

Follow-up Questionnaire Survey: Winkleigh Parish Opinion of the Proposed WINBEG Biomass Gasifier

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Executive summary

The 2007 survey of public opinion of the proposed Winkleigh gasifier confirms the negative perceptions identified in the 2004 survey. The 2007 response rate was about half that of the 2004 survey and may have been reduced by confusion over the return-by date. If a parish population of 1600 eligible respondents is assumed, the 2007 survey response rate was 18% (290 people). The questionnaire was distributed on a household basis (two questionnaires per household), not on a representative sample basis.

Comparison of the 2004 and 2007 surveys of Winkleigh Parish opinion indicates changes in the sources of information via which people have learned of the proposed biomass gasifier, plus some more strongly negative opinion. The respondents in the 2007 survey are substantially, and statistically significantly, older than the 2004 respondents (all adult age groups had the opportunity to answer the questionnaire in both years). It is not known at this point whether age is a factor in the more strongly negative perceptions of WINBEG.

In terms of statistically significant differences between 2004 and 2007 responses, more of the 2007 respondents have been exposed to local opposition campaign material, local newspaper articles and broadcast media articles on WINBEG than 2004 respondents. More people know about WINBEG per se and they rate their understanding of the proposal as higher than in 2004. More people are concerned about potential noise disturbance, landscape change from energy crops and other environmental impacts of energy crops. Fewer respondents are willing to state that they expect WINBEG to benefit the incomes of Devonshire farmers, fewer believe in the environmental benefits of energy crops, fewer expect WINBEG to encourage tourism, fewer expect that it will improve winter employment in agriculture or that WINBEG diverting biomass from landfill is a benefit. There is an increase in support, as an alternative to WINBEG, for about 100 small CHP bioenergy plants distributed across Torridge District. Also an increase in approval of communications by the public agencies involved, particularly Torridge District Council and Winkleigh Parish Council. There are other differences between the 2004 and 2007 surveys: the above list is restricted to those of statistical significance only, i.e. those for which there is a less than 5% probability of occurrence by chance.

Regarding the results of the 2007 survey per se, WINBEG remains an important and salient issue for the large majority, and nearly all are aware that Torridge District Council refused planning permission for WINBEG in 2006. The local campaign group and newsletter remain dominant as information sources about WINBEG, and approaching two thirds of the respondents think that they have good or very good knowledge of the development proposal.

The very large majority of respondents feel that Torridge District Council's refusal was definitely the right decision, and the large majority agree with the statement that it sounds as if WINBEG would be bad for the local area. All of the potential concerns suggested are agreed to by more than half of the respondents. Those shared by more than 80% are:

- 92% Traffic congestion from lorries bringing biomass fuel
- 90% Air pollution from lorries bringing biomass fuel
- 88% Air pollution from the WINBEG powerplant
- 87% The credibility of the developer
- 86% The wastes that WINBEG may use as fuel

- 85% The visual appearance of the WINBEG powerplant
- 83% The reliability of WINBEG's technologies
- 82% Odour or smell from the WINBEG powerplant

No potential benefit of WINBEG is agreed to by more than 20% of people.

With regard to the level of communication by public bodies, about WINBEG, only for Winkleigh Parish Council did more than 25% of people rate this as adequate; neutral responses on this issue were substantial. SWRDA continues to be perceived particularly poorly in communications terms on this issue.

The effect of the controversy on awareness and knowledge of climate change and renewable energy is mixed and would require follow-up interviews to understand fully. Nevertheless, more than twice the number of people disagree (42%) than agree (19%) that WINBEG has made them much more aware of the need to take action on climate change. 44% of people agreed that WINBEG had made them more cynical about the need for renewable energy, but 30% disagreed. The large majority (87%) agreed with the statement that they were very positive about small scale renewable energy developments, but that WINBEG is far too big for Winkleigh. The large majority (78%) agreed with the statement that they are in favour of renewable energy but are discouraged by the process by which the government gives support to such projects. 76% agreed with the statement that WINBEG has harmed the cause of renewable energy.

The large majority (87%) disagree with the statement that they are disappointed that WINBEG was not approved by Torridge District Council because it would have encouraged more renewable energy developments. 80% agree that the WINBEG case has given them cause for concern about the lack of accountability of public bodies that are promoting renewable energy technologies. 77% of people agreed that the decision of Torridge District Council not to grant planning permission has given them confidence that the planning process is up to the job of regulating renewable energy developments in their area. 85% disagreed that local campaigners opposed to WINBEG have misrepresented the facts about the development and misled the public, and 75% disagreed that the WINBEG case demonstrates the triumph of Not In My Back Yard (NIMBY) thinking over the greater interests of society at large. 86% disagreed that local campaigners opposed to WINBEG had too much influence on the planning decision, and 91% agreed that the WINBEG case demonstrates the need for public agencies as well as developers to listen to, and act upon, public opinion much earlier. 75% disagreed that the media has played too great a role in the case, and 63% agreed that the WINBEG case highlights the need to take action on reducing energy consumption before developing renewable energy.

When asked about renewable alternatives to WINBEG that would provide a similar level of renewable energy, opinion was mixed and somewhat negative, with a high level of neutral feeling. 59% did not like the option of 50 large wind turbines, sited across Torridge District, but 22% did like this option and 16% were neutral to it. 50% were in favour of 15 very large wind turbines sited offshore of Devon, but 31% were opposed this option (15% neutral). WINBEG on an industrial site was disliked by 47% and liked by 25%, but a sizeable 24% were neutral to this. The option of 100 small bioenergy CHP plant across Torridge District was disliked by 37%, liked by 33% and 23% were neutral. Two people liked WINBEG as currently conceived (<1%).

