



**Energy Trust of Oregon
Cannabis Market Research**

August 2017

Research Conducted and Presented By:

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Energy Trust of Oregon Cannabis Market Research Study

I. Purpose & Method

This research report summarizes the results of twenty-five in-depth interviews conducted for Energy Trust of Oregon among licensed indoor cannabis businesses in Oregon.

A. Purpose

The purpose of this research was to gain a better understanding of the attitudes and needs of cannabis business owners. The results will be used by Energy Trust in its development of strategies and programs to effectively serve this emerging market.

Key areas of exploration included:

- Awareness of Energy Trust and its services and incentives for growers
- Attitudes and importance of specific aspects of incentives and services offered by Energy Trust
- Role and importance of energy-efficiency in decision-making including criteria and processes for decision-making
- Energy-consuming equipment needs and how growers source and select suppliers
- Key information resources growers use and rely on including the OLCC
- Most effective ways for Energy Trust to communicate and share information with growers
- Likelihood of using Energy Trust in the future and suggestions for how Energy Trust can better meet growers' needs

B. Method

In-depth telephone interviews were conducted among licensed indoor cannabis businesses in Oregon. Two segments were included: those that have participated in the Energy Trust program (participants) and those that have not (non-participants).

- 1. Selection of respondents for research:** For participants, Energy Trust developed a list of 25 potential respondents. For non-participants, Energy Trust developed a list of 111 potential respondents. The lists were compiled using OLCC licensing data and Energy Trust internal sources. The non-participant list was only able to identify the grow method as being indoor or mixed for 32 of the 111 names on the list. Of the remaining names, the majority were located in Southern Oregon and considered likely to be outdoor. These factors were taken into consideration when selecting the 40 non-participants to receive a pre-letter.
- 2. Respondent pre-letters:** Sixty-two (62) respondents from Energy Trust's lists received a personalized letter from Energy Trust, signed by Susan Jowaiszas. The letter explained that Energy Trust was conducting a research study and asked for the respondent's cooperation in participating in the research. Of the

62 letters, 22 were sent to respondents who have participated in Energy Trust's program for cannabis growers and 40 were sent to non-participants. The letters were mailed in a series of batches during the time period of April 10 to May 18, 2017.

3. Completion of interviews: The research resulted in the completion of 25 interviews, which was the goal. Of the 25, 14 interviews were completed among participants and 11 among non-participants.

- The interviews were completed from April 13-June 5, 2017.
- Interviews ranged in length from 30 to 75 minutes with most averaging about 45 minutes.
- All interviews were conducted by Brenda Forrest, Forrest Marketing.

C. Research Materials

The Appendix of this report includes all the materials used in the research project including the pre-letter, discussion guides, and information about non-completed interviews.

D. Terminology: Indoor versus greenhouse

For purposes of this report only, the term indoor is used to describe a facility that is fully enclosed with no natural light used. The term greenhouse is used to describe a facility that uses some natural light. Although the official OLCC term for both types is "indoor", it was important to distinguish the difference in this report.

Research Caveat: This research study was qualitative and while it provides very valuable insights regarding the needs and attitudes of cannabis business owners, the results are not projectable to the entire universe of cannabis business owners that Energy Trust serves in Oregon.

II. Completed Interviews: Respondent Information

Twenty-five (25) interviews were conducted among licensed cannabis businesses in Oregon. All were either indoor or greenhouse growers. Of the 25, 14 interviews were completed among respondents who have participated in the Energy Trust program (Participants) and 11 among those who have not (Non-Participants). The table below provides a breakdown of respondents by geography, grow type, and lighting type. Information on grow type and lighting type was self-reported by respondents.

	Total	Participants	Non-Participants
	#	#	#
1. By Geography			
Portland Metro Area	17	13	4
Outside Portland Metro Area	8	1	7
Total	25	14	11
2. By Grow Type			
Indoor only	18	12	6
Greenhouse only	3	0	3
Indoor & greenhouse	4	2	2
Total	25	14	11
3. By Lighting Type			
LEDs	15	13	2
HID, HPS	10	1	9
Total	25	14	11

Other Respondent Information:

Expanding into greenhouses: Although only two of the 14 participants currently have greenhouse facilities, six other participants are planning to expand to greenhouses. Some have their plans underway and have already contacted Energy Trust about incentives. Five of the 11 non-participants already have greenhouse facilities and one more non-participant plans to expand into greenhouses.

Respondent doesn't qualify for Energy Trust incentives: It was discovered during the course of the interviews that three non-participants did not qualify for Energy Trust incentives. Two were being served by non-qualifying utilities and one was growing in shipping containers.

Respondent has multiple roles: One participant was not only a cannabis grower but also had other businesses related to energy.

III. Executive Summary

The following highlights results from each of the key topics explored in the research. More detailed summaries for each topic are located in the Detailed Findings section.

1. Awareness of Energy Trust

Participants

When participants were asked how they became aware of Energy Trust, perhaps one of the most significant findings was the influential role played by lighting manufacturers (especially those selling LEDs) and, to a lesser extent lighting distributors, in making customers aware. Other sources of awareness included: previous experience working with Energy Trust in a non-cannabis related business; OLCC materials; and cannabis trade show events.

Non-Participants: Awareness of Energy Trust

There is a fairly high level of awareness of Energy Trust among non-participants with eight of the eleven saying they are aware. However, there appear to be misperceptions about services offered by Energy Trust for the cannabis industry. Several non-participants believe the only lighting incentives offered by Energy Trust are for LEDs and also that LED lighting is the only energy-related equipment eligible for incentives from Energy Trust.

Non-Participants: Source of awareness

When the eight non-participants who were aware of Energy Trust were asked how they became aware, responses really varied. Sources given included: a previous non-cannabis job where their company received Energy Trust incentives, OLCC materials, participation in an energy task force, a cannabis trade show, an LED lighting manufacturer, one of their employees, and other growers.

Non-Participants: Reasons for not using Energy Trust

When the eight respondents who were aware were asked why they hadn't used Energy Trust, the most frequently mentioned reason was because they believed Energy Trust only offered incentives on LED lighting and/or Energy Trust did not offer incentives on HVAC. One respondent said he has specific plans to use Energy Trust in the near future and will be contacting Energy Trust soon. Many non-participants were interested in learning more about Energy Trust's services. Three respondents do not qualify for incentives: one is growing in shipping containers and two are served by other utilities.

2. Equipment Related Issues

Energy-related equipment issues emerged as one of the most difficult and challenging problems faced by cannabis growers. The next five Executive Summary points, numbers three through seven, deal with various aspects of this important topic.

3. Attitudes toward Manufacturers and Equipment Industry Dynamics

During the course of the interviews about equipment needs and suppliers, both participants and non-participants offered several negative comments about manufacturers; specifically, criticisms of the motivations that drive manufacturers in dealing with cannabis growers. Respondents also offered opinions on dynamics present in the equipment industry that affect their ability to assess and select equipment. In general, there were few differences of opinion between participants and non-participants.

a. Negative attitudes toward manufacturers

There were harsh criticisms of manufacturers with respondents saying that many are in it for profit only and do not have cannabis growers' best interests in mind. Respondents said this profit-only motive results in the following problems for cannabis growers:

- **Inferior products:** There is a glut of inferior and unproven products on the market. Also many products, especially lighting, are not specifically designed for cannabis.
- **Unreliability:** Manufacturers are an untrustworthy and unreliable source of information, which puts the burden on growers to determine the best equipment for their needs. Most seem to attribute this to manufacturers' greed but some also said it's a function of manufacturers' lack of knowledge about how cannabis is grown and what equipment is best suited for growers' needs.
- **Price gouging:** Manufacturers (and some contractors) raise their prices for growers because they know cannabis is a profitable industry and also because they know growers will receive Energy Trust incentives.

b. Equipment industry dynamics

- **Rapidly changing technology:** Rapidly changing technology is one of the biggest challenges growers face in making decisions about what equipment will best serve their needs. This requires that growers really understand all the latest developments in equipment especially lighting. As some said, "It's really hard to keep up". Also some said it's a never-ending process. Even after initial equipment purchases are made, growers report that they have to be continually exploring new technology.
- **Proliferation of products:** Related to the changing technology issue is the challenge of there being so many products available to choose from.
- **Lack of an objective information source:** Some respondents said the lack of an unbiased, objective source of information about the best equipment to buy for growing cannabis efficiently makes the task more difficult.

4. Locating Equipment Manufacturers and Distributors

When asked about the specific resources they use to locate equipment, it was revealed that this process poses its own challenges and can be very time consuming. Reasons include the difficulty in making actual contact with manufacturers and the tendency for secretiveness in the industry, which limits referrals from other growers.

Most respondents rely on several sources to explore and locate their equipment needs. The three most frequently mentioned sources were doing internet research, talking to other growers and attending trade shows. Many respondents locate equipment by doing internet research and several stressed this was most the important source among all growers for locating equipment. This includes watching You Tube videos, reviewing manufacturer websites and participating in online cannabis forums. Trade shows are also important because they provide an efficient way to see several manufacturers at once and to ask them questions. Many consider talking to other growers to be one of the best sources but it's limited due to the unwillingness of many growers to share information.

5. How Energy Trust Can Help Respondents with Equipment Challenges

Because of the dynamics of the equipment industry and attitudes toward manufacturers, many respondents are eager to get Energy Trust's help and offered suggestions for how Energy Trust could assist in alleviating this challenge.

Provide list of "approved" suppliers and/or a list of equipment that qualifies for incentives: Some suggested Energy Trust provide cannabis growers with a list of manufacturers and distributors that offer equipment that is energy efficient and that qualify for incentives. Others suggested Energy Trust should evaluate lighting fixtures and develop a list of those lights that are most energy efficient and then distribute this list to cannabis growers. Some would like Energy Trust to take this a step further and include on the list of energy efficient lighting the plant yield, plant quality, and energy cost savings based on results from actual growers.

Other suggestions included:

Several respondents said Energy Trust should reach out to manufacturers that sell Energy Trust "approved" equipment and encourage them to inform customers that Energy Trust incentives are available for the equipment they sell.

Others said Energy Trust needs to take an active role in putting a stop to manufacturers selling equipment to growers that isn't the best for their needs and also to put a stop to manufacturers raising their prices to growers because they know the grower is going to get an Energy Trust incentive. One said Energy Trust should make its incentive qualifications more stringent on energy efficient equipment by evaluating the equipment being sold by manufacturers and eliminating incentives for equipment that is of inferior quality.

6. The LED Controversy

Grower attitudes about the merits of LED lighting technology were offered frequently throughout the equipment discussion. This "LED controversy" generated passionate opinions from a handful of both supporters and detractors. Respondents who are "pro" LEDs characterized anti-LED growers as being very set in their ways and said they are often "old school", long time cannabis growers. They believe that growers with negative attitudes toward LEDs don't understand the "energy efficiency equation": that LEDs use

a lot less power, generate less heat and will eventually save them a lot of money. Respondents stressed these growers will need “verifiable proof” of not only cost savings but also of the yield and quality of plants grown with LEDs in order to consider them.

