to how the more abstract certificate verification system worked. When asked to talk about why they changed their selection, the primary answer given by respondents was that the true power source was misrepresented.

Respondents in all groups, after getting additional information about a particular verification system were less likely to choose the green product. More information also lowered confidence in terms of being able to choose the most environmentally-friendly product. Upon hearing all of the information about the verification system, the certificate

group preferred that the electricity and certificates come from the same place. The contract group did not like the idea of lowered precision in the verification system, even at a lower cost.

These results suggest that if the tracking system becomes a public issue, the certificates system is more likely to suffer from a negative consumer reaction.

Finally, when receiving information about an electricity supplier, respondents expected information about the particular *product* they will be receiving, not the *company*. When asked to make a choice about what type of information they would prefer, respondents wanted to know about the product.