When asked about an alternative renewable energy project proposed for a small part of the Winkleigh airfield by some Winkleigh parishioners, 66% were aware of the idea, though not necessarily in any detail. Grouped together, the other third had not heard of the proposal, were unsure or didn't answer. When given a summary of the project, 64% agreed that it looked very promising (12% were neutral). 48% agreed that the alternative project 'sounded OK', but that they have some concerns about it; 18% were neutral on this statement. In terms of which aspects of the project might have most appeal, the focus on developing new skills is considered the most important aspect of the alternative project by 55% of people, affordable housing by 47% and renewable energy by 38%. 51% disagreed with the statement that the airfield should not be developed any further. People were largely neutral (32%) on whether the alternative project was likely to attract funding, though 27% thought it unlikely and 19% thought funding likely. 69% said that they would support the alternative project but only if it is controlled and managed by the local community. 60% agreed that the idea merited the support of public agencies, though 22% were neutral.

1. Introduction

In June 2004, Tyndall Centre Manchester distributed a questionnaire to every household in the parish of Winkleigh, Devon, to assess public opinion on the proposed Winkleigh Biomass Gasifier (WINBEG). The proposal was put forward by Peninsula Power Ltd and entails construction of a 23 megawatt biomass gasifier on a disused RAF airfield on the outskirts of the village. The project had the backing of the Department of Trade and Industry and the South West Regional Development Agency (SWRDA). In 2006 Torridge District Council refused planning permission for WINBEG and Peninsula Power Limited has appealed against this. A planning inquiry is scheduled for January 2008.

This report describes the main findings of a follow-up questionnaire distributed at the end of March 2007, again to all households in Winkleigh parish. There were 290 responses, which is about half of the 2004 response rate (discussed in section 2.1). The 2007 questionnaire is given in Appendix F. Both studies have been funded under the *SuperGen*, specifically the *Biomass and Bioenergy Consortium*. SuperGen is a major programme of research into sustainable energy supply for the UK, sponsored by the Research Councils. The results of the first and second opinion surveys can be viewed at the *Research Outputs* section of the website: <http://www.supergen-bioenergy.net/>. More detail and comment on the WINBEG project and the demographic characteristics of Winkleigh are provided in the 2004 reports (Upham and Shackley, 2004a,b) and papers (Upham and Shackley, 2006a,b and 2007).

The purpose of the 2007 follow-up survey is to determine how and whether local opinion has changed, and also to assess opinion of an alternative proposal for renewable energy development at Winkleigh airfield. One of Tyndall Centre Manchester's research themes is public and stakeholder perceptions of low carbon energy futures, and the Winkleigh longitudinal case study fits within this theme. The case embodies issues relating to the governance of renewable energy and associated public attitudes. As climate change becomes more apparent and Research Council funding priorities begin to reflect this, themes of public attitudes, perception and governance in relation to low carbon economies, and the behavioural changes these may require, are being more intensively researched. An underlying objective is to facilitate public engagement with the rapid and substantial changes in energy supply and consumption required to avoid the most severe climate change impacts¹.

¹ The 2007 EC +2 degrees C avoidance target (EC, 2005) requires a maximum global atmospheric CO₂ concentration of 450ppmv, preferably 400ppmv. 450ppmv is likely to require ~4.5% annual reductions in total EU CO₂ emissions over the period 2012-2030 (implicit in Bows et al, 2007).

2. Results

Although the results are presented in detail, the accompanying commentary is brief at this stage. Further analysis and comment will be undertaken for a subsequent paper. Appendix A provides a summary comparison of the 2004 and 2007 surveys, using a t-test. Appendix B repeats and confirms this with a Mann-Whitney U test. Appendix C provides summary detail on the age and gender of respondents, Appendix D provides charts for the remainder of the results, and Appendix E provides the numerical information underlying those charts. All charts and tables are the output of SPSS statistical software. Appendix F provides the 2007 questionnaire.

2.1 Comparison of 2004 and 2007 opinion surveys

Neither the 2004 or 2007 surveys are controlled demographically, and in both, people of 55+ years form the majority of respondents. Moreover, as with all surveys, people are free to respond or not at will, such that there is always some risk that those who feel most strongly will be more likely to respond. Nevertheless, this could as well be a positive as a negative response. The most obvious difference between the 2007 and 2004 surveys is in their response rates: only about half of the number of responses was obtained in 2007 (290 responses) compared to 2004. One reason for this may be fatigue or belief that WINBEG is now an unlikely prospect; another may be that a questionnaire on the same topic was co-incidentally circulated at the same time by a student; a further possibility was some confusion over the return-by date: a revised date was stamped on the questionnaire envelope but this was apparently not seen by everyone.

In addition to new questions, the 2007 survey repeated nine questions that were present in the 2004 survey, enabling observation of any opinion change. Appendix A shows the independent samples t test results for these questions (t values are in the shaded column). Appendix B shows Mann-Whitney U test results. Both tests are used so that both normal and asymmetric distribution assumptions are accounted for. Although we already know from the 2004 results that the distribution of opinion is likely to be skewed to the negative, against WINBEG, an additional check with the Mann-Whitney U test (which is based on a ranking of values not their absolute value) shows that the t-test has functioned adequately in this context. That is, the t-test fails to identify significance at a 95% for only one of 48 sub-variables. For that sub-variable (age of the respondent), the t-test does show significance at a 90% threshold (referred to below).

For each sub-question, the t test considers the magnitude of the differences between the mean responses for 2004 and 2007 and the probability of those differences occurring by chance. Conventionally a 95% probability threshold is used: if a t value is at or below 0.05, it is considered that (in this case) the difference between the means in question is so large that it would be very unlikely to have arisen by chance. The possibility of significantly differing variances is allowed for and the (-) sign in the t-tests should be ignored.

The t-test shows several statistically significant differences between the two years. These are indicated by the shaded cells in Appendix A (for which Levene's test of non-significant variance difference is also passed) and are listed below. The test also shows near-statistical significance for age (a 90% probability of the means not differing by chance), and in fact the 2007

respondents do include a higher percentage of people 65 years and older (2004: 33%; 2007: 43%). For comparison, the 2001 census showed people of 65+ constituting 26% of the parish population.

When interpreting statistical test results, it should be noted that lack of statistically significant change is just as notable as its presence: a lack indicates a constant level of opinion on specific issues (or at least, a similar level of opinion at the two comparison years). Also note that the presence of statistical significance cannot be inferred from the size of the percentage change alone: the variance of each year's responses to each question, as well as the number of respondents, are both taken into account in the t-test, in addition to the difference between the mean percentages of each year. It should further be noted that the t-tests do not provide information on the reasons for any significant change. Change may be due, for example, to the increased prominence of local campaigning and media coverage of the issue. Alternatively, it may be the result of the older age of the 2007 respondents relative to 2004.

The statistically significant differences are in relation to questions with the following summary labels in the SPSS analysis; the final label marked (*) is identified at $p > 0.05$ by the Mann Whitney U test only:

- info - DUST
- info - DW
- info - radio tv
- prior [level of] knowledge
- concern - noise WINBEG
- concern - landscape change: energy crops
- concern - other environmental impacts: energy crops
- benefits - income for Devonshire farmers
- benefits - environmental benefits of energy crops
- benefits - encourage tourism
- benefits - winter employment in agriculture
- benefits - diversion of biomass from landfill
- alternatives - 100 small bioenergy plant
- communication - SWRDA
- communication - DCC
- communication - TDC
- communication – WPC
- age (*)

Considering these in turn, in terms of information sources, the percentage of people who said that they had been exposed to WINBEG-related information from the anti-WINBEG campaign group DUST increased from 70% in 2004 to 78% in 2007. The percentage saying the same for the local newsletter Distinctly Winkleigh increased from 83% to 91%. The percentage saying the same for radio and TV increased from 29% to 53%. The percentage saying they had a good or very good knowledge of WINBEG increased from 41% to 62%.

Regarding concerns, the percentage of people concerned about potential noise disturbance increased from 64% in 2004 to 79% in 2007; concern about landscape change from energy crops increased from 69% to 75%; concern about other environmental impacts of energy crops increased from 60% to 68%.

Regarding benefits, expression of belief in the benefits of WINBEG for the incomes of Devonshire farmers has fallen from 16% of respondents in 2004 to 9% in 2007. Belief in the environmental benefits of energy crops has fallen from 7% to 3%; belief that WINBEG will encourage tourism has also fallen from 7% to 3%; belief that WINBEG will improve winter employment in agriculture has fallen from 15% to 7%; and belief in the benefits of WINBEG diverting biomass from landfill has fallen from 11% to 7%.

Regarding perceptions of renewable energy supply that would provide very approximately the same level of electrical output as as alternatives to WINBEG², support for the option of 100 small CHP bioenergy plants distributed across Torridge District increased from 18% in 2004 to 33% in 2007. This is a very substantial increase and may (speculatively) reflect a higher level of understanding of bioenergy options.

Regarding perceptions of the level of communication by public bodies re WINBEG, there is significant change for all four bodies assessed: the South West RDA (SWRDA), Devon County Council (DCC), Torridge District Council (TDC) and Winkleigh Parish Council (WPC). The percentage of people perceiving communication by these bodies to be positive changed as follows, in which the improvements for Torridge DC and Winkleigh Parish are particularly notable:

	2004	2007
SWRDA	2%	5%
DCC	2%	9%
TDC	5%	22%
WPC	34%	67%

In summary, there are statistically significant changes in the perception of information sources about WINBEG, specific concerns and benefits, alternative energy supply options and the public bodies involved. The most notable changes are the improved perception of numerous hypothetical small scale bioenergy CHP plant and the improved perception of communications by Torridge District Council and Winkleigh Parish Council. The following subsections describe the results summarily; brief comment is provided in section 3.

² The option 'WINBEG as currently conceived' is not included in the comparison as the question was configured differently in the 2007 questionnaire. Only two people responded positively to this option.

2.2 Question 1

On a scale of 1 to 5, how important an issue for you is the WINBEG proposal?

WINBEG is perceived as an important or very important issue by 88% of respondents (very important: 80%).

2.21 Question 2

Before reading this questionnaire, had you heard of the proposal to build a bioenergy power station (WINBEG) on the old Winkleigh airfield?

99% of respondents had heard of the WINBEG proposal (4 people had not).

2.22 Question 3

Before reading this questionnaire were you aware that Torridge District Council had refused planning permission for WINBEG in 2006?

98% of respondents were aware that Torridge District Council had refused planning permission for WINBEG in 2006 (7 people were not).

2.23 Question 4

If you had heard about WINBEG before, from what information sources did you hear about it? Please tick all that apply

This question is intended to identify the various information sources from which respondents have learned of WINBEG. 48% of respondents had heard of WINBEG via Peninsular Power Ltd, 78% via the DUST opposition group, 91% via the local newsletter Distinctly Winkleigh, 31% via another local newsletter, 65% via a neighbour or friend, 71% via a letter in a local newspaper, 53% via radio or TV.

2.24 Question 5

How would you rate your level of knowledge of WINBEG? Please tick one only

42% rated their knowledge of WINBEG as good, 31% as moderate, 20% as very good, 4% as poor, 2% as very poor.

2.25 Question 6

How do you feel about the decision of Torridge District Council to refuse WINBEG planning permission? Please tick one only

91% of respondents felt that Torridge's refusal was definitely the right decision, 4% felt that it was probably the right decision, 3% felt that there were good and bad aspects to the decision and 1% (4 people) felt that it was definitely the wrong decision.

2.26 Question 7

Which of the following is nearest to your own opinion? Please tick one box only

When forced to choose one option only, 80% of respondents chose the option stating that it sounds as if WINBEG would be bad for the local area; 15% chose the option stating that they don't like WINBEG itself, but support some of the ideas behind the project; 2% chose the option stating that WINBEG sounds as if it probably would have been good for the local area; and 2% chose the option stating that WINBEG sounds as if it might be good for the local area, but they have some concerns about it.

2.27 Question 8

Which of the following potentially negative aspects of WINBEG have concerned you over the past few years?

When presented with a list of possible concerns about WINBEG, the following percentages of respondents ticked particular concerns:

- 92% Traffic congestion from lorries bringing biomass fuel
- 90% Air pollution from lorries bringing biomass fuel
- 88% Air pollution from the WINBEG powerplant
- 87% The credibility of the developer
- 86% The wastes that WINBEG may use as fuel
- 85% The visual appearance of the WINBEG powerplant
- 83% The reliability of WINBEG's technologies
- 82% Odour or smell from the WINBEG powerplant
- 79% Noise pollution from the WINBEG powerplant
- 75% Change in landscape arising from miscanthus grass and other energy crop cultivation
- 68% Adverse environmental impacts of energy crops such as miscanthus grass
- 64% A decrease in local house prices
- 63% Negative effects on tourism
- 59% WINBEG as a precedent for industrial development of the airfield
- 58% Light pollution from the WINBEG powerplant

2.28 Question 9

Which of the following potentially positive aspects of WINBEG have you considered plausible over the past few years?

When presented with a list of possible benefits arising from WINBEG, the following percentages of respondents ticked particular benefits:

- 19% Employment at the WINBEG powerplant
- 15% Indirect employment through maintenance/manufacturing services
- 13% Reduction in greenhouse gas emissions (especially CO₂)
- 12% Stimulation of other businesses at the airfield site

- 11% Development of UK capacity in the bioenergy sector
- 9% A reliable and long term income for Devonshire farmers
- 7% Winter employment of agricultural workers due to late harvesting of willow
- 7% Diversion of food, catering and similar wastes from polluting landfill
- 3% Environmental benefits of miscanthus and other energy crop cultivation
- 3% Encouraging tourism in the area through the proposed visitor centre

2.29 Question 10

Do you think the level of communication by public bodies, about WINBEG, has been adequate?

Percentages for positive responses are listed in section 2.1 above. There were a relatively large number of neutral responses for some of the public bodies, as follows:

SWRDA	11%
Devon County Council	22%
Torrige District Council	31%
Winkleigh Parish Council	20%

2.30 Question 11

How has WINBEG affected your awareness and knowledge of renewable energy? Please indicate your opinion with respect to each of the following statements. Please tick only one option for each of the statements

This question was intended to identify possible effects of the WINBEG proposal on local perceptions of renewable energy and climate change, given the strength of local opposition recorded in 2004 and an on-going opposition campaign. The statements and the top two returns per question are:

WINBEG has made me much more aware of the need to take action on climate change

Neither agree nor disagree	32%
Disagree strongly	30%

I am now more cynical about the need for renewable energy

Agree somewhat	27%
Agree strongly	18%
Neither agree nor disagree	18%

I am very positive about small scale renewable energy developments, but WINBEG was far too big for Winkleigh

Agree strongly	63%
Agree somewhat	23%

I am in favour of renewable energy but am discouraged by the process by which the government gives support to projects

Agree strongly	50%
Agree somewhat	28%

I am disappointed that WINBEG was not approved by Torridge District Council because it would have encouraged more renewable energy developments

Disagree strongly	81%
Disagree somewhat	5%

The WINBEG case has given me cause for concern about the lack of accountability of public bodies that are promoting renewable energy technologies

Agree strongly	62%
Agree somewhat	18%

The decision of Torridge District Council not to grant planning permission has given me confidence that the planning process is up to the job of regulating renewable energy developments in this area

Agree strongly	42%
Agree somewhat	35%

Local campaigners opposed to WINBEG misrepresented the facts about the development and misled the public

Disagree strongly	78%
Neither agree nor disagree	4%

The WINBEG case demonstrates the triumph of Not In My Back Yard thinking over the greater interests of society at large

Disagree strongly	65%
Disagree somewhat	10%

WINBEG has harmed the cause of renewable energy

Agree strongly	47%
Agree somewhat	29%

WINBEG has made me more sceptical about the whole issue of climate change

Agree somewhat	27%
Neither agree nor disagree	21%

Local campaigners opposed to WINBEG had too much influence on the planning decision

Disagree strongly	74%
Disagree somewhat	12%

The WINBEG case demonstrates the need for public agencies as well as developers to listen to, and act upon, public opinion much earlier

Agree strongly	71%
Agree somewhat	19%

The media had too big a role in the decision to refuse planning permission to WINBEG

Disagree strongly	62%
Disagree somewhat	13%

The WINBEG case highlights the need to take action on reducing energy consumption before developing renewable energy

Agree somewhat	36%
Agree strongly	27%

2.31 Question 12

Below are some alternatives to WINBEG, all of which would provide a similar amount of renewable energy. These alternatives are not alternative proposals for the Winkleigh site: they are other renewable energy options for the district. To what extent do you like each alternative?

This question, a repeat from 2004, is premised on the belief that there needs to be a substantial roll-out of renewable energy infrastructure – of one type or another - in or around the UK. The question therefore asks what types of renewables people would prefer to WINBEG. The main 2007 responses are:

- 50 large wind turbines, each 55 metres (180 foot) high, sited across Torridge District

Don't like at all	46%
Neutral	16%

- 15 very large wind turbines, each 90 metres (300 foot) high, sited offshore of Devon

Like very much	30%
Don't like at all	25%
Like	20%

Note: as question 12 elicited less polarised responses than most, the top three responses are listed.

- A Bioenergy powerplant similar to WINBEG, located in an industrial area of Devon

Don't like at all	33%
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Neutral	24%
Don't like much	14%
Like	14%

- 100 small bioenergy powerplants, providing heat & power across Torridge District

Don't like at all	25%
Neutral	23%
Like very much	18%

- I prefer WINBEG as currently conceived: 2 people agreed (<1%).

2.32 Question 13

An alternative renewable energy project has been proposed for a small part of the Winkleigh airfield. To what extent are you aware of this alternative?

Questions 13 and 14 relate to a locally-proposed alternative to WINBEG. Responses are:

I know a bit about it	34%
I have never heard of it	30%
I have vaguely heard about it	21%

2.33 Question 14

The principal aspects of the alternative project for a small part of the site have been suggested as follows: training in skills for sustainability; sustainability appraisal of individual buildings; demonstration of small-scale renewable technologies (micro-generation); and construction of a small affordable housing scheme for local people using local building materials. To what extent do you agree with the following statements about this alternative proposal? (Please tick only one option for each of the statements)

- The alternative project looks very promising

Agree strongly	33%
Agree somewhat	32%

- The alternative project sounds OK, but I have some concerns about it

Agree somewhat	41%
Neither agree nor disagree	18%

- The focus on developing new skills is the most important aspect of the alternative project

Agree somewhat	35%
Neither agree nor disagree	22%
Agree strongly	20%

- The airfield should not be developed any further

Disagree somewhat	28%
Disagree strongly	23%
Neither agree nor disagree	15%

- The focus on affordable housing is the most important aspect of the alternative project

Agree somewhat	24%
Agree strongly	23%
Neither agree nor disagree	21%

- The alternative project is unlikely to attract funding

Neither agree nor disagree	32%
Agree somewhat	20%

- I would support the alternative project but only if it is controlled and managed by the local community

Agree strongly	37%
Agree somewhat	33%

- The focus on renewable energy is the most important aspect of the alternative project

Neither agree nor disagree	27%
Agree somewhat	26%

- The alternative project should be supported by public agencies

Agree somewhat	31%
Agree strongly	25%
Neither agree nor disagree	22%

2.34 Question 15

Please tick your age group

55-64	31%
65+	43%

2.35 Question 16

Please tick your gender

Male	50%
Female	49%

3. Conclusions

The 2007 survey confirms the negative opinions of the proposed Winkleigh gasifier found in the 2004 survey. The modest response rate means that the results should be interpreted with some caution, but given the history of this controversy there is no reason to believe that the 2007 views are not widely held in the Parish. Neither the changes in the sources of information via which people have learned of the proposed biomass gasifier, nor the apparent hardening of opinion, will be of much surprise to those who have followed the controversy.

In terms of statistically significant differences between 2004 and 2007 responses, perhaps the most interesting are the increase in support for small CHP bioenergy plants as an alternative to WINBEG, and an improvement in perceptions of communications by the public agencies involved, particularly Torridge District Council and Winkleigh Parish Council. The higher level of public support for smaller plant supplying heat and CHP, relative to large power plant, is mirrored in other research conducted under the Supergen Biomass and Bioenergy programme (Upham et al, 2006, 2007). It would also seem that local people do now have more trust in the roles of the public agencies involved.

People continue to express concern about the environmental impacts of the proposed gasifier; particularly those that they expect to impinge directly on the village. Heavy vehicles and pollutants from these and the gasifier remain prominent among the expressed concerns. That 44% of people agreed that the WINBEG case had made them more cynical about the need for renewable energy, and that 76% agreed with the statement that WINBEG has harmed the cause of renewable energy, is concerning. Nevertheless, this is counter-balanced by the large majority (87%) also agreeing with the statement that they are very positive about small scale renewable energy developments, but that WINBEG is far too big for Winkleigh. That the large majority (78%) agreed with the statement that they are in favour of renewable energy but are discouraged by the process by which the government gives support to such projects, confirms previous interpretation of this particular case, namely that poor governance compounds the problems of attempting to site new energy infrastructure in rural or previously undeveloped areas (Upham and Shackley, 2006a).

The above declared support for renewables notwithstanding, this remains a local population that is doubtful of renewable energy infrastructure. As alternatives to WINBEG, 59% did not like the option of 50 large wind turbines, sited across Torridge District, and only 50% were in favour of 15 very large wind turbines sited offshore of Devon. Although support for small scale bioenergy has increased, more people disliked than liked the option of 100 small bioenergy CHP plant across Torridge District (disliked: 37%, liked: 33%). These views clearly beg many further questions and issues.

The alternative renewable energy project proposed for a small part of the Winkleigh airfield by some Winkleigh parishioners is generally supported, with a focus on developing new skills and providing affordable housing considered the most important two aspects of the proposal. More than twice as many people disagreed with the statement that the airfield should not be developed further as agreed with it. People were largely neutral on whether the alternative project was likely to attract funding, and more than two thirds said that they would support the alternative project on the condition that it is controlled and managed

by the local community. 60% agreed that the idea merited the support of public agencies, though 22% were neutral.

The controversy associated with the proposed Winkleigh gasifier has reflected themes present in many renewable energy siting controversies in the UK, some of which are specific to bioenergy, others of which are more generic. As a result of the public and stakeholder opinion studies conducted under the Supergen biomass and bioenergy programme (phase 1), the causes of dissent and approval in a bioenergy context are better understood. While substantial, new low carbon energy provision is required in the UK and globally, this should be rolled out with the consent of affected populations. There is substantial evidence that most people in the vicinity of the proposed Winkleigh gasifier do not give their consent to this proposal. A more detailed discussion of these results will follow in an associated paper.

4. References

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Appendix A Independent Samples t Test

Significant difference denoted by shaded cells

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
heard of?	Equal variances assumed	3.722	.054	.965	853	.335	.007	.007	-.007	.020
	Equal variances not assumed			.870	446.283	.385	.007	.008	-.008	.022
info- PPL	Equal variances assumed	1.596	.207	1.727	855	.085	.062	.036	-.009	.133
	Equal variances not assumed			1.724	580.221	.085	.062	.036	-.009	.133
info- DUST	Equal variances assumed	19.374	.000	-2.099	855	.036	-.067	.032	-.129	-.004
	Equal variances not assumed			-2.159	628.663	.031	-.067	.031	-.128	-.006
info- DW	Equal variances assumed	39.597	.000	-2.991	855	.003	-.074	.025	-.123	-.026
	Equal variances not assumed			-3.247	725.057	.001	-.074	.023	-.119	-.029
info- other local newsletter	Equal variances assumed	.046	.830	.107	855	.915	.004	.034	-.062	.069
	Equal variances not assumed			.107	583.612	.915	.004	.033	-.062	.069
info- neighbour/friend	Equal variances assumed	8.488	.004	-1.385	855	.166	-.049	.035	-.117	.020
	Equal variances not assumed			-1.397	595.806	.163	-.049	.035	-.117	.020
info- local newspaper article	Equal variances assumed	26.561	.000	-2.410	855	.016	-.082	.034	-.150	-.015
	Equal variances not assumed			-2.459	615.621	.014	-.082	.034	-.148	-.017

info- radio tv	Equal variances assumed	58.505	.000	-6.965	855	.000	-.237	.034	-.303	-.170
	Equal variances not assumed			-6.754	536.041	.000	-.237	.035	-.305	-.168
info other	Equal variances assumed	4.735	.030	-1.097	854	.273	-.026	.023	-.071	.020
	Equal variances not assumed			-1.065	535.328	.287	-.026	.024	-.073	.022
prior knowledge	Equal variances assumed	2.364	.125	-6.813	850	.000	-.477	.070	-.614	-.339
	Equal variances not assumed			-7.000	629.378	.000	-.477	.068	-.610	-.343
issue importance	Equal variances assumed	5.630	.018	.913	847	.361	.069	.075	-.079	.217
	Equal variances not assumed			.847	477.568	.398	.069	.081	-.091	.229
nuanced opinion	Equal variances assumed	.430	.512	.363	851	.717	.017	.046	-.074	.107
	Equal variances not assumed			.356	555.138	.722	.017	.047	-.076	.109
concern- air pollution WINBEG	Equal variances assumed	6.581	.010	-1.261	853	.208	-.031	.025	-.080	.017
	Equal variances not assumed			-1.302	636.595	.193	-.031	.024	-.079	.016
concern- odour WINBEG	Equal variances assumed	.320	.572	.284	854	.776	.008	.028	-.046	.062
	Equal variances not assumed			.282	573.598	.778	.008	.028	-.047	.062
concern- light pollution	Equal variances assumed	1.744	.187	-.634	854	.527	-.023	.036	-.093	.048
	Equal variances not assumed			-.635	585.740	.526	-.023	.036	-.093	.048
concern- noise WINBEG	Equal variances assumed	99.046	.000	-4.461	853	.000	-.147	.033	-.212	-.082
	Equal variances not assumed			-4.697	671.039	.000	-.147	.031	-.209	-.086

concern- appearance WINBEG	Equal variances assumed	2.233	.135	- .740	854	.460	- .019	.026	- .071	.032
	Equal variances not assumed			- .752	609.466	.452	- .019	.026	- .070	.031
concern- industrial precedent	Equal variances assumed	2.299	.130	- .727	854	.467	- .026	.036	- .096	.044
	Equal variances not assumed			- .729	586.737	.466	- .026	.036	- .096	.044
concern- fuel wastes	Equal variances assumed	8.165	.004	- 1.399	853	.162	- .037	.027	- .090	.015
	Equal variances not assumed			- 1.443	634.883	.149	- .037	.026	- .088	.013
concern- technological reliability	Equal variances assumed	10.481	.001	- 1.575	853	.116	- .045	.029	- .101	.011
	Equal variances not assumed			- 1.623	632.212	.105	- .045	.028	- .100	.009
concern- lorry air pollution	Equal variances assumed	8.802	.003	- 1.456	853	.146	- .035	.024	- .081	.012
	Equal variances not assumed			- 1.517	652.249	.130	- .035	.023	- .079	.010
concern- lorry traffic congestion	Equal variances assumed	.863	.353	.466	853	.641	.009	.018	- .028	.045
	Equal variances not assumed			.457	554.993	.647	.009	.019	- .028	.046
concern- landscape change: energy crops	Equal variances assumed	18.348	.000	- 2.039	853	.042	- .067	.033	- .131	- .002
	Equal variances not assumed			- 2.088	622.052	.037	- .067	.032	- .129	- .004
concern- other environmental impacts: energy crops	Equal variances assumed	25.916	.000	- 2.375	853	.018	- .083	.035	- .151	- .014
	Equal variances not assumed			- 2.414	609.634	.016	- .083	.034	- .150	- .015
concern- negative effect on tourism	Equal variances assumed	9.373	.002	1.631	853	.103	.056	.034	- .011	.123
	Equal variances not			1.610	563.353	.108	.056	.035	- .012	.123

	assumed									
concern-credibility of developer	Equal variances assumed	1.924	.166	-.688	854	.492	-.017	.025	-.067	.032
	Equal variances not assumed			-.699	609.775	.485	-.017	.025	-.066	.031
concern-decrease in local house prices	Equal variances assumed	11.092	.001	1.768	853	.077	.060	.034	-.007	.126
	Equal variances not assumed			1.741	559.457	.082	.060	.034	-.008	.127
benefits-employment at WINBEG	Equal variances assumed	10.578	.001	1.579	854	.115	.047	.030	-.011	.105
	Equal variances not assumed			1.621	626.446	.105	.047	.029	-.010	.104
benefits-stimulation of airfield businesses	Equal variances assumed	.479	.489	.345	854	.730	.008	.024	-.039	.056
	Equal variances not assumed			.348	596.811	.728	.008	.024	-.039	.056
benefits-indirect employment	Equal variances assumed	5.154	.023	1.116	854	.265	.030	.027	-.023	.083
	Equal variances not assumed			1.143	621.934	.253	.030	.026	-.022	.082
benefits-develop UK bioenergy industry	Equal variances assumed	2.267	.132	-.757	854	.449	-.017	.022	-.060	.026
	Equal variances not assumed			-.740	547.932	.460	-.017	.022	-.061	.027
benefits-income for Devonshire farmers	Equal variances assumed	30.951	.000	2.665	854	.008	.066	.025	.017	.114
	Equal variances not assumed			2.866	708.927	.004	.066	.023	.021	.111
benefits- reduce greenhouse gases	Equal variances assumed	9.158	.003	1.481	854	.139	.038	.026	-.013	.090
	Equal variances not assumed			1.533	641.098	.126	.038	.025	-.011	.088

benefits- environmental benefits of energy crops	Equal variances assumed	22.062	.000	2.289	853	.022	.038	.017	.005	.071
	Equal variances not assumed			2.573	785.702	.010	.038	.015	.009	.067
benefits- encourage tourism	Equal variances assumed	27.372	.000	2.538	853	.011	.043	.017	.010	.077
	Equal variances not assumed			2.880	800.271	.004	.043	.015	.014	.073
benefits- winter employment in agiculture	Equal variances assumed	61.461	.000	3.673	854	.000	.086	.024	.040	.133
	Equal variances not assumed			4.121	782.378	.000	.086	.021	.045	.128
benefits- diversion of biomass from landfill	Equal variances assumed	16.553	.000	1.984	854	.048	.042	.021	.000	.084
	Equal variances not assumed			2.124	701.204	.034	.042	.020	.003	.081
	Equal variances not assumed			18.681	558.254	.000	.895	.048	.801	.990
alternatives- 50 large turbines	Equal variances assumed	1.841	.175	-1.018	854	.309	-.105	.103	-.307	.097
	Equal variances not assumed			-1.007	565.962	.314	-.105	.104	-.309	.100
alternatives- 15 very large turbines	Equal variances assumed	.103	.749	.095	853	.924	.011	.119	-.223	.246
	Equal variances not assumed			.096	587.470	.924	.011	.119	-.223	.245
alternatives- WINBEG on industrial site	Equal variances assumed	.091	.763	-1.199	853	.231	-.125	.104	-.330	.080
	Equal variances not assumed			-1.202	587.026	.230	-.125	.104	-.330	.079
alternatives- 100 small bioenergy plant	Equal variances assumed	9.750	.002	-6.057	854	.000	-.649	.107	-.860	-.439
	Equal variances not assumed			-5.857	532.297	.000	-.649	.111	-.867	-.432
communication- SWRDA	Equal variances	27.691	.000	-5.198	854	.000	-.337	.065	-.465	-.210

	assumed									
	Equal variances not assumed			-4.912	500.949	.000	-.337	.069	-.472	-.202
communication-DCC	Equal variances assumed	28.797	.000	-10.957	852	.000	-.744	.068	-.878	-.611
	Equal variances not assumed			-9.952	453.836	.000	-.744	.075	-.891	-.597
communication-TDC	Equal variances assumed	28.868	.000	-14.307	852	.000	-1.120	.078	1.274	-.967
	Equal variances not assumed			-13.317	482.282	.000	-1.120	.084	1.286	-.955
comunication-WPC	Equal variances assumed	17.717	.000	-6.391	851	.000	-.671	.105	-.878	-.465
	Equal variances not assumed			-6.743	675.768	.000	-.671	.100	-.867	-.476
age group	Equal variances assumed	3.549	.060	-2.566	850	.010	-.264	.103	-.466	-.062
	Equal variances not assumed			-2.595	602.284	.010	-.264	.102	-.464	-.064
gender	Equal variances assumed	10.721	.001	-.216	846	.829	-.008	.037	-.081	.065
	Equal variances not assumed			-.211	552.552	.833	-.008	.038	-.082	.066

Appendix B Mann Whitney U test results

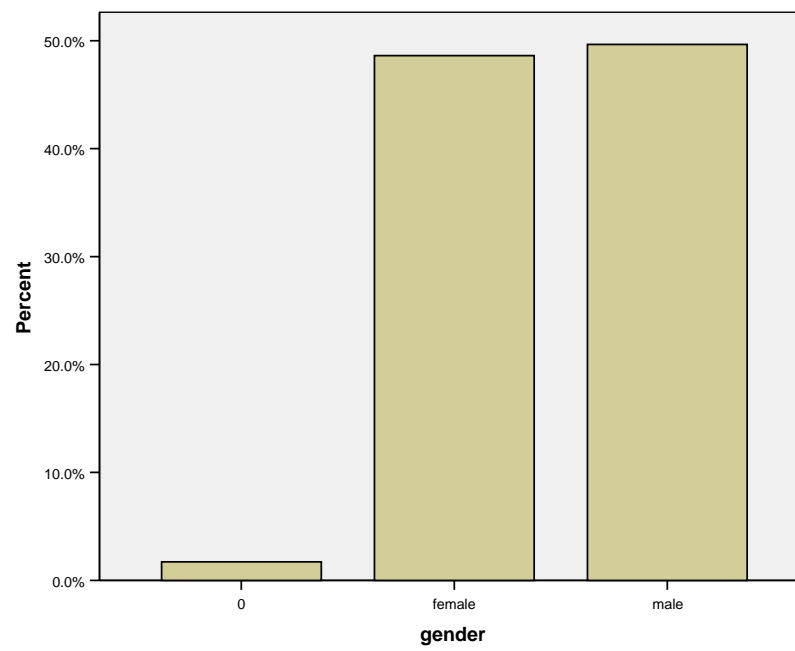
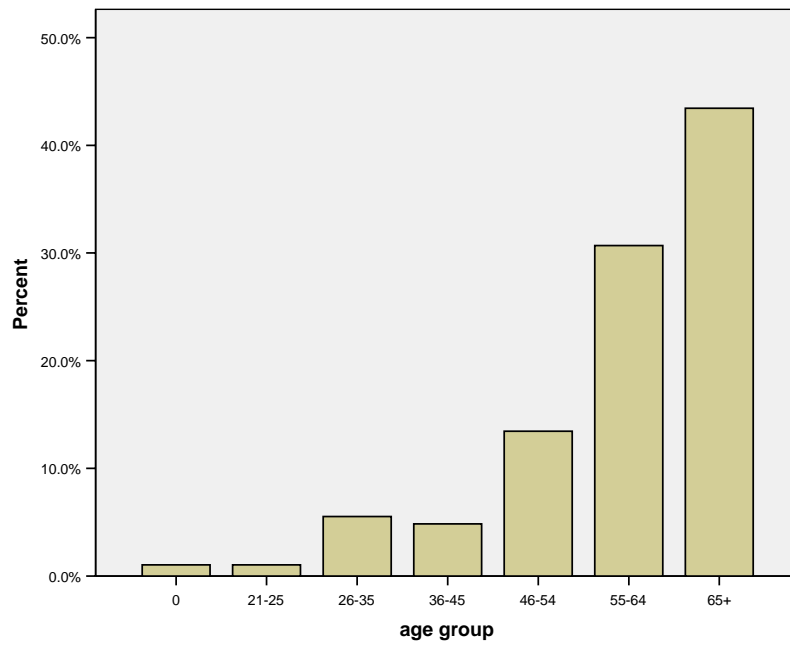
Variables for which there are significant differences between 2004 and 2007 are in shaded cells (i.e. where significance is <.05). Significance is shown in the 'Asymp. Sig. (2-tailed)' row, where values >0.05 indicate 95% confidence of the difference having not occurred by chance.

	heard of?	info- PPL	info- DUST	info- DW	info- other local newsletter	info- neighbour/friend
Mann-Whitney U	81,375.000	77,100.000	76,724.000	76,101.000	81,920.000	78,223.500
Wilcoxon W	123,570.000	119,295.000	237,752.000	237,129.000	124,115.000	239,251.500
Z	-0.965	-1.725	-2.095	-2.977	-0.107	-1.384
Asymp. Sig. (2-tailed)	0.335	0.085	0.036	0.003	0.915	0.166
	info- local newspaper article	info- radio tv	info other	prior knowledge	issue importance	Nuanced opinion
Mann-Whitney U	75,434.000	62,764.500	79,834.000	59,816.500	79,318.000	80,954.500
Wilcoxon W	236,462.000	223,792.500	240,862.000	218,019.500	235,838.000	123,149.500
Z	-2.403	-6.780	-1.097	-6.708	-0.695	-0.288
Asymp. Sig. (2-tailed)	0.016	0.000	0.272	0.000	0.487	0.774
	concern- air pollution WINBEG	concern- odour WINBEG	concern- light pollution	concern- noise WINBEG	concern- appearance WINBEG	concern- industrial precedent
Mann-Whitney U	79,350.000	81,426.000	80,208.000	69,867.500	80,471.000	79,939.000
Wilcoxon W	239,245.000	123,621.000	240,669.000	229,762.500	240,932.000	240,400.000
Z	-1.261	-0.284	-0.634	-4.412	-0.740	-0.727
Asymp. Sig. (2-tailed)	0.207	0.776	0.526	0.000	0.459	0.467

	concern- fuel wastes	concern- technological reliability	concern- lorry air pollution	concern- lorry traffic congestion	concern- landscape change: energy crops	concern- other environmental impacts: energy crops
Mann-Whitney U	78,870.000	78,230.000	79,097.500	81,220.000	76,462.500	75,145.000
Wilcoxon W	238,765.000	238,125.000	238,992.500	123,415.000	236,357.500	235,040.000
Z	-1.398	-1.574	-1.455	-0.466	-2.035	-2.369
Asymp. Sig. (2-tailed)	0.162	0.115	0.146	0.641	0.042	0.018
	concern- negative effect on tourism	concern- credibility of developer	concern- decrease in local house prices	benefits- employment at WINBEG	benefits- stimulation of airfield businesses	benefits- indirect employment
Mann-Whitney U	77,370.000	80,644.000	77,050.000	78,212.000	81,383.000	79,594.000
Wilcoxon W	119,565.000	241,105.000	119,245.000	120,407.000	123,578.000	121,789.000
Z	-1.629	-0.688	-1.766	-1.578	-0.345	-1.116
Asymp. