Ysleta del Sur Pueblo
Alternative Renewable Energy Community Engagement Survey
August 2013

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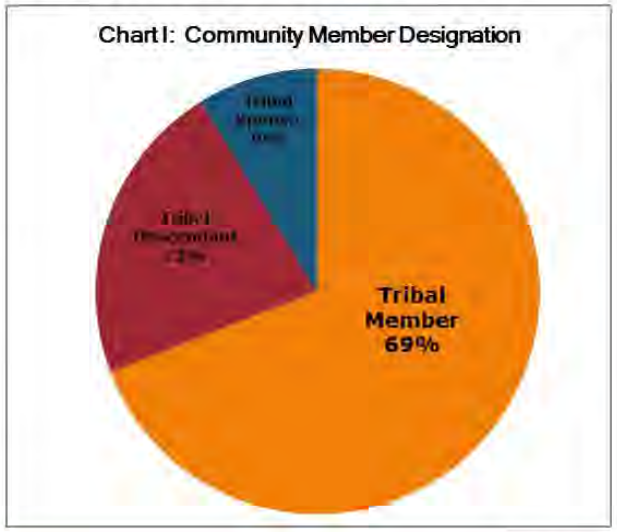
Introduction

The Ysleta del Sur Pueblo (YDSP) has traditional ties to its land and natural resources, with certain places being ceremonial and fundamental to the Pueblo way of life. Hence, protecting tribal lands, the environment and natural resources, while fostering respect for YDSP culture, is integral to the Pueblo. In addition, there is a prevailing concern that failure to place more value on the natural environment could alter the tribe's way of life. Therefore, sustainable development is a core value for the Pueblo. At present, tribal leadership and pertinent program directors are charged with promoting economic development and building community infrastructure while preserving the land.

In order to identify methods by which to build a stable community, in accordance with the Pueblo's own vision and priorities, the Economic Development Department (EDD) initiated the YDSP Alternative/Renewable Energy Community Engagement Survey to gather the Pueblo's viewpoints on a short-list of potentially feasible green energy initiatives and to gauge the level of support for potential projects. The survey also takes into account views on probable YDSP land sites and project scope preferences for possible endeavors. Intended as a facilitation tool, the survey allows tribal leadership and pertinent directors to take into consideration community perceptions and the level of Pueblo commitment. In so doing, the tribal community is included as an equal partner in the initial planning stages. The survey was conducted through EDD, in the summer of 2013, by Analinda Moreno, Statistical Information and Project Technician, under the management and cultural guidance of Patricia Riggs, EDD Director.



Demographic Findings

The 70 participants who provided feedback comprise a small but relatively reflective sample of the Pueblo population. As noted on Chart I, 69% of the participants are tribal members, 22% are tribal descendants and 9% are tribal spouses; indicating that 100% of the respondents are tribal community members. Chart II, to the next page, specifies that 29% are YDSP employees, 16% are Elders, 3% are on Tribal Council, 2% are on Youth Council, 2% are members of the Wildlife Committee and 2% are YDSP directors. Hence, the views of individuals,

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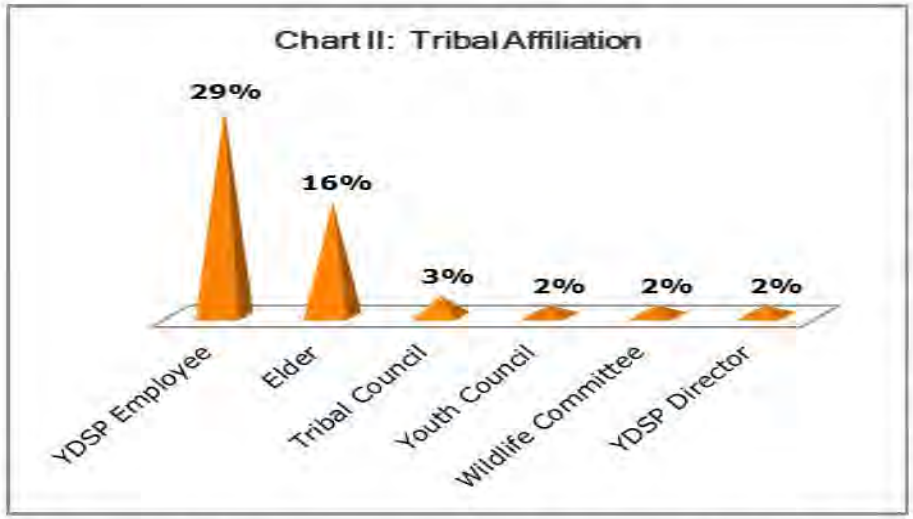
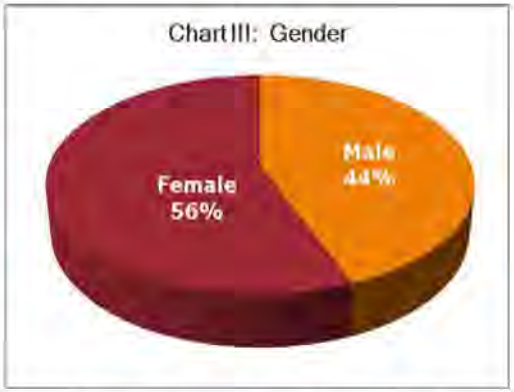
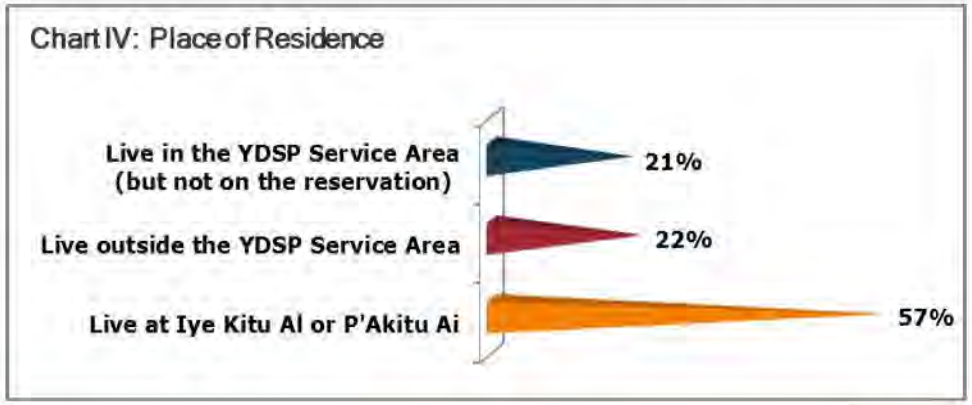


representing key affiliations with vital links into the tribal community, are given voice. Chart III, below, denotes that 56% of the contributors are female and 44% are male. This is fairly similar to the official 2012 tribal member and descendant gender composition breakdown; which is documented at 51% female and 49% male (cited from the 2012 Socio-Economic Profile).



The one demographic attribute which may suggest partiality is "Place of Residence" depicted below, on Chart IV. As noted, 22% of the contributors live outside the YDSP service area (which consists of tribal members and descendants not living in El Paso or Hudspeth Counties). Respectively, the official 2012 demographic breakdown of tribal members and descendants living outside the YDSP service area is 45%. Survey contributors living within the YDSP service area (residing at Iye Kitu Al-corn village, P'Akitu Ai-pumpkin village or in El Paso/Hudspeth Counties, jointly) account for 78% of the responses (21% + 57% = 78%) but, according to the official 2012 demographic breakdown, this grouping only comprises 55% of the total tribal member and descendant population.

While the observations of tribal members and descendants living within the YDSP service area will be represented a higher proportion, this preference is deemed acceptable in that tribal members and descendants living within the YDSP service area, where the green energy project will theoretically take place, constitute a group of interest. It is also important to



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note that because each tribal member and descendant had equal opportunity to respond to the YDSP Alternative/Renewable Energy Community Engagement Survey, a higher participation rate among individuals living within the YDSP service area corroborates the contention that the survey holds greater relevance for them. Still, 70 respondents for a population of n=3,315 constitute a 2% response rate. The concern with a sample of this size is that it may yield a non-response bias. Recent studies, however, suggest that lower response rates are only minimally less accurate; especially if sub-group participation is sufficient in permitting a reasonable estimation as is the case with this survey.

Personal Views on Eco-Friendly Activities and Green Energy

Survey contributors place high personal importance on green activities. They care about protecting the environment and they are in favor of sustainable agriculture practices. They view green energy projects as viable future energy options that are better for the environment and the YDSP economy than regular power. Overall, half of the contributors believe that the general attitude of the YDSP community towards an energy project is favorable and assuming that the sale of energy will generate revenue for YDSP, a sizeable majority thinks that the Pueblo should produce power to sell to others outside the Pueblo.

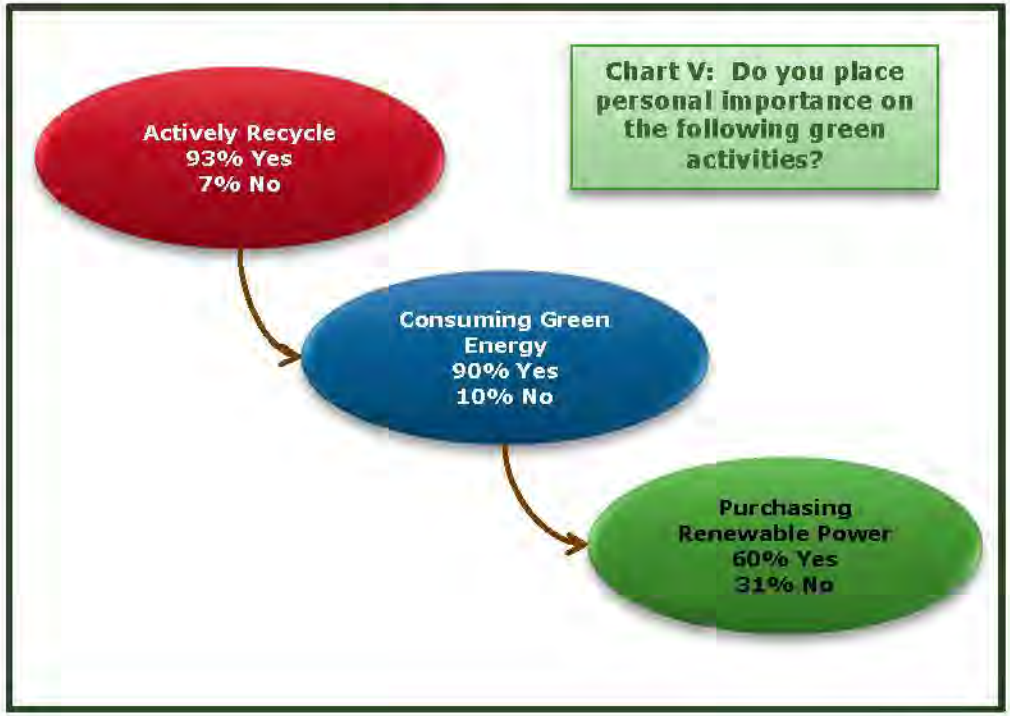

Chart V, to the right, denotes that almost all of the contributors (93%) place personal importance on active recycling. To a certain extent, this finding is anticipated. YDSP has an active Environmental Management Office that pursues a wide breadth of environmentally friendly educational activities of which a comprehensive recycling program is in the beginning stages. In addition, recycling meets the Pueblo's traditional principals of native stewardship,

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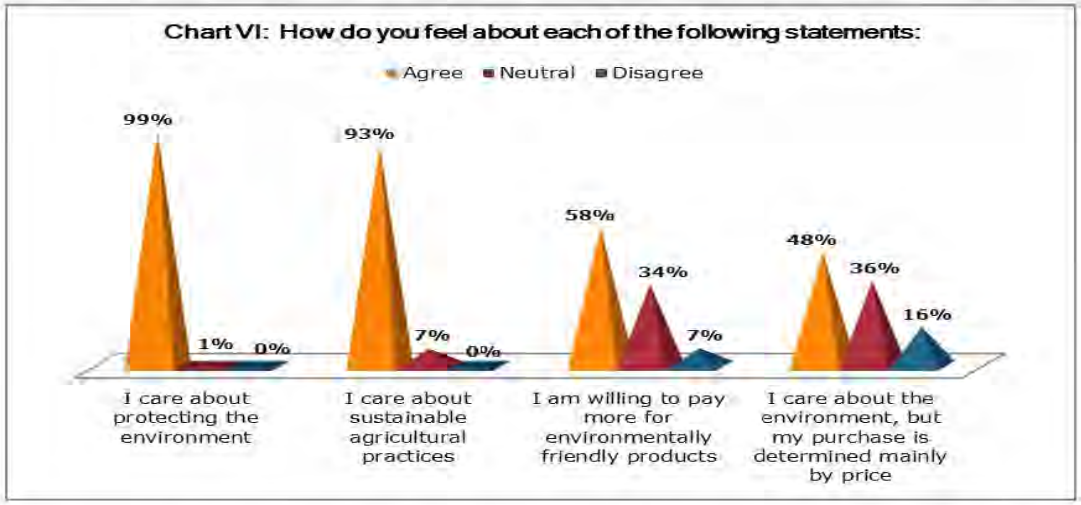
self-sufficiency and respect for the land. In accordance, 90% of the participants also place personal importance on consuming green energy; and 60% assign significance to purchasing renewable power. Again, the conjecture can be made that recent efforts to put green activities into effect is reflective of the Pueblo's ethic of a respectful human/nature relationship where traditional values uphold that environment and culture are inseparable; and identity is inextricably tied to the land.



Community members, when asked if they cared about protecting the environment, affirmed that they did (99%); see Chart VI. Similarly, 93% stipulated that they cared about sustainable agricultural practices—with five (5) individuals electing to remain neutral. The willingness of survey participants to pay for environmentally friendly products was also weighed. The key assumption being that willingness to pay denotes the value assigned to environmentally friendly products. As illustrated on Chart VI, 58% of the contributors stated that they were willing to pay more for environmentally friendly products and only 16% disagree with the notion that their purchases are determined mainly by price—even if they do care about the environment.

These relatively lower percentages may lead to an unsound assumption that quite a few respondents do not regard environmentally friendly products as worth paying for; or that the motivation to pay for changes that hold the potential to improve the level of environmental quality and natural resource use is lacking. When assessing this response rate, it is vital to place it within the economic context of the Pueblo. Expressly, the Pueblo continues to endure socio-economic conditions such as trailing income, high unemployment and elevated poverty. As a whole, the Pueblo has reported household income averages that are below the U.S. average, with 29% of its households falling at or below the poverty threshold; and employment has not provided a safeguard for overcoming poverty. Of the households living at or below the poverty level, 46% have at least one gainfully employed household member. Faced with economic vulnerability, the expressed level of willingness, by survey contributors, to pay for environmentally friendly products and, consequently, for changes that hold the potential to improve the level of environmental quality and natural

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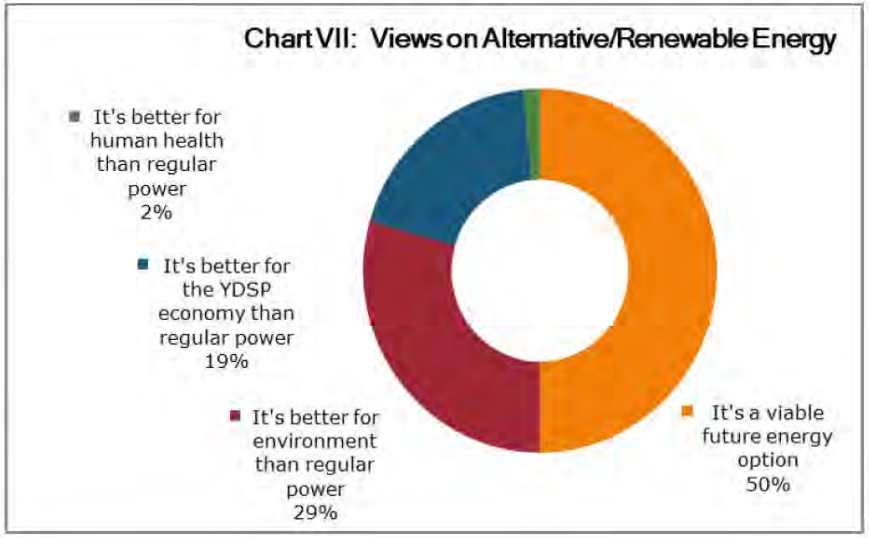
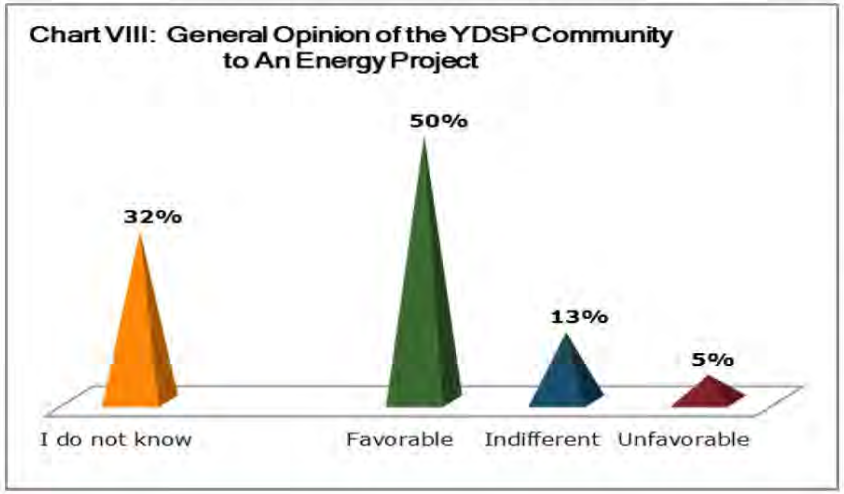
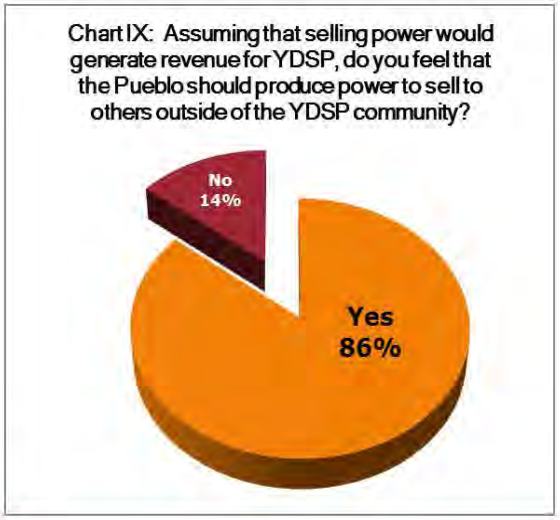
resource use is fittingly characterized as strong and aligned with traditional values in which the relationship to the environment is regarded as a major component of tribal sovereignty, tribal identity and a self-determined future.

When asked expressly about their views on alternative/ renewable energy, half of the survey contributors (50%) specify that they see alternative/renewable energy principally as a viable future energy option. An added 29% describe it, mainly, as being better for the environment than regular power; and 19% term it as better for the YDSP economy than regular power. Only 2% feel that the phrase "alternative/ renewable energy is better for human health than regular power" best describes their view. These responses are illustrated, on Chart VII.



While almost one third (32%) of the survey participants are unsure of the overall opinion of the YDSP community to an energy project, half of them describe the general view as favorable; with only 18% defining the community's view as indifferent or unfavorable; Chart VIII denotes the itemized breakdowns. An ample 86% of the participants stated that, if selling power would generate revenue for YDSP, they personally felt that the Pueblo should produce power to sell to others outside of the YDSP community (see Chart IX).





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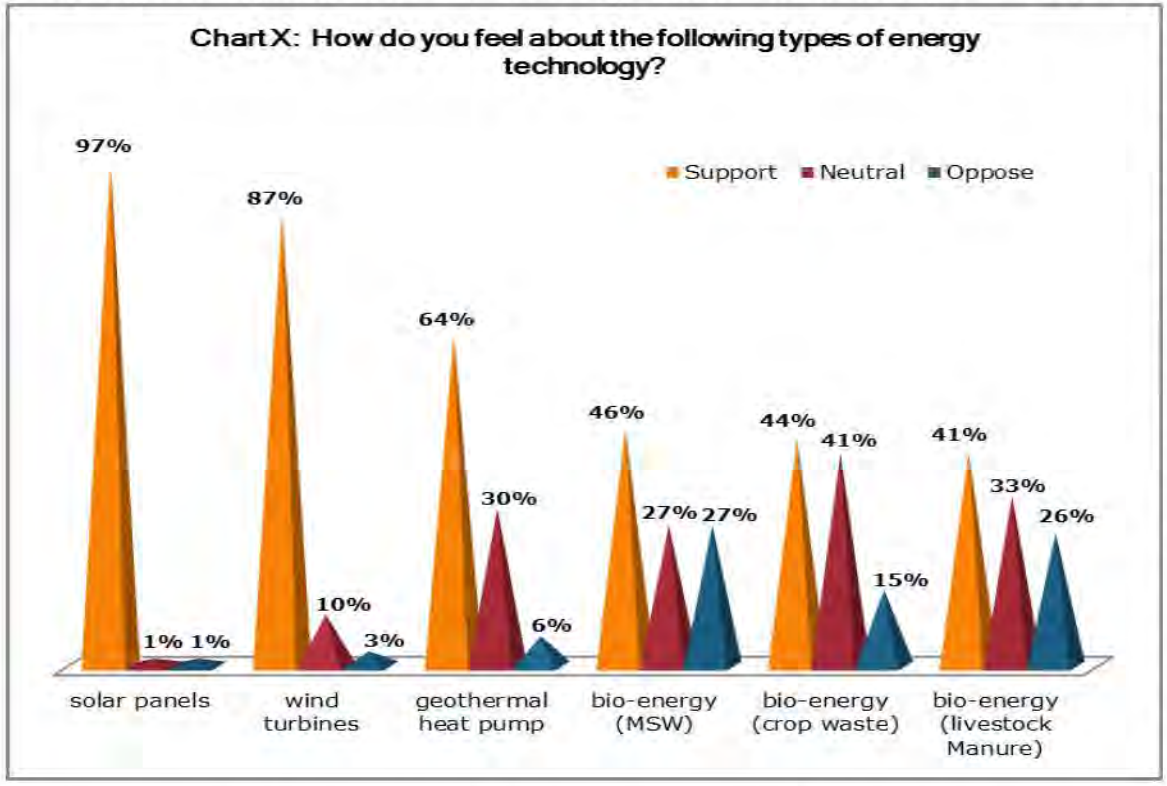
Community Support for Utilizing the Energy of the Sun, Winds and Earth

Survey results indicate that participants prefer a selection of energy technologies over others. Recognizing that reservation lands have abundant solar resources that could be commercially utilized to the Pueblo's benefit, solar panels and wind turbines were the most highly rated technologies; with geothermal heat pumps ranking third on the list. Bio-energy, whether from municipal solid waste, crop waste or livestock manure, is the lowest-ranked technology; see Chart X, on the left, for a response synopsis. Still, solar panels, which received support from 97% (n=68) of the participants, constitute the most promising community-supported energy resource for development on large tracts of Pueblo lands with ample sunshine, such as is available at Chilicote Ranch. The Pueblo tends to have higher than average energy costs; primarily associated with Speaking Rock, the Socorro Entertainment Center and the Recreation and Wellness Center. Comments from survey contributors affirm that this makes solar projects all the more attractive both as a means of boosting the tribes' economic potential and lowering tribal energy bills.



Solar, Solar & Solar!

"With over 325 sunny days, solar seems the best option. The Pueblo (Speaking Rock) has a lot of parking lots. Build a solar polar park over the parking to power the building."

"QUOTE"

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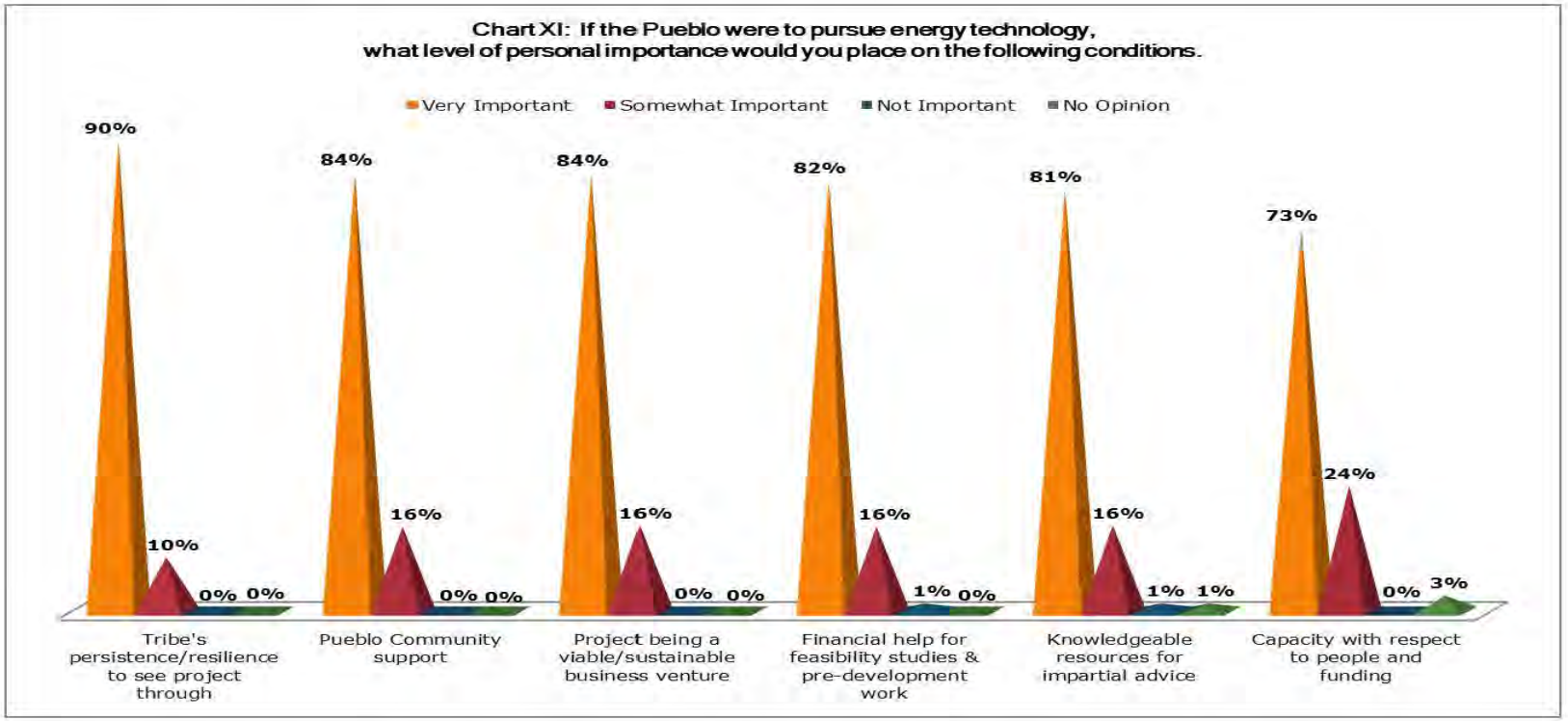
Observations and commentaries by survey contributors affirm that the successful development of an energy project will be highly determined by community sponsorship; particularly at YDSP. Chart XI, below, denotes that 90% (n=61) regard the tribes persistence and resilience to see an energy project through as a very important condition related to pursuing energy technology; followed by 84% (n=57) who rate Pueblo community support as very important. Coupled with community support, is the energy project's viability and profitability as a business venture (84%; n=57).



However, remarks by survey participants caution tribal leadership to plan carefully. Financial help for feasibility studies and pre-development work is viewed as a very important condition by 82% (n=56) of the contributors; and 81% (n=54) regard access to knowledgeable resources to provide impartial advice related to all aspects of the energy project (i.e.: assessing viability, selecting a project, securing funding) as imperative. While capacity, with respect to people and funding (including but not limited to: grants,

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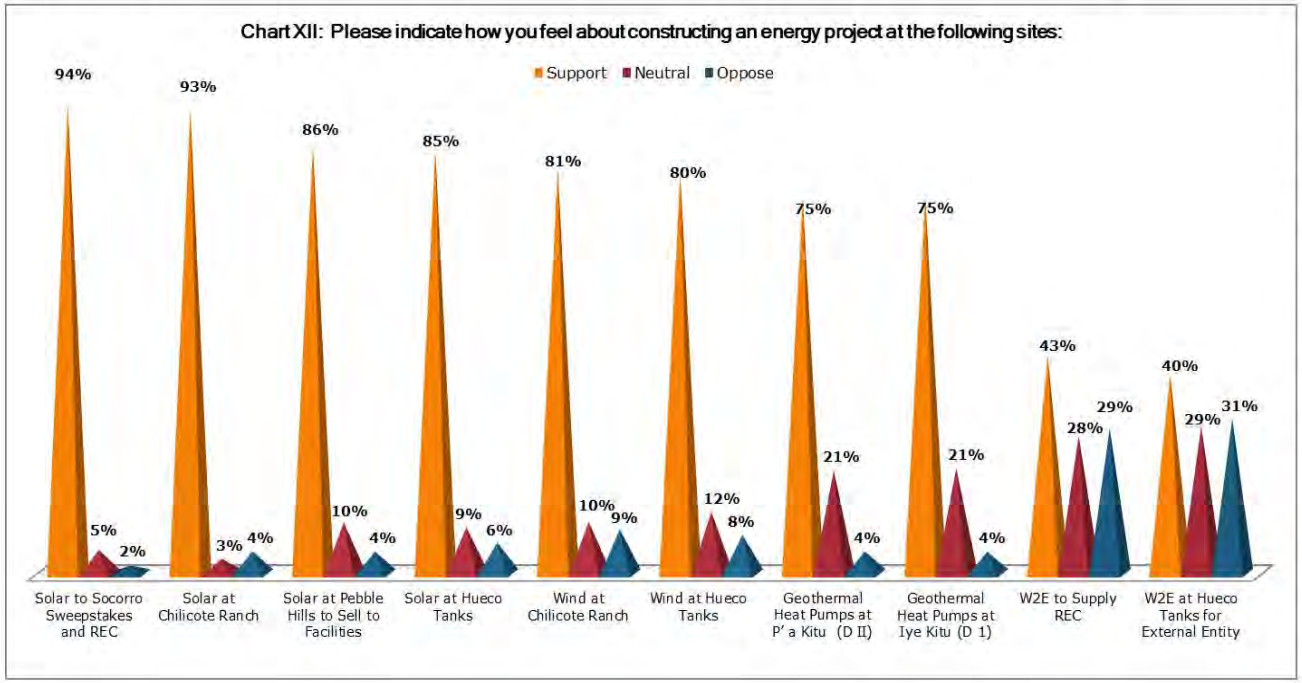
bonds, YDSP investment, etc.), received the lowest rating. Still, it is important to recognize that this condition, while relatively lower ranked, is nevertheless considered very important by almost three-quarters of the survey participants (73%). Aggregately, survey responses uphold an expressed need for the Pueblo community to play an active role in their own economic destiny, by promoting the Pueblo's energy security and self-sufficiency

Community Assessment of Project Sites

The following chart denotes levels of support for the multiple project locations available for the development of an energy project. As shown below, the consideration of project locations corroborates a primary focus on solar projects. The greatest level of community support (94%) was assigned to a facility-scale solar project to supply energy to the Socorro Sweepstakes Center and the Recreation and Wellness Center. A mid to large-scale solar installation at Chilicote Ranch to sell electricity back to the electric grid acquired 93% support; and a facility-scale solar project at Pebble Hills to sell electricity to nearby buildings obtained 86% support. A small to mid-scale solar installation to generate electricity to sell back to the electric grid (on the border of Hueco Tanks that serves as a barrier to protect traditional lands) received 85% backing.



Wind energy projects obtained 80% approval; geo-thermal projects had 75% endorsement; and waste-to-energy projects, with at or about 40% authorization possessed the least amount of support and the greatest levels of opposition.

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Valuation of Project Scope

Overall, the Pueblo's survey contributors expressed interest in developing a solar energy project that either furnishes electricity for utilization by tribal facilities (serving on-reservation residents) or a solar project that produces electricity as a commodity for sale to a non-tribal public utility. As a rule, participants prefer to retain sole control over the development of any energy project. However, given limited tribal resources and restricted critical skill sets in energy development they are drawn to the possibility of sharing the management and financial risks by entering into a joint development agreement, with a non-tribal entity, to co-develop and fund a project. Nonetheless, they underscore that the project must remain under YDSP control and that tribal sovereignty must be respected and maintained. With regards to investment in the project, contributors would like to see financial support come from the U.S. Federal Government and other grant monies that may be subsidized by a government entity, corporation, private foundation or trust; but they are committed to limited costs of achieving this goal being shared by the Pueblo—through YDSP Enterprises and Tribal Government. Tribal development of an energy project is strongly encouraged by the survey participants who perceive the production of alternative energy as holding the potential to:

- Invigorate the tribal economy by providing income and economic growth;
- Complement their respect for nature by protecting tribally owned lands as well as the regional environment; and
- Promote the Pueblo's energy security and self-sufficiency.

In general, how do you feel about YDSP exploring options to partner with another entity?

"I do not like it. We have been taken advantage of one too many times, just like all other native peoples."

"It would be good to be able to partner. I just think our past experiences have taught us to be cautious when entering into any business with the city or the federal government."

"We have to start somewhere and exploring with experienced people is a plus."

"In some of the partnerships mentioned I would feel it would be good to be partners with them because it not only helps our tribal community but also the surrounding community as well."

"I can support this as long as the partnership recognizes our sovereignty and maintains community support at all levels."

"I am ok with it as long as the tribe has full control of what is done on our lands."

"Good idea; minimizes risks of capital failure."

"Proceed with extreme caution!"

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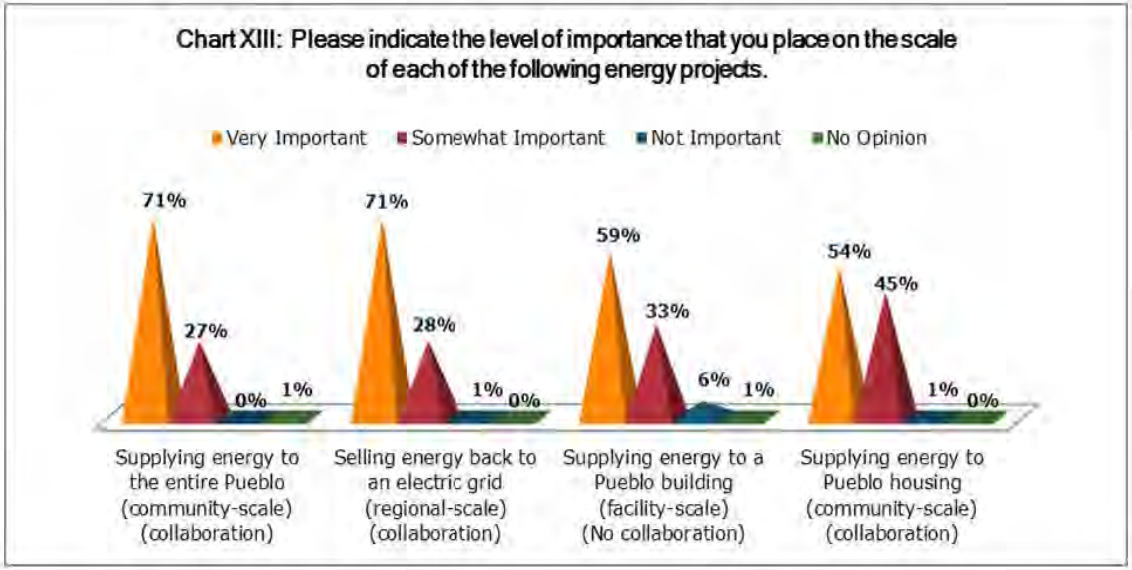
When asked to weigh in on the scale (or size) of the enterprise, the participant's preferences remain aligned with preceding responses. As illustrated on Chart XIII, 71% express favor to either: 1) supply energy to the entire Pueblo through a community-scale project that can be led by YDSP but that will require collaboration; or 2) to sell energy back to an electric grid through a regional-scale project that can be led by YDSP but that is large enough to require collaboration with a local community, a public utility company or another partnership for successful implementation. Supplying energy to a single Pueblo community building or tribal apartment building (a facility-scale project that would not require collaboration with a local community or another group for successful implementation) was rated very important by 59% of the participants. Finally, supplying energy to Pueblo residential housing (a community-scale project that can be led by YDSP but is large enough that it will require collaboration with a local community, a public utility company or another group for successful implementation) was regarded as very important by 54% of the participants.



It is worth noting that two of the four options, supplying energy to a single Pueblo community building or tribal apartment building and supplying energy to Pueblo residential housing, are really subsets of the singled out option to supply energy to the entire Pueblo. Hence, community contributors are in support of establishing a self-contained community with its own source of electrical power generated through the utilization of solar resources. Anticipated population growth rates, documented in the 2012 Socio-Economic Profile, do indicate that there will likely be a market need, within the reservation residential community, for additional housing and the resultant power and transmission infrastructure. Notwithstanding, a self-contained community, with its own source of electrical power, would yield energy security through a reduced dependency on external energy sources for the entire Pueblo—to include the Socorro Entertainment Center and the Recreation and Wellness Center—two YDSP facilities associated with high energy costs.

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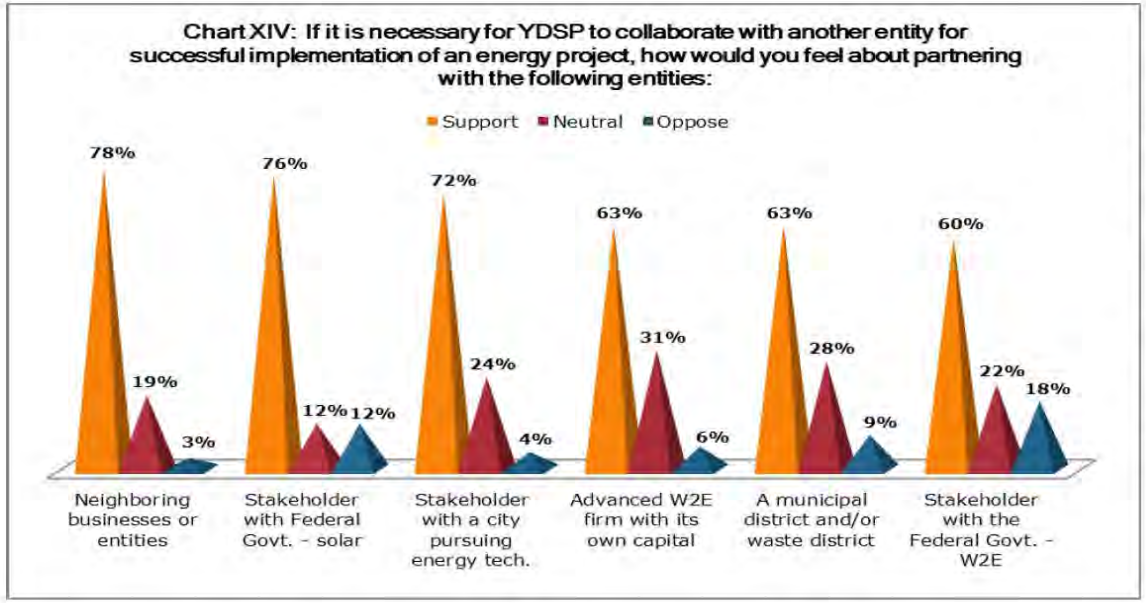
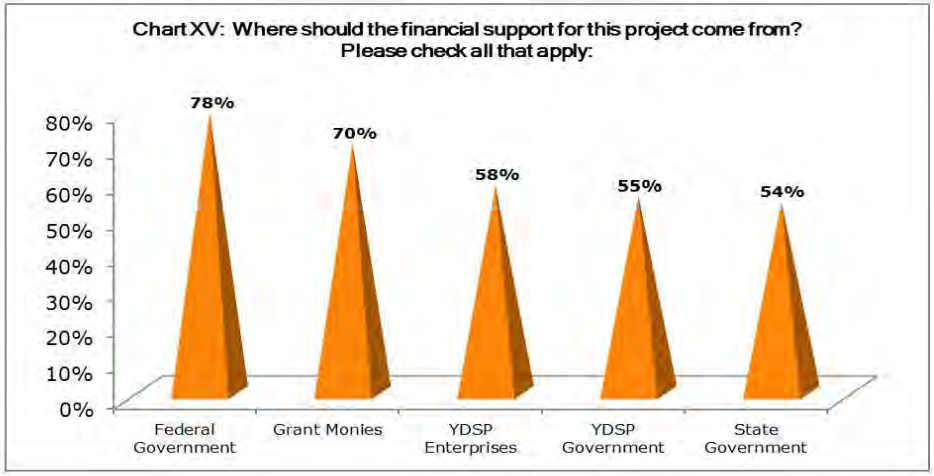


With an underlying goal to retain firm control over any project development and to uphold a steadfast assurance to tribal autonomy, community respondents are drawn to the possibility of entering into a joint development agreement with a partner to co-develop an energy project. Chart XIV, indicates that partnerships with neighboring businesses or entities, backed by 78% of the contributors, are preferred. Should the Federal Government pursue construction of a solar power facility, 76% of the survey participants would like YDSP leadership to explore partnership options. Likewise, 72% support joining as a stakeholder with a local city that is pursuing energy technology. As noted, the three partnerships aligned with waste-to-energy development obtained at or below 63% endorsement by survey participants.

Taking into consideration investment in the project, 78% of the contributors would like to see financial support come from the U.S. Federal Government and 70% would like to rely on grant monies that may be funded by a government entity, corporation, private foundation or trust. However there is financial commitment to the project, with 58% of contributors favoring investment through YDSP Enterprises and 55% recommending capital from Tribal Government. Chart XV, on the right, denotes the funding sources that received support by more than 50% of the participants.



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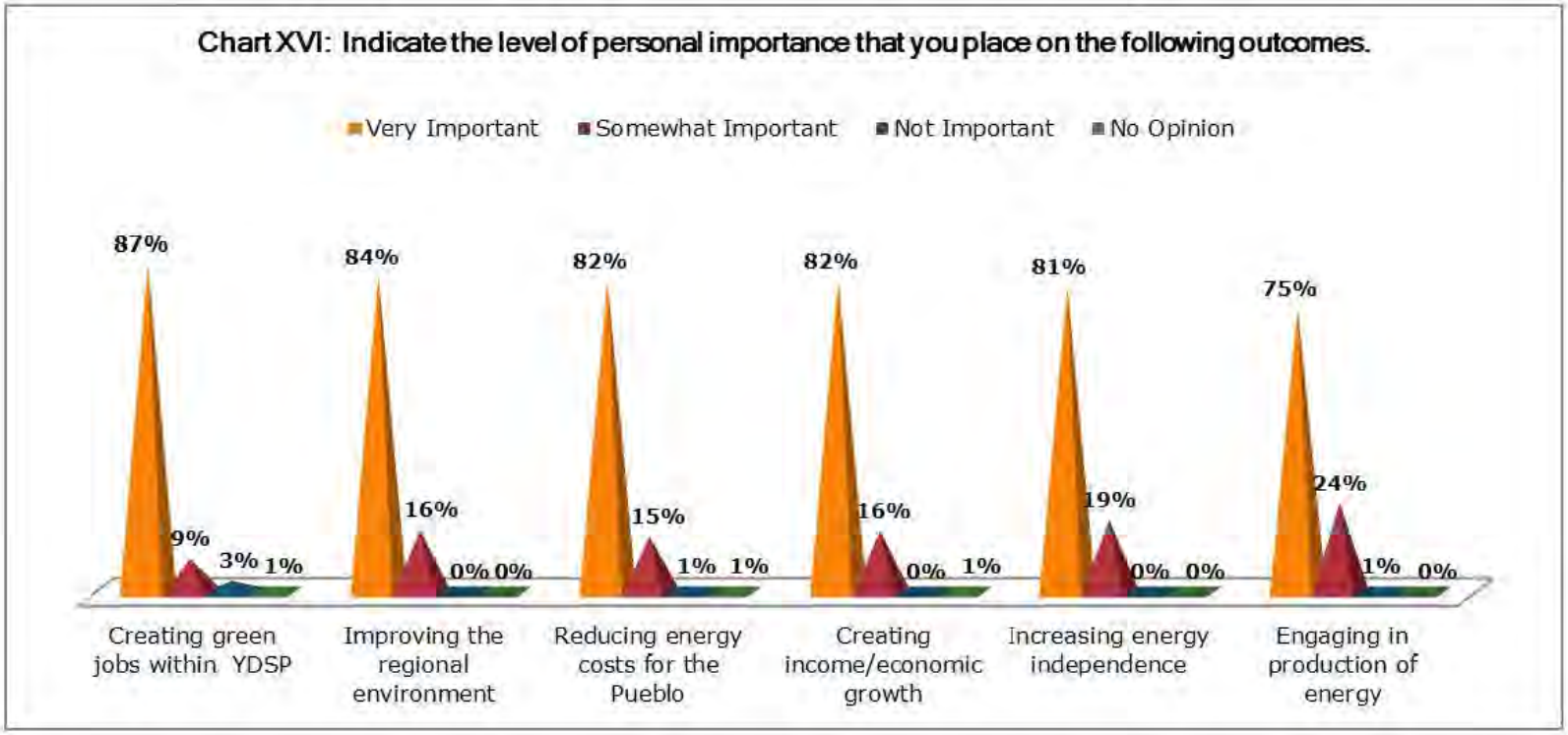
As illustrated below, on Chart XVI, survey participants value the opportunity to advance an innovative, clean energy, project because they consider it as capable of bearing social, economic and environmental benefits for the Pueblo. Some of these advantages include the creation of "green" jobs for the tribal community (87%), improving the Pueblo's regional environment (84%), reducing energy costs at the Pueblo (82%), generating income/economic growth for the YDSP community (82%), while also ensuring that the community is moving in the right direction towards increasing energy independence and promoting the Pueblo's energy security and self-sufficiency (81%). Lastly, 75% see engaging YDSP community members in the production of energy as a very important outcome.



Inclusive, these aftereffects suggest an infrastructure and capacity to strengthen economic independence and to a certain extent, advance long-term goals related to sovereignty, sustainability and financial security.

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Next Steps

Almost all of the survey contributors (86%) stated that they were interested in taking part in subsequent decisions associated with planning, developing and constructing an alternative energy facility. Listed below are the suggested methods for involvement.

Community Involvement

86% (n=57) are interested in taking part in the planning stages of an energy project

Methods of Involvement:

Community involvement allows for the capitalization of knowledge and skills that exist within the Pueblo community; highlighting the importance of working together to create sustainable programs. If there is interest in moving an energy project forward:

- 55% (n=36) are interested in participating in community meetings
- 52% (n=34) would like to join in a working group
- 51% (n=33) are interested in partaking in educational events

The success of realizing an energy project is highly dependent on community support and the rich input related to community interest and opinions. Hence, it is promising to note that 95% of the contributors are interested in receiving added information on energy projects.

Additional Information

95% (n=63) are interested in receiving additional information on energy projects

Methods for Contact:

Survey participants want to play an active role in helping to define, not only what is to be developed but, what is to be considered and what is possible in terms of community benefit. Towards this end, they would like to receive additional information regarding energy projects via:

- 78% (n=53) would like to receive information through e-mail
- 28% (n=19) prefer for information to be delivered through the EDD Newsletter
- 25% (n=17) selected brochures and pamphlets for receiving information

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Community Contribution Summary

YDSP is well positioned to take advantage of alternative energy development opportunities as a result of its land holdings, abundant solar resources and tribally controlled assets. The 70 contributors who provided feedback comprise a small but relatively reflective sample of the Pueblo population. The concern with a sample size, such as this one, is that it may yield a non-response bias; however, recent studies suggest that lower response rates are only minimally less accurate; especially if sub-group participation is sufficient in permitting a reasonable estimation as is the case with this survey. The Alternative/Renewable Energy Community Engagement Survey was undertaken to authenticate the community's viewpoints on a short-list of potentially feasible green energy initiatives and the level of support for potential energy projects. It is critical to note that, with the exception of the YDSP Waste-to-Energy Feasibility Study, the viability of the above mentioned energy technologies has not been established. Inasmuch this survey is intended as a facilitation tool that allows tribal leadership and pertinent program directors to take into consideration community views and the level of Pueblo commitment prior to committing resources towards establishing the viability and developing any energy project.

Analysis of the ensuing data shows that the Pueblo's survey contributors place high personal importance on green activities. They care about protecting the environment and they are committed to sustainable agriculture practices. They view green energy projects as viable future energy options that are better for the environment and the YDSP economy than regular power. Overall, half of the participants believe that the general attitude of the YDSP community towards an energy project is favorable and, assuming that the sale of energy will generate revenue for YDSP, they think that the Pueblo should produce power to sell to others outside the Pueblo. Comments and observations by survey contributors affirm that the successful development of an energy project will be highly determined by community backing. Ninety percent (90%) regard the tribes persistence and resilience to see an energy project through as a necessary condition for pursuing energy technology; followed by Pueblo community support and the viability and sustainability of the energy project as a revenue generating business venture. Moreover, a significant number of participants expressed willingness to take part in the planning stages either by attending community meetings, joining in a working group and/or partaking in educational events. All but seven would like to receive additional information on energy projects.

Survey results indicate that solar panels, wind turbines, and geothermal heat pumps, in that order, are all highly rated by more than 50% of the survey contributors. Bio-energy,

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whether from municipal solid waste, crop waste or livestock manure, is the lowest-ranked technology. With regard to project site, the greatest level of community support is assigned to development of a facility-scale solar project to supply energy to Socorro Sweepstakes and the Recreation and Wellness Center; followed by a mid to large-scale solar installation at Chilicote Ranch to sell electricity back to the electric grid; and a facility-scale solar project at Pebble Hills to sell electricity to nearby buildings. A small to mid-scale solar installation to generate electricity to sell back to the electric grid (on the border of Hueco Tanks that serves as a barrier to protect traditional lands) ensues. Trailing behind are locations allotted to wind, geo-thermal and waste-to-energy projects; with waste-to-energy projects possessing the greatest level of opposition.

Overall, contributors convey that if an energy project is feasible, their interest lies in a solar energy endeavor that either furnishes electricity for use by tribal facilities or that produces electricity as a commodity for sale to a public utility. As a rule, participants prefer to retain sole control over the development of the project. However, given limited tribal resources and restricted critical skill sets in energy development they are drawn to the possibility of sharing the management and financial risks by partnering with a non-tribal entity to co-develop and fund the project. Even so, they caution that the project must remain under YDSP control and that it is imperative that tribal sovereignty be respected and maintained. As regards financial investment, contributors would like funding to come from the U.S. Federal Government and project-related grant monies that may be subsidized by a government entity, corporation, private foundation or trust; but they are committed to costs of achieving this goal being shared by the Pueblo.

Taken as a whole, the Alternative/Renewable Energy Community Engagement Survey constituted as an effective tool, for providing Pueblo citizens and their leadership with rich input in relation to community attitudes and interest as regards alternative and renewable energy development on Pueblo lands. Common themes emerging from the analysis include the following. Survey participants view solar energy technology as a preferred option for consideration. Development of an alternative energy project on Pueblo lands is appealing because of the perceived potential that the project is capable of bearing social, economic and environmental benefits for the Pueblo. In addition, survey participants believe that tribal citizens should have adequate opportunity to participate in decisions associated with the planning, development and construction of an alternative energy project. In short, tribal sponsorship of a solar energy development is strongly encouraged by the community survey respondents who, explicitly, perceive the production of solar technology, as holding the potential to:

- Invigorate the tribal economy by providing income and economic growth;
- Complement their respect for nature by protecting tribally owned lands and the regional environment; and
- Promote the Pueblo's energy security and self-sufficiency.

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