Respondents who are anti-LED feel it is very important for Energy Trust to understand why LEDs are not a good option for growing cannabis because they believe Energy Trust’s current lighting calculations on energy efficiency are flawed. They provided fairly detailed descriptions of their reasons why LEDs don’t work, which focused on the decreased yield that results by using LEDs thus negating any energy savings. They gave examples of growers who have experienced failure when using LEDs.

7. Satisfaction with Equipment Manufacturer or Distributor Relationship

Despite expressing criticisms of manufacturers and distributors overall, some respondents reported being satisfied in the end with their equipment purchase and with their relationship with the manufacturer or distributor. Some made favorable comments about the knowledgeability and service-orientation of their manufacturer or lighting distributor. Others praised the equipment they purchased saying it performed as promised. Among those who reported being dissatisfied, reasons focused on the equipment they purchased not performing as promised and price gouging.

8. Energy-Related Costs as a Percent of Total Costs

Although most respondents were able to provide their monthly energy-related costs, only 13 of the 25 respondents were able to provide the percent that energy-related costs are of their total costs. Among these, the average was about 25%. However there was a quite a range from a low of 4% to a high of 60%. Several said that energy costs were second only to their labor costs. Almost all respondents said that lighting was their biggest energy-related cost with other energy-related costs such as HVAC coming in a distant second.

9. Importance of Energy Efficiency

Participants: All participants stressed that being energy efficient was very important to them with many saying that being energy efficient was an integral part of their company mission from the onset. The primary reason given for the importance of being energy efficient was to reduce costs. However, all but three participants also mentioned that environmental concerns were an important reason. Some acknowledge and are sensitive to the industry’s reputation for being “energy hogs” and believe it’s important to be as energy-efficient as possible.

Non-Participants: Non-participants also said that energy efficiency was very important with the primary reason being the need to reduce this cost. Compared to participants, non-participants’ overall commitment to energy efficiency didn’t seem as intense with no one mentioning that it was a key part of their company’s mission or goals. Also fewer mentioned environmental concerns as a reason with two actually saying environmental concerns were not very important to them.

10. Future Importance of Energy Efficiency

All respondents said they believe being energy efficient will become more important to them in the future. Several said that when cannabis is legalized across the country, it will result in increased power usage and will drive energy prices up. Some said reducing energy-related costs will give them a competitive edge. Other responses were more general such as “it’s a big part of our costs and costs will only go up”.

11. Future Energy Efficiency Projects & Likelihood of Working with Energy Trust

Participants: When asked about future energy efficiency projects and the likelihood of working with Energy Trust, many participants said they already have plans to expand their operations by building either new indoor or greenhouse facilities. These respondents plan on working with Energy Trust when they do their new builds. The Energy Trust service they are most likely to use is incentives on lighting. Others are gradually phasing in more LED lighting to their existing operations and will be contacting Energy Trust as they do so.

Non-Participants: Two non-participants have already decided to contact Energy Trust about incentive opportunities for additional facilities they plan to build. Others said they didn’t have plans to work with Energy Trusts either because they aren’t using energy-efficient lighting or because Energy Trust doesn’t offer incentives for HVAC. Three said they don’t qualify: two are not in the service territory and one is growing in shipping containers. It’s important to note that all non-participants wish they were able to receive Energy Trust incentives.

12. Decision-Making Process

Compared to other industry sectors, cannabis growers are more informal when making energy efficiency decisions about their business. While there are exceptions, in general, the cannabis industry is less reliant on the more structured internal processes common to more established businesses. Reasons for this include:

- Many cannabis businesses are owned and operated by a single owner or a few individuals, often family and/or friends, which means fewer decision-makers are involved. As one grower said, “The buck stops with me and it starts with me”.
- Cannabis growers come from a variety of backgrounds and experience levels. As younger businesses in a growing industry, many growers are more entrepreneurial in how they approach business decisions, and few have firm financial thresholds or standards they’re required to meet before moving projects forward.

Many describe the decision-making process as being difficult. Lighting decisions are frequently mentioned as the most important and most difficult decision. Testing lighting for long periods of time before purchasing is a frequently mentioned step, especially among participants. LEDs were mentioned most often as the lighting type tested because of their cost and growers’ concerns about their ability to produce the desired yield and quality. Some participants said they took a long-term view in their decision to purchase LEDs. They factored in that LEDs would be more cost-efficient long-term and

that because the purchase price for cannabis would eventually drop, it would become increasingly important to remain competitive. Eight participants said the Energy Trust incentive played a critical role in their decision to purchase LED lights. Some said without the incentive, they wouldn't have been able to afford LED lights.

Some respondents, especially non-participants, stressed that their experience growing cannabis prior to legalization helped make the decision-making process easier. Those respondents without cannabis experience experienced more difficulty with two non-participants saying because of this, they ultimately made their decisions based on what other growers do.

Some stressed that “the leap to recreational is huge” and to produce successfully on a larger scale has to be factored into the decision-making process.

Two non-participants said they decided right away to produce the highest quality cannabis possible and this in turn affected their decisions on equipment. One said he needed the power of Gavita lights to achieve this.

13. Build-Out: Energy Efficiency Decision-Making Factors

There was consensus among respondents that decisions about energy-related equipment are made very early on, often six months before the actual build-out begins. Because of this, many respondents, especially participants, stressed that Energy Trust needs to reach growers in the early stages of their build-out planning process. Respondents make energy-related equipment decisions early on because of the need to know what their electrical loads will be in order to allow enough time for power upgrades to their transformers. They also need to know because their equipment choices will impact other facility design and infrastructure needs. And finally, they need to allow enough lead time for city and county permitting processes and the OLCC licensing application process.

Many respondents stressed that it's very expensive to do a start-up, describing it as their biggest hurdle. These initial costs result in some respondents, especially non-participants, needing to defer the purchase of energy efficient equipment until they've made enough money to be able to afford it.

Responses to how long it took to complete their build-out ranged from two months to 15 months with the average being about seven months. The majority of respondents built their building from scratch—from the ground up. Others started with a “shell” of building and renovated it for cannabis. A couple expanded and retrofitted their medical marijuana facilities.

14. Barriers Faced When Making Energy-Related Decisions

The most frequently mentioned barriers cited by respondents were money-related issues including start-up costs, raising capital and access to financing through traditional lenders. These financial barriers can have an impact on their decision to purchase energy efficient equipment, especially LED lighting. Some say deciding what

type of efficient equipment to purchase is also a barrier due to the dynamics present in the equipment industry.

15. Energy Trust Incentives and Technical Services

Participants

- **Incentives:** Many participants said they have a “pretty good understanding” of the Energy Trust incentives for lighting and most seem highly satisfied with the incentive amounts. However, the level of understanding for non-lighting incentives was low. Some have the impression that incentives simply aren’t available for anything other than lighting. Others said they “have holes in their understanding” of the Energy Trust incentives for non-lighting equipment (HVAC, insulation and greenhouse materials) and don’t understand what’s available. Respondents offered many improvements and suggestions for the incentive program. See Detailed Findings section on this topic for more information.
- **Technical services:** There appears to be low awareness and a lack of understanding of the technical services offered by Energy Trust. Although the lighting calculator was done for all participants, none specifically mentioned it. It appears that respondents just consider this part of the process of getting a lighting incentive and not a technical “service”. No participants mentioned any of the other technical services and yet Energy Trust records show that at least one respondent had an enhanced scoping report, one had a technical analysis study, and two pursued deemed/calculated measures (prescriptive insulation). When asked about technical services, almost all participants found the idea of technical services appealing, especially the service of Energy Trust visiting their facility to identify energy efficiency opportunities and possibly completing a technical study.

Non-Participants

- **Incentives:** Most non-participants stated they are not knowledgeable about Energy Trust incentives. Many were interested in receiving further information. Also, some are under the impression that Energy Trust only provides incentives on LED lighting and also believe that incentives for equipment other than lighting are not offered.
- **Technical services:** When asked about technical services, seven non-participants found this service appealing.

16. Wait Time for Incentive Check

Among participants, most felt the wait time for their Energy Trust incentive was too long. When asked about the wait time from final inspection to receipt of check, most reported wait times ranging from three to six months. When asked what they considered to be a reasonable wait time, most said one month.

Cash flow concerns were the most frequently mentioned reason for why the wait time is such a problem for respondents. Several mentioned they are waiting for the check so that they can pay their vendors. Two respondents said a shorter wait time would increase the likelihood of growers purchasing LED lights. Several stressed that it’s

important for Energy Trust to understand that it's not just the wait time to get the check that is difficult but the entire time they wait, starting from when they pay the vendor to when they receive their incentive check. This factor seems to heighten their dissatisfaction with Energy Trust's delays in issuing their checks once final inspection is completed.

Several mentioned that in addition to a wait time that they already consider to be too long, Energy Trust also "messed up" in processing their incentive check resulting in delays of up to six months longer. Several provided detailed accounts of the "mess-ups" they experienced. One respondent who experienced Energy Trust mistakes in processing her check also said that she feels like once you submit your payment request to Energy Trust, it seems to go in a "black hole" and you don't hear anything from Energy Trust.

Four respondents felt the wait time was reasonable and not a problem. These tended to be respondents who received their checks in less than 45 days following final inspection. One respondent qualified his response by saying the wait time wasn't a problem because they are well capitalized and had the money set aside.

17. Attitudes Toward Incentive Check Being Paid Directly to Vendor

Only six participants were aware of the vendor direct option with two of the six saying they've used this option. No non-participants were aware of it. Many respondents expressed amazement that this option was even available and they found the option very appealing. The reason given among all was that it would alleviate their lack of capital and cash flow problems, especially in the start-up phase. One said: "If the vendor direct option were available, 20-30 percent more growers would be taking advantage of Energy Trust and buying more energy efficient equipment, especially LED lights". Three respondents said the option offered little appeal for them saying they simply would prefer to pay the entire amount upfront and that the option wouldn't make any difference in their decisions regarding what equipment to purchase.

Some respondents offered opinions on whether vendors would be willing to participate in this option. Some said it was unlikely because of the amount of money involved, especially for LED lights, and that vendors can't afford to act as a bank. Two respondents thought the idea would have great appeal to vendors because it would help them sell more of their products.

The discussion of vendors directly receiving incentive checks prompted three participants to bring up equipment leasing and other financing options available for cannabis growers. Because of the steep fees involved in these other options, all three respondents preferred the vendor direct incentive option.

18. Industry Resources: Peers

Most respondents report that their peers are an important industry resource saying that they do share information with their peers on equipment, methods and solutions. They also say that they are eager to share because they feel it's important to help each other and to move the industry forward. Many feel their peers are the most reliable source of information because they are actual growers with real experience and not vendors or others that may have less altruistic motives.

However, at the same time, most respondents stressed that the sharing of information among peers is quite limited because many of their peers are simply unwilling to talk to other growers and share information. One respondent referred to this as a "divide in the industry" and estimated that half of all growers were unwilling to share information with their peers. Many said the reason for this is that after years of growing illegally and living in the shadows, some growers continue to be very secretive and want to keep everything to themselves. Also, some growers are afraid other growers will steal their ideas.

Even those respondents who are willing to share information limit this to only those peers they feel are reliable and trustworthy. As one respondent said, "There are a lot of growers I don't trust or want to associate with. They're used to finding ways to cheat and to game the system". Some also said that some growers claim to know it all but in fact have very little business experience and thus provide unreliable information.

19. Industry Resources: OLCC

Although respondents were quick to say it's been a learning process for the OLCC and that the OLCC has made mistakes, overall many report being satisfied with the OLCC's performance and feel they've done a good job. One respondent said, "Frankly, I'm actually kind of shocked about how well they've handled it". A few mentioned specific problems including that the OLCC is short on manpower resulting in long waits in getting inspections done and questions answered.

When it comes to relying on the OLCC for build-out recommendations, the words "rely on" are perhaps too strong to describe how some respondents utilized the OLCC's assistance in their build-out development process. Instead many describe the OLCC as being helpful in getting their businesses established including by answering questions and offering informational seminars. Others said they didn't rely on the OLCC for anything other than to get their license and not for "how to set up our operation or to grow marijuana". One said many growers view the OLCC as strictly regulatory and want to interface with the OLCC as little as possible.

All but one respondent read the OLCC Business Readiness Guidebook and many stressed that they took it very seriously, saying they studied it "tooth and nail" or read it repeatedly. Of the twenty-five respondents, ten confirmed seeing the Energy Trust listing in the OLCC Guidebook. All thought it was a good idea for Energy Trust to be listed in the Guidebook because everyone has to read the Guidebook and it's important

to have the Energy Trust information in the early stages of their build-out. Only six respondents reported receiving emails from OLCC. All were participants and almost all said the emails were helpful.

20. Industry Resources: Trade Associations, Shows, and Publications

When asked about the importance of various cannabis trade industry resources, respondents most frequently mentioned trade shows and conferences as being the resource they rely on most. Trade associations were also considered to be an important resource. Trade publications were the least relied on trade resource. However, among those who do read these publications, it was interesting to see that online publications receive as much attention as print publications. Specific trade shows, associations and publications mentioned by respondents are included in the Detailed Findings section on this topic.

21. Energy Trust Communications with Cannabis Growers

Overall, respondents agreed that the industry needs to be better educated about Energy Trust and how its programs can help growers be successful. When asked about the best ways for Energy Trust to communicate with the industry, both participants and non-participants agreed that a presence at trade shows and conventions could make the biggest impact. Specific trade events suggested by respondents are included in the Detailed Findings section on this topic. Respondents, especially participants, were somewhat lukewarm about receiving more direct communications from Energy Trust unless the communication was to inform them of a program change or a new energy efficiency opportunity. Respondents were more likely to favor email over other forms of direct communication such as phone calls, direct mail or flyers.

MEMO



Date: September 18, 2017
To: Board of Directors
From: Susan Jowaiszas, Sr. Marketing Manager, Commercial + Industry|Ag
Erika Kociolek, Evaluation Project Manager
Subject: Staff Response to the 2017 Cannabis Qualitative Market Research Study

In spring 2017, Energy Trust undertook a qualitative market research project with Forrest Marketing to gain a better understanding of the attitudes and needs of the newly-legal cannabis growers in the state. Knowing that the cannabis market was developing at a rapid pace, Energy Trust wanted to make sure that the Production Efficiency program had good insights into how to establish itself with growers to avoid missing opportunities to gain savings from this energy-intensive market.

Using public information available through the Oregon Liquor Control Commission (OLCC) as well as our own participation data, Energy Trust created a pool of potential respondents. Ultimately, interviews were completed with 14 participants and 11 non-participants, all of whom had indoor cultivation facilities.

Area of inquiry centered around grower awareness of Energy Trust services and incentives, attitudes about energy efficiency and decision-making, equipment needs and supply chain information, and how to most effectively engage with growers regarding program offers.

These interviews revealed that most growers knew about Energy Trust, having heard about it from lighting manufacturers, past experience, OLCC materials, or industry contacts or events. Lighting was the most frequently cited equipment need, which was expected, but there were varied impressions of what equipment Energy Trust supported; some non-participants believed that we only incented LED lighting and did not offer any non-lighting incentives.

While respondents did not express skepticism about Energy Trust, many did express significant skepticism about the motives of other market actors, including lighting manufacturers, distributors, and other growers. Some growers indicated they talk with their peers for information about energy, but many relied heavily on internet research to learn about the efficacy of various lighting solutions. Many growers cited energy efficiency and sustainability as a differentiating feature of their operations and virtually all reported energy was a significant cost to be managed for their success.

In terms of decision-making, cannabis growers reported having a more casual, less structured process and also reported that the equipment decisions for lighting were extremely difficult for them. A consensus emerged that Energy Trust's best opportunity to influence equipment purchases was prior to the build-out of a facility. Cash flow is a huge issue for these business since significant investment is required before they can

sell product. They tended to perceive Energy Trust's incentive processing timeline as slow, or even too slow, to meet their needs.

Few growers understood the technical services provided by the program, and none saw the calculator tools as technical services, rather, they saw these tools as part of the incentive application process. Assigning the incentive to their manufacturer or distributor received mixed reviews, with many seeing it as only driving up costs.

Industry trade shows are seen as good ways to get more information about energy decision. Information directly from Energy Trust was welcome, if deemed helpful by recipients.

Program staff are analyzing these findings and are integrating them into program activities, especially marketing. These activities include:

- **Development of on-target marketing messaging and strategies:** Energy Trust is developing a marketing characterization and market development plan which will draw from on findings from this study. Marketing is a significant piece of this strategy document.
- **Enhancement of collaboration with market actors:** Energy Trust is discussing opportunities to enhance collaboration with market actors, including other organizations serving this market and allies/contractors to minimize lost opportunities for energy efficiency in this energy-intensive market.

V. Detailed Findings

This section provides detailed findings from the research. It is divided into seven topic areas as listed below.

1. Awareness of Energy Trust

- Source of awareness among participants
- Level and source of awareness among non-participants
- Reasons for not using Energy Trust among non-participants

2. Equipment Needs and Issues

- Attitudes toward manufacturers and equipment industry dynamics
- Equipment: How locate & importance of referrals from other growers
- How Energy Trust can help respondents with equipment challenges
- Satisfaction with equipment manufacturer or distributor relationship
- The LED controversy

3. Role of Energy Efficiency

- Energy-related costs as a percent of total costs
- Importance of energy efficiency
- Future importance of energy efficiency
- Future energy efficiency projects & likelihood of working with Energy Trust

4. Decision-Making

- Decision-making process
- Build-out: energy efficiency decision-making factors
- Barriers faced when making energy-related decisions

5. Energy Trust Incentives and Services

- Awareness and attitudes toward Energy Trust incentives and technical services
- Wait time for incentive check
- Attitudes toward incentive check being paid directly to vendor

6. Industry Resources

- Resources: Peers
- Resources: OLCC
- Resources: Trade associations, trade shows and publications

7. Communications and Suggestions

- Energy Trust communications with cannabis growers
- Respondent suggestions for Energy Trust

Awareness of Energy Trust among all Respondents and Reasons for Not Using Energy Trust among Non-participants

Participants

Source of awareness

When participants were asked how they became aware of Energy Trust, perhaps one of the most significant findings was the influential role played by lighting manufacturers (especially those selling LEDs) and, to a lesser extent lighting distributors, in making customers aware. Eight participants mentioned this was the source of their awareness. Some said a lighting manufacturer or distributor was the sole source of their awareness. Others said it wasn't until a lighting manufacturer or distributor mentioned Energy Trust that they recalled their previous knowledge of Energy Trust, implying they may not have thought of Energy Trust otherwise.

Other sources of awareness included:

- Three participants were already aware of Energy Trust because they own other non-cannabis businesses that have received incentives.
- Two participants said they became aware of Energy Trust through the OLCC Guidebook or other OLCC materials.
- Two respondents mentioned cannabis related events including the Indo Expo trade show and a Resource Innovation Institute convention.

Non-Participants

Awareness of Energy Trust

There is a fairly high level of awareness of Energy Trust among non-participants with eight of the eleven saying they are aware.

- Four of the eight were interested in learning more about Energy Trust incentives and services and requested follow-up information about the program.
- There appear to be misperceptions about services offered by Energy Trust for the cannabis industry. Several non-participants believe the only type of lighting incentives offered by Energy Trust is for LEDs, which is especially frustrating for those that believe LEDs are ineffective for cannabis growing. Moreover, some have the perception that LED lighting is the only energy-related equipment eligible for incentives from Energy Trust. As one respondent said, "I think the only benefit Energy Trust offers for the cannabis industry is for the LED lighting aspect of it". Regarding HVAC, four non-participants believe there are no Energy Trust incentives for HVAC. Two of these people were told by Energy Trust that the HVAC incentive program had been discontinued.

Among the three non-participants not aware of Energy Trust, two were very excited to learn about it and requested further information. The third non-aware respondent is not eligible for Energy trust incentives and was disappointed to learn he did not qualify, especially because he uses LEDs.

How became aware of Energy Trust

When the eight non-participants who were aware of Energy Trust were asked how they became aware, responses were varied: Two said they were aware from a previous non-cannabis job where their company received Energy Trust incentives. The remaining six each gave a different answer for the source of their awareness, including: the Energy Trust listing in OLCC Guidebook, participation in an energy task force, a cannabis trade show, an LED lighting manufacturer, one of their employees, and other growers.

Reasons for not using Energy Trust among those aware

When the eight respondents who were aware were asked why they hadn't used Energy Trust, responses fell into these categories:

- Two non-participants had contacted Energy Trust and were disappointed to learn that the incentives were only for LED lights, and also that Energy Trust's HVAC program had been discontinued.
- Three non-participants said they didn't bother to contact Energy Trust because they aren't using LED lights and thus believed there were no incentives available for them. One of the three also thought there were no incentives for HVAC.
- Two respondents did not qualify for Energy Trust incentives. One is growing in shipping containers and after contacting Energy Trust, learned that shipping containers do not qualify. This respondent was very disappointed and feels the policy is unfair. The second respondent is served by a non-qualifying utility and prior to the interview suspected he did not qualify.
- One non-participant has specific plans to use Energy Trust in the near future for both a new and existing facility and will be contacting Energy Trust soon.

Attitudes toward Manufacturers and Equipment Industry Dynamics

During the course of interviews about equipment needs and suppliers, both participants and non-participants offered several negative comments about manufacturers; specifically, criticisms of the motivations that drive manufacturers in dealing with cannabis growers. Respondents also offered opinions on dynamics present in the equipment industry that affect their ability to assess and select equipment. In general, there were few differences of opinion between participants and non-participants.

A. Negative attitudes toward manufacturers

There were harsh criticisms of manufacturers with respondents saying that many are in it for profit only and do not have cannabis growers' best interests in mind. As one respondent said, "There's a lot of greed in the industry because cannabis can be so profitable". Respondents said this profit-only motive results in the following problems for cannabis growers:

1. There is a glut of inferior and unproven products on the market. As one respondent said: "There's just so much junk on the market as a result of manufacturers and distributors wanting to take advantage of the situation and to start selling equipment to cannabis growers as quickly as possible". Some also said many products are not designed specifically for cannabis.
2. Manufacturers are an unreliable source of information, which puts the burden on growers to determine the best equipment for their needs. Because manufacturers can't be trusted to provide the best information, many stressed that a grower has to know what they want before talking to manufacturers. One said, "Vendors don't fully communicate with growers about what would benefit us most because they really want to sell what's going to benefit them the most". Most seem to attribute this to manufacturers' greed but some also said it's a function of manufacturers' lack of knowledge about how cannabis is grown and what equipment is best suited for growers' needs.
3. One respondent also said that manufacturers "jack up their prices just because we have marijuana stamped on our foreheads".

B. Equipment industry dynamics

1. **Rapidly changing technology:** Rapidly changing technology is one of the biggest challenges growers face in making decisions about what equipment will best serve their needs. This requires that growers really understand all the latest developments in equipment especially lighting. As some said, "It's really hard to keep up". Also some said it's a never-ending process. Even after initial equipment purchases are made, growers report that they have to be continually exploring new technology.

- 2. Proliferation of products:** Related to the changing technology issue is the challenge of there being so many products available to choose from. As one said, “Trying to navigate through all the equipment options offered by manufacturers and distributors is a very difficult process, especially for lighting”.

 - Regarding HVAC, fewer respondents made comments. One respondent said that compared to lighting, HVAC equipment has not made “great strides” for cannabis growers’ needs. Another said the HVAC equipment currently available is more suitable for commercial use such as an office building and what is needed is equipment that is more industrial such as that used in wineries and breweries.

- 3. Lack of an objective information source:** Some respondents said the lack of an unbiased, objective source of information about the best equipment to buy for growing cannabis efficiently makes the task more difficult. This is related to their criticism of manufacturers not being a reliable source but also their desire for a one-stop objective resource to provide information. One respondent said that growers who rely exclusively on the internet to get information are particularly susceptible to equipment of questionable quality or benefit to them.

Locating Equipment Manufacturers and Distributors

As reported in the previous section, assessing and selecting equipment is one of the most difficult challenges respondents face. When asked about the specific resources they use to locate equipment, it was revealed that this process poses its own challenges, including the difficulty in making actual contact with manufacturers and secretiveness in the industry among growers. All of this results in what can be a very time-consuming process. As one respondent said:

“A lot of growers aren’t going to take the time to research and locate the best equipment because we’re in a cash crop that can be turned over every eight weeks and we’re eager to start making money. So especially when growers are first getting started, there’s a tendency to go with the old style methods of growing and just choose HPS lights and mini-splits”.

Most respondents rely on several sources to explore and locate their equipment needs. The three most frequently mentioned sources were doing internet research, talking to other growers and attending trade shows.

Internet research: Many respondents locate equipment by doing internet research. This includes watching You Tube videos, reviewing manufacturer websites and participating in online cannabis forums. Several stressed this was most the important source among all growers for locating equipment. Some qualified their internet usage for locating equipment by saying they use it “cautiously” because it is not always reliable.

Other growers: Other growers are also an important source of information. Respondents tend to describe the value of talking to other growers as more of a sharing of opinions and experiences versus outright referrals. It’s important to note that talking to other growers would probably be more prevalent as a tool in locating equipment if it weren’t limited by the tendency for secretiveness in the industry. (The tendency for secretiveness in the cannabis industry is detailed further in the Industry Resources section of this report.)

- Several noted that once they had narrowed their search to a particular type of lighting, it was especially valuable to visit the farms of growers who were using that lighting. Seeing the equipment in use by a peer is considered by many to be the most reliable way of evaluating equipment.
- One respondent mentioned the Oregon Cannabis Industry Meetups, which are casual meetings for growers to share experiences. He said, “At these Meetups growers share information about the lights and other energy efficient equipment they use and they tell other growers, ‘Hey you should look into this’”.
- A couple mention that they refer their LED lighting equipment to other growers but only when asked and one said not by brand name.

Trade shows: Attending trade shows is also important because it provides an efficient way to see several manufacturers at once and to ask them questions. As one respondent said, *“Going to trade shows is the best way to find manufacturers and distributors for all equipment—lighting, HVAC and whatever. I think any grower who is a real player in this business goes to these conferences, the summits and expos”*.

Another respondent was very frustrated because a manufacturer wasn't returning her calls and so she began “stalking” them. She finally was able to track down the manufacturer at a trade show.

How Energy Trust Can Help Respondents with Equipment Challenges

As described in the previous section, the purchase of equipment is one of the biggest challenges faced by both participants and non-participants. Because of the dynamics of the equipment industry and attitudes toward manufacturers, many respondents are eager to get Energy Trust's help and offered suggestions for how Energy Trust could assist in alleviating this challenge. Sixteen of the twenty-five respondents offered suggestions for how Energy Trust could help.

Participants

Eight participants had suggestions including:

One respondent believes that some growers are getting Energy Trust incentives on energy efficient equipment that is of inferior quality. Because of this he said, "I would like to see things be made more stringent by Energy Trust so that the (incentive) money is spent more wisely". He suggested that it is Energy Trust's responsibility to develop a way of evaluating the equipment being sold by manufacturers. As he put it, "I guess at the end of the day, if Energy Trust is handing out money, they have to come up with some way of vetting these manufacturers".

Several respondents said Energy Trust should reach out to manufacturers that sell Energy Trust "approved" equipment and encourage them to inform customers that Energy Trust incentives are available for the equipment they sell. Manufacturers could post Energy Trust information on their websites (including a link to Energy Trust) or simply tell customers.

Others suggested it would be helpful if Energy Trust developed lists for distribution to cannabis growers. Some suggested a list of "approved" manufacturers. The list would include manufacturers and distributors that offer equipment that is energy efficient and that qualify for incentives. Others suggested Energy Trust should evaluate lighting fixtures and develop a list of those lights that are most energy efficient.

One participant is concerned about manufacturers taking advantage of growers and feels one solution is for Energy Trust to make growers more aware of its trade allies. This respondent strongly believes that Energy Trust should not start directly working with manufacturers because it would jeopardize Energy Trust's relationship with its trade allies and hurt the businesses of its trade allies.

Non-Participants

Eight non-participants had suggestions with many focusing on LED lighting issues. Suggestions included:

One respondent strongly believes that Energy Trust is closely allied with LED manufacturers and actively supports them because LED manufacturers are government subsidized. He wants Energy Trust to stop doing this because LEDs do not work for cannabis growing and by supporting LEDs, Energy Trust is doing a disservice to growers. He thinks Energy Trust should work on developing a better light.

One respondent wants Energy Trust to “put a stop to manufacturers selling equipment to growers that isn’t the best for their needs and also to stop manufacturers from raising their prices to growers because they know the grower is going to get an Energy Trust incentive”. This grower strongly believes manufacturers are the only ones benefiting from Energy Trust incentives because it allows them to increase prices and also that manufacturers are “not doing what’s right” for growers but instead just doing what will line their own pockets.

Although one respondent believes that energy efficiency should be “incentivized” and that Energy Trust is the proper entity to administer this, he also strongly believes that the incentives Energy Trust provides for LEDs is a waste of “tax dollars” because LEDs don’t work for cannabis. He suggests that Energy Trust visit growers’ farms to see how lighting types actually perform in terms of plant yield, quality and energy efficiency. He then says Energy Trust should distribute this data to growers because, “What we really need is good data”.

Two respondents suggested Energy Trust help with the LED controversy by providing growers with objective information about how LEDs perform versus other lighting types, especially HPS lights.

Two respondents suggested Energy Trust let manufacturers and distributors know that it offers incentives so that manufacturers and distributors can get the word out to their customers.

One respondent focused his suggestion on Gavita lights saying he wishes Energy Trust were more active in informing growers that Gavita lights are “bad lights” because they use so much power and generate so much heat. He also feels Energy Trust needs to do a better job of informing customers that they could be spending only one-third of their electric cost if they went with more energy efficient lights.

The LED Controversy

Grower attitudes about the merits of LED lighting technology were offered frequently throughout the equipment discussion. This “LED controversy” generated passionate opinions from a handful of both supporters and detractors. For the purposes of this summary, respondent comments are organized as either “pro” or “anti” the use of LEDs.

Pro-LED Respondents

Six respondents who use LEDs and are satisfied with them offered their opinions and on both the mindset and reasons why other growers resist LEDs. Of the six respondents, five were participants and one was a non-participant.

The mindset of growers who resist LEDs

Respondents characterized these anti-LED growers as being old school, set in their ways, stubborn and, as one respondent said, “Like trying to teach an old dog new tricks”. Respondents believe negative attitudes toward LEDs are more prevalent among long time marijuana growers.

Respondents also said that growers who are anti-LED very strongly believe that their way of growing with HID or HPS lights is the best and only way to effectively grow cannabis. Respondents stressed it’s going to be very hard to convince these growers that LEDs are a good option.

Specific reasons given for why some growers resist using LEDs included:

- They don’t understand the “energy efficiency equation”; that LEDs use a lot less power, generate less heat and will eventually save them a lot of money.
- They believe that LEDs result in lower yield and quality. This is a key factor inhibiting usage. Respondents stressed these growers will need “verifiable proof” of yield with LEDs in order to consider them.
- The cost of LEDs is also a barrier.

Anti-LED Respondents

Two non-participants felt it was very important for Energy Trust to understand why LEDs are not a good option for growing cannabis. They provided fairly detailed descriptions of their reasons why LEDs don’t work, including examples of growers who have experienced failure when using LEDs. Their reasons focused on the decreased yield (pounds per light) that results by using LEDs thus negating any energy savings. One respondent stressed that Energy Trust’s lighting calculations on energy efficiency are flawed.

Satisfaction with Equipment Manufacturer or Distributor Relationship

1. Satisfied with relationship and products purchased

Despite expressing criticisms of manufacturers overall, some respondents reported being satisfied in the end with their purchase and with their relationship with the manufacturer or distributor. Comments included:

- **Knowledgeable, service-oriented lighting distributors:** Two respondents offered favorable comments about lighting distributors, Light-Waves Electronics and Forever Green Illumination, saying they were educated on product, offered helpful advice, and understood Energy Trust programs and local regulations.
- **Manufacturers' products performed and service was good:** Other respondents were pleased with the performance of the product they purchased and its suitability for the cannabis business. Six mentioned satisfaction with Fluence (LEDs) products and service. One mentioned Illumintex (LEDs) and another was very happy with products made by Gavita (HID).

2. Dissatisfied with relationship and products purchased: Other respondents reported dissatisfaction with their relationship. Reasons included:

- **Products purchased did not perform as manufacturer promised:** More than one respondent felt that manufacturers promise results that don't materialize. One respondent purchased induction lights and said, "I pulled my hair out for three years trying to figure out why I couldn't grow and produce with the induction lights. And the manufacturer said, 'Well our test results showed us that it performs this way.' I said I don't care what your test results said, I'm having issues with how they perform right now".

Another respondent was dissatisfied with a major manufacturer because they pushing a product they knew did not perform. The respondent discovered this after purchasing 300 of these lights. He said, "I won't name any names but one of the largest lighting manufacturers in the industry, and in the world today, is having massive failures of their lights everywhere. And yet they continue to sell them even though they know their lights are bad". This grower ultimately found a brand that delivered better results and was able to replace his original 300 lights.

- **Price gouging and up-selling by manufacturers and contractors:** One respondent reported priced gouging by two contractors he had planned to work with. One submitted a bid for rewiring his facility and the other for installing insulation. He said their bids were outrageously over-priced and he believes this is because they know cannabis can be such a profitable business and also that cannabis growers get Energy Trust incentives. This same respondent experienced a manufacturer rep that presented a one million dollar proposal that included much more than just the lighting the respondent had asked for. He

said: “These guys just want to sing and dance while Energy Trust foots the bill. It is big time like you’ve never seen how these guys are using Energy Trust to line their own pockets”.

Energy-Related Costs as a Percent of Total Costs

Although most respondents were able to provide their monthly energy costs, only thirteen respondents were able to provide the percent that energy costs are of their total costs. Among these, the average was about 25%. However there was a quite a range from a low of 4% to a high of 60%. The reason some couldn’t provide their energy costs as a percent of total costs was either because didn’t know the number off the top of their head or they didn’t keep track of it.

Other mentions included:

- Almost all respondents said that lighting was their biggest energy-related cost with other energy-related costs such as HVAC coming in a distant second.
- Several said that energy costs were second only to their labor costs.

Importance of Energy Efficiency

Participants

All participants stressed that being energy efficient was very important to them.

- Half said that being energy efficient was an integral part of their company mission from the onset.
- Two mentioned that being energy efficient wasn't a primary focus when they first started their business but that it is becoming more so over time.
- As an example of their efforts to be more energy efficient, six participants mentioned their decision to go with LED lights despite the high initial cost of the lights.

The primary reason given for the importance of being energy efficient was to reduce costs. However, all but three participants also mentioned that environmental concerns were an important reason. Many are very passionate about being good stewards of the environment saying it's a primary goal of their company. Two also mentioned that being energy efficient is important in order to keep their cost of goods down so that they remain competitive in the industry.

Several respondents mention that the cannabis industry is known to be a huge energy user. As one said, "We're energy hogs and that's part of the bad rap". With this in mind, two respondents have dedicated themselves to promoting energy efficiency to the entire cannabis industry with the goal of directing the industry toward best management practices, less energy usage and reducing the stigma that's existed in the past of being big energy users.

Non-Participants

Non-participants also noted that energy efficiency was very important. The primary reason they gave was the cost of the electricity and the need to reduce this cost.

Non-participants' responses differed from participants' responses in these two areas:

- Overall their commitment to energy efficiency didn't seem as intense with no one mentioning that it was a key part of their company's mission or goals.
- Although about half of non-participants mentioned environmental concerns as a reason for being energy efficient, several did not bring it up and two actually said environmental concerns were not very important to them.

One non-participant stressed there is no excuse for growers not to be as energy efficient as possible, including not being able to afford it, because there's every inducement possible. Another said he has invented his own system of growing and that he has implemented "the most energy efficient model" and that he would like to share it with Energy Trust. He said he is producing more cannabis than anyone and believes overall production is the key to energy efficiency.

Future Importance of Energy Efficiency

All respondents said they feel being energy efficient will become more important to them in the future. Many simply said “yes” while others elaborated on specific reasons influencing energy efficiency. Reasons included:

- **Increase in legalization nationwide and resulting increased power usage.**
Three respondents commented that when cannabis is legalized across the country, “there’s going to be a power explosion”, that it will “drive prices up”, and at least on the West Coast, spark “a power war” for energy. One respondent noted that, “Eastern states don’t have a good growing season outdoors for this product so it’s all going to be grown inside”.
- **Reducing costs offers competitive edge.**
Two respondents indicated that reducing costs through saving energy will give them a competitive edge. One said, “As the industry matures, we’ll need to be very careful about watching our costs to make sure we can remain viable and competitive.” Another said, “I do think energy costs are going to be the competitive edge between some growers and others because those energy costs will go up.”
- **Energy self-sufficiency through renewable energy.**
Two respondents said that generating their own renewable power through solar or wind may help contain costs. One expressed interest in disconnecting from the grid entirely or, “what I’d like even more is to get paid if I produce extra electricity”. Another said, “The only thing I think could help is if we put up solar panels or use wind power”.
- **Other mentions**
Other responses tended to be more general such as “we’re an energy intensive industry” and “it’s a big part of our costs and costs will only go up”. One respondent noted that Energy Trust can set the stage for the rest of the country, saying “Energy Trust can become a model for the rest of the country once it becomes legalized nationwide”.

Future Energy Efficiency Projects & Likelihood of Working with Energy Trust

Participants

When asked about future energy efficiency projects and the likelihood of working with Energy Trust, many participants said they already have plans to expand their operations by building either new indoor or greenhouse facilities. These respondents plan on working with Energy Trust when they do their new builds. The Energy Trust service they are most likely to use is incentives on lighting. Others are gradually phasing in more LED lighting to their existing operations and will be contacting Energy Trust as they do so.

Non-Participants

Among non-participants, two respondents have already decided to contact Energy Trust about incentive opportunities for additional facilities they plan to build. One said, "Now that I know about Energy Trust, I would like to work with the program to see how much I can qualify for in my second build".

Three said they wouldn't be working with Energy Trust because Energy Trust only provides incentives for LEDs and doesn't have incentives for HVAC. One said they're considering using LEDs as supplemental lighting in their non-flowering greenhouses and if they do, they'll contact Energy Trust.

Three respondents don't qualify for Energy Trust incentives making future work with Energy Trust not possible. Two aren't in the Energy Trust service territory and one grows in shipping containers. All have expansion plans in mind and would love to work with Energy Trust.

Decision-Making Process

Overview

Compared to other industry sectors, cannabis growers are more informal when making energy efficiency decisions about their business. While there are exceptions, in general, the cannabis industry is less reliant on the more structured internal processes common to more established businesses. Reasons for this include:

- Many cannabis businesses are owned and operated by a single owner or a few individuals, often family and/or friends, which means fewer decision-makers are involved. As one grower said, “The buck stops with me and it starts with me”.
- Cannabis growers come from a variety of backgrounds and experience levels. As younger businesses in a growing industry, many growers are more entrepreneurial in how they approach business decisions, and few have firm financial thresholds or standards they’re required to meet before moving projects forward.

Summary

1. The decision-making process is difficult.

Some respondents described the decision-making process as being very difficult using words such as “terrifying” or “stressful” or “painstaking and slow”. As one said, *“Decision-making is terrifying. I don’t sleep much. It’s especially hard upfront when you’re not making any money”.*

2. Lighting is the most important decision.

In describing their decision-making process many respondents focused on lighting describing this as their biggest, most difficult, most expensive and most time consuming decision. Some talked about deciding on lighting in general but most focused specifically on their decision whether to purchase LED lights. As one said:

“One of our biggest decisions was whether to go with LEDs. And we made that decision very painfully. It was a lot of struggle and a lot of thought and a lot of comparison and a lot of research”.

3. Testing lighting is a key step in the decision-making process.

A frequently mentioned decision-making step among participants was the extensive research they do on lighting options followed by testing of the actual lights in their facilities. Some report testing lights for three to five years. LEDs were mentioned most often as the lighting type tested because of their cost and growers’ concerns about their ability to produce the desired yield and quality. Three non-participants also mention that testing is a key part of their decision-making process.

4. Experience with growing cannabis helps in the decision-making process.

Some respondents, especially non-participants, stressed that their experience growing cannabis prior to legalization helped make the decision-making process easier once they were licensed and could grow on a larger scale. Those respondents without cannabis experience experienced more difficulty with two non-participants saying they

made their decisions based on what other growers do. As one said: “The whole decision making process is stressful and difficult. So to be honest, I ended up just going with what another grower had been doing for years”.

5. Role of Energy Trust among participants

Eight participants said the Energy Trust incentive played a critical role in their decision to purchase LED lights. Some said without the incentive, they wouldn't have been able to afford LED lights.

6. Other mentions

- Some participants said they took a long-term view in their decision to purchase LEDs. They factored in that LEDs would be more cost-efficient long-term and that because the purchase price for cannabis would eventually drop, it would become increasingly important to remain competitive.
- Some stressed that “the leap to recreational is huge” and to produce successfully on a larger scale has to be factored into the decision-making process.
- Two non-participants said they decided right away to produce the highest quality cannabis possible and this in turn affected their decisions on equipment. One said he needed the power of Gavita lights to achieve this.

Build-Out: Energy Efficiency Decision-Making Factors

1. Energy efficiency related decisions are made early on.

There was consensus among respondents that decisions about equipment, including whether to go with energy efficient choices, are made long before the actual build-out begins. It appears that six months prior to build-out is not uncommon. Because of this, many respondents, especially participants, stressed that Energy Trust needs to reach growers in the early stages of their build-out planning process.

- Only one respondent, a non-participant, said they didn't make any equipment decisions before they completed their build-out. But this respondent acknowledged that this is not typical among growers.

2. Reasons why equipment decisions are made early on.

Among participants, one of the most frequently mentioned reasons for making equipment decisions early on is the need to know what their electrical loads will be. Several stressed that getting PGE power upgrades to bigger transformers is a lengthy process taking up to nine months. Other reasons mentioned by respondents included:

- Equipment decisions will impact their building design and infrastructure needs.
- The need to allow enough time for city and county permitting processes and the OLCC licensing application process. As one said, "It will take much longer to get the City of Portland permit to build the building than it will actually take to build it".

3. Start-up costs have a big impact on energy efficient purchase decisions.

Many respondents stressed that it's very expensive to do a start-up, describing it as their biggest hurdle. Some speculate that initial costs are the reason why many growers decide to go with the less energy efficient lighting equipment. Others, especially non-participants, say the upfront costs resulted in their need to defer the purchase of energy efficient equipment with plans to purchase once they've made enough money to be able to afford it. As one non-participant said, "Not all growers can afford to go with their ideal choices for equipment in the beginning. So for us the process of making energy efficient decisions is ongoing". Because of this, some said having Energy Trust reach growers early on might not necessarily be the best time.

4. Length of time it takes to complete build-out.

Responses to how long it took to complete their build-out ranged from two months to 15 months with the average being about seven months. Respondents mentioned several factors that impact how long it takes including: size of the facility, available capital, amount of work done by the growers themselves versus paying contractors to do it, the amount of time the grower devotes to it (some say they "worked non-stop, around the clock" to complete their build-out) and experience in constructing buildings.

5. Facility built from scratch versus renovation of existing building.

The majority of respondents built their building from scratch—from the ground up. Others started with a “shell” of building (i.e., an old barn or warehouse) and renovated and outfitted it for cannabis. A couple expanded and retrofitted their medical marijuana facilities. Some of those that renovated an existing building have since gone on to build their second facility from scratch.

Barriers Faced When Making Energy-Related Decisions

Although the question asked respondents to focus on barriers when making *energy-related* decisions, many respondents answered with the biggest barriers they face in their operation overall. It’s important to remember that other topics summarized in this report, including sourcing and purchasing equipment, incentive wait time, and more, include additional and very specific challenges respondents face when making energy-related decisions.

Access to capital is a significant overall barrier.

Among overall barriers mentioned, 12 respondents cited money-related issues as the most significant, including start-up costs, raising capital and access to financing through traditional lenders. Some connected financial barriers to their ability to be energy efficient, with one respondent saying, “being the owner of the business you have a responsibility to just do the most profitable thing for your employees and that’s not always the most energy efficient thing”.

Energy efficiency is intertwined with other factors.

Among those respondents who gave specific energy-related barriers, one respondent mentioned “figuring out what lights to go with is probably the biggest barrier we faced with energy efficiency.” Another indicated that initial set-up costs are a big hurdle to being energy efficient, saying “Money is hard to come by. For me, it’s meant that I’ve only been gradually able to afford working toward switching my lights to LEDs”. A third said that lack of experience is a barrier, and inhibits their ability to make good decisions on equipment purchases and to find reliable, trusted vendors.

Other mentions

Other barriers mentioned that are unrelated to financing or energy efficiency, include compliance with regulatory requirements, finding experienced labor, and uncertainty over changes in policies at the federal level that affect state legalization.

Energy Trust Incentives and Technical Services

This section summarizes respondents' awareness and attitudes toward Energy Trust's incentives and technical services. Participants and non-participants are summarized separately.

1. Participants a. Incentives

Level of understanding about available incentives

Many respondents said they have a "pretty good understanding" of the Energy Trust incentives, especially lighting incentives.

- Several participants attribute their understanding of Energy Trust incentives to having developed a good relationship with an Energy Trust representative. Several mentioned their lighting Program Delivery Contractor (PDC) as being very helpful in assisting them and providing information.
- * Some also described the incentives as being straightforward and the incentives process as being simple or easy.

The level of understanding among participants for non-lighting incentives was low. Some have the impression that incentives simply aren't available for anything other than lighting. Others said they "have holes in their understanding" of the Energy Trust incentives for non-lighting equipment and don't understand what's available. HVAC was the most frequently mentioned non-lighting equipment followed by insulation. Comments included:

- With non-lighting incentives, the grower has to push to get the information from Energy Trust.
- The lighting incentives are pretty apparent but the incentives you're going to get for HVAC and other equipment are not as clear and are "trickier" to determine.
- "There's all kinds of things that I'm sure that I could qualify for that I'm just not aware of".

Satisfaction with incentive amounts

Respondents seem highly satisfied with the incentive amounts saying the money allowed them to purchase more energy efficient equipment.

- One participant was disappointed to learn that their HVAC incentive was only going to be \$20,000 on \$250,000 worth of units.

Incentive program issues that need improvement

Many participants mentioned issues with the incentives that they felt weren't helpful and needed improvement. Comments included:

- One participant said Energy Trust doesn't have an incentive program that is designed to take into consideration those growers wishing to expand. He explained this by saying, "When I was taking 400 watt induction fixtures out of

my facility and putting in 600 watt LEDs fixtures, there wasn't a program that allowed me to increase my energy consumption and still qualify for the energy rebates".

- One participant is interested in purchasing lighting that her current lighting distributor doesn't offer but is afraid to switch distributors because a new distributor may not be able to provide the help she needs in completing the Energy Trust paperwork, and more importantly, she worries she may lose out on her incentive.
- One participant is very frustrated by the fact that information isn't available for growers to determine on their own what incentives are available for their specific operation. Instead growers have to contact Energy Trust, which is very time consuming and "involves sending emails, making calls, and going back and forth with Energy Trust". She gave an example of having to wait three weeks for Energy Trust to return her call regarding her needs for her new 10,000 square foot hybrid greenhouse. When Energy Trust called back, the person said, "Well, we don't do a lot on the cannabis side and it's kind of hard to get some of these rebates". As this respondent said, "I need information on those incentives in order to make decisions and proceed. A lot of growers aren't going to wait three weeks to get this information".
- One participant said Energy Trust should allow those customers who buy and install energy efficient equipment to receive an incentive even if it wasn't pre-approved.
- One participant said it's a problem that growers have to buy and install equipment before Energy Trust will provide a precise estimate of what their incentive will be. The respondent described this as a "Catch 22" and said it would be helpful to have better idea upfront so that growers could narrow down what they want to do and what technology to use.

Suggested improvements to incentive programs

- Two participants stressed the need for Energy Trust to keep reminding growers of all the incentives available and not just those for lighting.
- One respondent suggested Energy Trust issue "a little book" that lists all the incentives available, the names of Energy Trust people to contact to learn more, and the vendors who sell equipment that qualify for incentives.
- Another respondent said his LED lights are resulting in savings that are greater than what Energy Trust predicted and that Energy Trust should fine-tune its models to be more accurate.

b. Technical services

As seen in previous Energy Trust market research, there appears to be low awareness and a lack of understanding of the technical services offered by Energy Trust. Although the lighting calculator was done for all participants, none specifically

mentioned it. It appears that respondents just consider this part of the process of getting a lighting incentive and not a technical “service”. No participants mentioned any of the other technical services and yet Energy Trust records show that at least one respondent had an enhanced scoping report, one had a technical analysis study, and two pursued deemed/calculated measures (prescriptive insulation).

Among the four respondents that mentioned something about technical services, all found it appealing. One said she is concerned about relying so heavily on her engineers to make important decisions and would prefer to get input from an Energy Trust expert. Another said they just learned earlier this year that Energy Trust provides “initial meetings” with growers to assess the energy efficiency options specifically for their operation and they wished they had known about this “wonderful service” when they were doing their build-out in May 2016.

2. Non-Participants

a. Awareness of available incentives

Most non-participants stated they are not knowledgeable about Energy Trust incentives and services. However, four of the eleven believe they are somewhat informed. As summarized earlier in this report, many were interested in receiving further information. Also, some are under the impression that Energy Trust only provides incentives on LED lighting and also believe that incentives for equipment other than lighting were not offered.

b. Awareness of available technical services

When asked about technical services, seven non-participants found this service appealing. One said it would be a “hard sell” because growers don’t want to share what they’re doing even with Energy Trust and also because there’s no sense in learning how to be more energy efficient if they can’t afford it.

Wait Time for Incentive Check

While both participants and non-participants were asked about wait time for incentive checks, non-participants had difficulty providing meaningful answers to this question as it was too hypothetical. The two that responded both said they couldn't imagine that it would be a problem.

Among participants, 13 responded to this question. Eight felt the wait time for their Energy Trust incentive was too long. Four felt the wait time was reasonable. One is still awaiting final inspection so it was too soon for her to comment on the wait time to receive her check. Responses are summarized below.

1. Actual wait time versus a reasonable wait time

When asked about the wait time from final inspection to receipt of check, one participant reported a wait time of six weeks and another sixty days. However, most reported much longer wait times ranging from three to six months. When asked what they considered to be a reasonable wait time, most said one month. Two said two to three weeks.

2. Participants who say wait time is a problem

Eight respondents said the wait time was too long and creates difficulties for them.

Reasons why wait time is a problem

Cash flow concerns were the most frequently mentioned reason for why the wait time is such a problem for respondents. Several mentioned they are waiting for the check so that they can pay their vendors. Two respondents said a shorter wait time would increase the likelihood of growers purchasing LED lights. One of these respondents said that the wait time she's already experienced with Energy Trust concerns her because she's considering going to LED lighting. She said if she went with LEDs:

"I would have had to come up with upwards of \$450,000 to light up my whole facility. Then I have to submit for the rebate, which I don't get until I've got the lights ordered, installed and approved. And then I have to wait six weeks to get the money from Energy Trust. That's a long time to wait to see any returns from all this money I've paid upfront".

Several stressed that it's important for Energy Trust to understand that it's not just the wait time to get the check that is difficult but the entire time they wait, starting from when they pay the vendor to when they receive their incentive check. This factor seems to heighten their dissatisfaction with Energy Trust's delays in issuing their checks in a timely fashion.

Energy Trust problems with processing checks

Several mentioned that in addition to a wait time that they already consider to be too long, Energy Trust also "messed up" in processing their incentive check resulting in delays of up to six months longer. One respondent who experienced Energy Trust

mistakes in processing her check also said that she feels like once you submit your payment request to Energy Trust, it seems to go in a “black hole” and you don’t hear anything from Energy Trust. She added:

“I think it would be pretty easy to set up an automated system that sends an occasional email that says your paperwork is at this spot or it’s been submitted to accounting. And to me the fact that there’s no communication from Energy Trust opens up the possibility of fraud and embezzlement on the Energy Trust side of things because while it’s in this black hole, does Energy Trust even know what’s happening to it”?

3. Participants who say wait time is not a problem

Four respondents felt the wait time was reasonable and not a problem. These tended to be respondents who received their checks in less than 45 days following final inspection. One respondent qualified his response by saying the wait time wasn’t a problem because they are well capitalized and had the money set aside.

4. Other

One respondent who is in the Energy Trust “pipeline” said she didn’t know exactly what the process was once her lights arrive and are installed. She assumes she should email Energy Trust and then they’ll come out and inspect her lights. She hopes to get her check within four weeks after that.

Attitudes Toward Incentive Check Being Paid Directly to Vendor

Summary

Only six participants were aware of the vendor direct option with two of the six saying they've used this option. No non-participants were aware of it. Many respondents expressed amazement that this option was even available. When asked if this option would be appealing, respondents were divided as to the merits for their business.

1. Attitudes toward vendor direct option

Vendor direct is appealing for our business: Most respondents found the vendor direct incentive option very appealing. The reason given among all was that it would alleviate their lack of capital and cash flow problems. Some stressed that it's very expensive to get a cannabis operation started and that the initial cash required is "really tough on growers". One said: "If the vendor direct option were available, 20-30 percent more growers would be taking advantage of Energy Trust and buying more energy efficient equipment, especially LED lights".

Vendor direct is not appealing for our business: Three respondents said the option offered little appeal for them. Two said they prefer to pay the entire amount upfront either because "when the check goes direct to the vendor it kind of gets lost on the spreadsheet" or because it allows them to move on. A third was indifferent to the option saying it wouldn't make any difference in their decisions regarding what equipment to purchase.

2. Likelihood of vendors being willing to accept incentive check direct: Some respondents offered opinions on whether vendors would be willing to participate in this option. Some said it was unlikely because of the amount of money involved, especially for LED lights, and that vendors can't afford to act as a bank. Two respondents added that Energy Trust's delays in issuing incentive checks would also be a hardship on vendors. Two respondents thought the idea would have great appeal to vendors because it would help them sell more of their products. One described it as being a "salesman's dream" for vendors.

3. Other mentions

Leasing and other financing options: The discussion of vendors directly receiving incentive checks prompted three participants to bring up other financing options. Two mentioned companies that offer leasing options for lighting. One thought if Energy Trust coordinated with a lighting leasing company it would be helpful in moving growers toward more energy efficient lighting. The other respondent explained that the leasing company's offer on a \$200,000 purchase of lights was either for him to pay the fee of 20 percent (\$40,000) or that the leasing company would waive the fee and keep his \$80,000 Energy Trust incentive. As the respondent said, "Why would I ever sign up for that! It's predatory for people who don't understand the math and there are a lot of people in this industry who don't understand the math". A third participant was

aware of financing companies that are willing to take the Energy Trust rebate as your interest payment on the financing they're providing. But this respondent said he wasn't "keen on doing that" and would prefer to have the lighting vendor receive the incentive.

The option of being able to test lights for free is better: One respondent said: "Frankly, if we could just get lighting manufacturers to give us two or three lights for six months to try them out that would be even better than having them wait to get paid the incentive. I'd be willing to pay upfront for my full order if I could test the lights for free. And part of the free lights for testing would mean that if I didn't like the lights, I would just send them back but still not be charged".

Unwise to "extend credit" to growers: Two participants feel it's not a good idea to help growers by offering the vendor direct option because if a grower isn't amply financed to begin with, this option will exacerbate their situation.

Industry Resources: Peers

Most respondents report that their peers are an important industry resource saying that they do share information with their peers on equipment, methods and solutions. They also say that they are eager to share because they feel it's important to help each other and to move the industry forward. Many feel their peers are the most reliable source of information because they are actual growers with real experience and not vendors or others that may have less altruistic motives. A couple of growers say that because their facilities are located in a community of growers it makes sharing easier and more prevalent.

At the same time, most respondents stressed that the sharing of information among peers is quite limited. There are two key factors that contribute to this:

1. Even those respondents who are willing to share information limit this to only those peers they feel are reliable and trustworthy. As one respondent said, "It's tough to know who has credibility because a lot of people say things about their business and you don't really know whether it's true or if they are really doing what they say they're doing". Another said, "There are a lot of growers I don't trust or want to associate with. They're used to finding ways to cheat and to game the system".

Other mentions of why relying on other growers is limited included:

- **Lack of business expertise:** Several respondents said some growers aren't a good resource because they don't know how to run a business. One respondent mentioned that because some growers have been growing in their backyards or garages, they lack knowledge of how to grow on a larger scale. Another respondent said some growers have no clue how to run a business and that they haven't done their homework or taken advantage of industry resources. Yet another respondent said of the 4,500 licenses issued by the State in the first year, only 2,000 of those businesses are "left standing now". He attributed this to a lack of business expertise.
 - **Big egos:** Several non-participants mentioned the prevalence of "big egos" among cannabis growers. They say growers with big egos are either those who claim to know it all but in fact have very little experience and thus provide unreliable information. Or they are growers who think they know it all but refuse to share their knowledge.
2. Many of their peers are simply unwilling to talk to other growers and share information. One respondent referred to this as a "divide in the industry" and estimated that half of all growers were unwilling to share information with their peers. The reasons given for this included:
 - **The culture:** After years of growing illegally and living in the shadows, some growers continue to be very secretive and want to keep everything to themselves.

- **Fear of competition:** Some growers are afraid other growers will steal their ideas.
- **Other mentions:** One grower said some growers will not reveal their location or any information for fear of robberies. This respondent also mentioned that because pests are transmitted so easily, it limits visits to other growers' facilities.

Industry Resources: OLCC

Although respondents were quick to say it's been a learning process for the OLCC and that the OLCC has made mistakes, overall many report being satisfied with the OLCC's performance and feel they've done a good job. One respondent said, "Frankly, I'm actually kind of shocked about how well they've handled it". A few mentioned specific problems including that the OLCC is short on manpower resulting in long waits in getting inspections done and questions answered.

Specific issues explored with respondents are summarized below:

1. Relying on the OLCC for build-out recommendations

The words "rely on" are perhaps too strong to describe how respondents utilize the OLCC's assistance in their build-out development process. Instead many describe the OLCC as being very helpful in getting their businesses established including by answering questions and offering informational seminars.

Among those who explicitly stated they didn't rely on the OLCC, the harshest criticism came from a respondent who said:

"I don't even remotely rely on the OLCC for any recommendations including on my build-out. Those guys don't know their neck bones from their elbows. They are learning slower than we are. They are not cannabis people—they are not agricultural people. They are compliance and enforcement people who want to have additional authority".

Others said they didn't rely on the OLCC for anything other than to get their license and not for "how to set up our operation or to grow marijuana". One said many growers view the OLCC as strictly regulatory and want to interface with the OLCC as little as possible. Another said they weren't able to rely on the OLCC for their build-out because the OLCC doesn't have contact with growers until they get their preliminary license and by that time, this respondent was too far along in her build-out development timeline and had already made energy efficiency related decisions.

One mentioned the OLCC has announced it will be changing next year to focus more on compliance and less on helping growers get established.

2. Review of the OLCC Business Readiness Guidebook

The majority of respondents not only reviewed the Guidebook but also took it very seriously. Some said they studied it “tooth and nail” or memorized it or read it repeatedly. One said because some growers are scared of the process, “They pay a lawyer to go through the OLCC Guidebook and application materials sentence by sentence”. Only one respondent said he didn’t read the Guidebook.

3. Energy Trust listing in OLCC Guidebook

Of the twenty-five respondents, ten confirmed seeing the Energy Trust listing in the OLCC Business Readiness Guidebook. All thought it was a good idea for Energy Trust to be listed in the Guidebook because everyone has to read the Guidebook and it’s important to have the Energy Trust information in the early stages of their build-out. A couple of respondents said it prompted them to contact Energy Trust right away. Some suggested the Energy Trust listing would be more effective if it were more prominent and included a more detailed message.

Of the remaining fifteen respondents, some were quite certain they hadn’t seen the listing and others were either uncertain or didn’t respond to the question. One respondent said: “If Energy Trust was listed in there, it bounced off my forehead because at the time all I really cared about was my application”. Another respondent strongly stated that although he felt it was good for Energy Trust to have the Guidebook listing, it would not be wise for Energy Trust to go further than that in associating itself with the OLCC because the OLCC is part of a giant bureaucracy that doesn’t care about people.

4. Email communications from the OLCC

Only six respondents reported receiving emails from OLCC. All were participants and almost all said the emails were helpful. However these results aren’t conclusive because so many respondents didn’t answer the question.

Industry Resources: Trade Associations, Shows, and Publications

Trade associations

Eleven of the twenty-five respondents mentioned trade associations as an industry resource. The most frequently mentioned one was the Oregon Cannabis Association with many of those mentioning it saying they are members. The next most frequently mentioned was the Ethical Cannabis Association. The remaining mentions were single mentions and included: the Research Innovation Institute, the Oregon Business Council, the Minority Cannabis Business Association, Women in Grow, and NORML.

Trade shows and conferences

As stated previously in this report, trade shows and conferences are one of the most important resources for cannabis growers. When asked specifically which ones they rely

on and attend, the most frequently mentioned were: the Cannabis Collaborative Conference, CannaCon, Indo Expo, and the Summer Fair put on by the Oregon Cannabis Association. The remaining were single mentions including: the Oregon Marijuana Business Conference, the Cannabis Science Conference and the Cultivation Classic put on by Willamette Week.

Trade publications

Trade publications are not a major resource for respondents. Among respondents who mentioned trade publications as a resource, ten said they do read publications. Specific publications named included several that are online: Leafly, Weedmaps, Cannabis Weekly Report and the Marijuana Business Daily. Other publications mentioned included High Times, Dope and Marijuana Venture.

Among respondents who said they don't read any trade publications, reasons included: they don't have time to read them; publications are an unreliable source of information because they contain too much hype and self-serving information from manufacturers and other vendors; and publications "don't work" for cannabis growers because growers tend to be more "hands-on".

Energy Trust Communications with Cannabis Growers

Overall, respondents agreed that the industry needs to be better educated about Energy Trust and how programs can help growers be successful. One suggested education could help growers distinguish Energy Trust from governmental entities, saying, “I think some growers think of Energy Trust as another government agency that enforces regulations or they think it’s a power company. They don’t understand why it exists”. Another suggested that Energy Trust create a demonstration project or website to showcase how energy efficiency investments can deliver results.

When asked about the best ways for Energy Trust to communicate with the industry, both participants and non-participants agreed that a presence at trade shows and conventions could make the biggest impact. One respondent said, “In my opinion, the best way for Energy Trust to allocate its money to reach the maximum number of people is to be at the conventions and fairs that take place in Oregon.” Some also think Energy Trust should be visible in industry publications.

Some respondents said that receiving information directly from Energy Trust would be helpful, especially if the message was focused on program or incentive changes or announcements. Respondents were more likely to favor email over other forms of direct communication such as phone calls, direct mail or flyers.

Suggestions for Energy Trust

Throughout the interviews, respondents offered suggestions for Energy Trust by topic such as equipment suggestions, incentive suggestions and more. These suggestions are included in the topic where they arose. However, at the end of the interview, respondents were asked if there were any other suggestions they had for Energy Trust and these are listed below. Suggestions range from providing growers with help at the county level, helping increase awareness of financing options, visiting dispensaries, helping with wind power tax credits, and making it a protocol that growers have one assigned contact at Energy Trust. One respondent even suggested that Energy Trust consider contracting with a company like theirs to quit growing for economical purposes and start growing for pure research. The intention would be to provide Energy Trust with objective results on the performance of various types and brands of equipment for distribution to other growers.

V. Appendix

This appendix includes the following materials:

- 1. Non-completes:** A recap of the reasons for non-completed interviews.
- 2. Pre-letter sent to respondents**
- 3. Discussion guides used in research**

Non-Completed Interviews

Energy Trust mailed pre-letters to 62 potential respondents. All 62 respondents were contacted and interviews were completed with 25 of these respondents. The following recaps the results of the remaining 37 non-completed interviews broken by participants and non-participants.

A. Participants: 8 incompletes

Twenty-two (22) pre-letters were mailed. Interviews were completed with 14 respondents. The remaining 8 were not completed for reasons below:

1. **Respondent did not return call:** Two participants did not return the calls from Forrest Marketing.
2. **Respondent agreed to participate but didn't follow-through:** Two participants were reached and expressed a sincere willingness to participate but were not available at the scheduled time and despite efforts to reschedule, the respondent never followed through.
3. **Inaccurate contact information:** Three participants were eliminated because they could not be reached at the contact information provided.
4. **Respondent death**

B. Non-participants: 29 incompletes

Forty (40) pre-letters were mailed. Interviews were completed with 11 non-participants. The remaining 29 were not completed for reasons below:

1. **Respondent did not return call:** 13 non-participants did not return calls from Forrest Marketing.
2. **Inaccurate contact information:** 14 non-participants were eliminated because they could not be reached at the contact information provided.
3. **Declined interview:** One non-participant declined the interview. He explained he wasn't able to get the property he had planned on and thus his operation was not underway yet. He suggested Forrest Marketing call him again in six months.
4. **Respondent didn't qualify:** One non-participant explained he was an outdoor grower only and thus he couldn't participate in the study.

**Cannabis Market Research
Pre-letter Sent to Respondents**

All respondents received the following pre-letter prior to being contacted by Forrest Marketing. Letters were printed on Energy Trust of Oregon letterhead.

Date

Respondent name

Company name

Company address

Dear [First name of respondent]:

Energy Trust would like your opinion on how we can best meet the energy efficiency needs of licensed cannabis producers in Oregon. To get your input we have retained an independent researcher, Brenda Forrest. Brenda will be calling you in the next week to ask whether you are willing to participate in a brief telephone interview.

We understand the value of your time and when you receive a call from Brenda, she will schedule a phone interview at your convenience. If you participate in this research, your response will be treated confidentially.

Your participation in this research project is of course voluntary but I encourage you to participate. We highly value your input and hope you will take a few minutes to share your thoughts with us.

If you have any questions about this research project, please don't hesitate to contact me at 503-546-3624, or susan.jowaiszas@energytrust.org. Thank you for your cooperation.

Sincerely,

Susan Jowaiszas
Senior Marketing Manager
Commercial & Industrial Sectors

Cannabis Market Research Final Discussion Guide for Participants

1. Introduction and warm-up

- Determine the type of grow system: indoor grow vs. greenhouse.
- Confirm they've worked with Energy Trust.

2. Overall awareness of Energy Trust

- Briefly describe your level of awareness of Energy Trust—specifically your awareness of Energy Trust's role in assisting cannabis growers.
- How did you become aware of Energy Trust?
 - Probe for whether they were contacted by Energy Trust versus hearing about Energy Trust through other sources.

3. Role & importance of energy efficiency in decision-making process

- How important is it to you to incorporate energy efficiency in your business?
- Is it a priority? How much attention does it get?
 - Probe for reasons why: cost savings, being green, other.
- What percentage of costs do you think are related to energy?
 - What is the breakdown of that energy use? (lighting, HVAC, etc.)
- Describe how energy-related decisions are made in your company.
 - Probe for: criteria, process for evaluating products (including use of data, field tests, other?) and differences in the build-out phase versus upgrades to existing operations.
 - Do you have all the tools you need to make a decision? If not, what else do you need that would be helpful to you?
- When doing a build-out or upgrading an existing operation, how do energy-related decisions fit into your overall timeline? How quickly do you need to make energy-related decisions?
 - Probe for: How long does it take to get an operation up & running—are they starting from scratch?
- What are the key challenges or barriers you face when considering or making energy-related decisions?
- Are you considering other energy efficiency projects in the future? Probe for details on specific projects being considered.
- How likely is your company to work with Energy Trust in the future? Why do you say that? Probe for specific services they would be most likely to use.
- As the industry becomes more established, do you think energy efficiency will become more important to you, less important or remain the same? Why?

4. Energy-consuming equipment needs and suppliers by grow type

- What types of energy-consuming equipment or supplies do you purchase?
 - Probe for equipment or supplies purchased during build-out vs. on-going.
- Which of your energy-consuming equipment needs are most important to your business?

- How do you locate manufacturers or distributors that serve your needs?
- How do you decide which ones to purchase from?
 - Probe for referrals: Are growers referring the lighting manufacturers or distributors they use to their competitors? Are they all buying from the same manufacturer or distributor?
- Overall, how satisfied are you with your relationship with your manufacturers or distributors?

5. Awareness & attitudes toward Energy Trust incentives and services

- How aware are you of the specific incentives and technical services available to you through Energy Trust?
 - Probe for respondent's level of confidence/understanding of specific services and incentives offered.
- How helpful to you are the cash incentives and technical services offered by Energy Trust?
 - Probe for specific incentives/services including by indoor vs. greenhouse growers. Probe for why or why not helpful.
- When you received a cash incentive payment from Energy Trust was it paid directly to you or to your vendor or contractor?
- Are you aware that Energy Trust can provide cash incentive payments directly to your equipment vendor or contractor rather than directly to you?
- How appealing is this option to you?
 - Probe for reasons why.
- How did you feel about the length of time you had to wait to receive your cash incentive payment?
 - Probe for reasons why.
- Do you have any suggestions for how Energy Trust could work more effectively with growers like you?

6. Industry resources

- **What information sources are most important for your business?**
Probes will include:
 - Who has credibility in their market? Who's an opinion leader, market leader, technology leader.
 - Do you rely on referrals from colleagues? Media recommendations? Other recommendations?
 - Are there associations or other groups where you share information, peer to peer?
 - What trade publications, if any, do you read and rely on?
- **Role of OLCC as a Resource**
 - Do you rely on the OLCC for recommendations related to the build-out of your facilities?
 - Do you review the OLCC Business Readiness Guidebook?
 - Are you aware that Energy Trust is listed in the OLCC Guidebook?
 - Do you review the email communications you receive from the OLCC?

7. Communications

- What are the most effective ways for Energy Trust to communicate and share information with you?
 - Probe for specific communication channels: direct mail, email, newsletters, group meetings, cold calls, site visits (website, events, others)
- In terms of content, what type of information would be most useful for you to receive from Energy Trust?
- Among those who have received communications from Energy Trust: How effective were the materials you received in meeting your needs?
- Optional question: In your opinion, what is the most important message Energy Trust could be communicating about its incentives and services for growers like you?

8. Wrap-up

- Do you have any other suggestions for how Energy Trust could better meet your needs?
- Are there any issues we haven't covered that you'd like to comment on?
- Thank respondent

Cannabis Market Research Final Discussion Guide for Non-Participants

1. Introduction and warm-up

- Determine the type of grow system: indoor grow vs. greenhouse.

2. Overall awareness of Energy Trust

- Are you aware of Energy Trust of Oregon?
 - Probe specifically for Energy Trust's role in assisting cannabis growers.
- If respondent is aware:
 - How did you become aware of Energy Trust?
 - Probe for whether they were contacted by Energy Trust versus hearing about Energy Trust through other sources.

3. Role & importance of energy efficiency in decision-making process

- How important is it to you to incorporate energy efficiency in your business?
- Is it a priority? How much attention does it get?
 - Probe for reasons why: cost savings, being green, other.
- What percentage of costs do you think are related to energy?
 - What is the breakdown of that energy use? (lighting, HVAC, etc.)
- Describe how energy-related decisions are made in your company.
 - Probe for: criteria, process for evaluating products (including use of data, field tests, other?) and differences in the build-out phase versus upgrades to existing operations.
 - Do you have all the tools you need to make a decision? If not, what else do you need that would be helpful to you?
- When doing a build-out or upgrading an existing operation, how do energy-related decisions fit into your overall timeline? How quickly do you need to make energy-related decisions?
 - Probe for: How long does it take to get an operation up & running—are they starting from scratch?
- What are the key challenges or barriers you face when considering or making energy-related decisions?
- Are you considering any energy efficiency projects in the future? Probe for details on specific projects being considered.
- How likely is your company to work with Energy Trust in the future? Why do you say that? Probe for specific services they would be most likely to use.
- As the industry becomes more established, do you think energy efficiency will become more important to you, less important or remain the same? Why?

4. Energy-consuming equipment needs and suppliers by grow type

- What types of energy-consuming equipment or supplies do you purchase?
 - Probe for equipment or supplies purchased during build-out vs. on-going.

- Which of your energy-consuming equipment needs are most important to your business?
- How do you locate manufacturers or distributors that serve your needs?
- How do you decide which ones to purchase from?
 - Probe for referrals: Are growers referring the lighting manufacturers or distributors they use to their competitors? Are they all buying from the same manufacturer or distributor?
- Overall, how satisfied are you with your relationship with your manufacturers or distributors?

5. Awareness & attitudes toward Energy Trust incentives and services

- How aware are you of the specific incentives and technical services available to you through Energy Trust?
 - Probe for respondent's level of understanding/confidence of specific services and incentives offered by type of grow.
 - How appealing are these incentives and services to you? Probe for why or why not.
- If you were receiving a cash incentive payment from Energy Trust, would you prefer it to be paid directly to you or directly to your equipment vendor or contractor?
 - Why?
- If the cash incentive were being paid directly to you, how important to you is the amount of time you'd have to wait to receive it from Energy Trust?
 - Probe for reasons why and an acceptable period of time.
- Why haven't you taken advantage Energy Trust's services?
- Do you have any suggestions for how Energy Trust could work more effectively with growers like you?

6. Industry resources

- **What information sources are most important for your business?**
Probes will include:
 - Who has credibility in their market? Who's an opinion leader, market leader, technology leader.
 - Do you rely on referrals from colleagues? Media recommendations? Other recommendations?
 - Are there associations or other groups where you share information, peer to peer?
 - What trade publications, if any, do you read and rely on?
- **Role of OLCC as a resource**
 - Do you rely on the OLCC for recommendations related to the build-out of your facilities?
 - Do you review the OLCC Business Readiness Guidebook?
 - Are you aware that Energy Trust is listed in the OLCC Guidebook?
 - Do you review the email communications you receive from the OLCC?

7. Communications

- What are the most effective ways for Energy Trust to communicate and share information with you?
 - Probe for specific communication channels: direct mail, email, newsletters, group meetings, cold calls, site visits (website, events, any others?)
- In terms of content, what type of information would be most useful for you to receive from Energy Trust?
- Among those who have received communications from Energy Trust: How effective were the materials you received in meeting your needs?
- Optional question: In your opinion, what is the most important message Energy Trust could be communicating about its incentives and services for growers like you?

8. Wrap-up

- Do you have any other suggestions for how Energy Trust could better meet your needs?
- Are there any issues we haven't covered that you'd like to comment on?
- Thank respondent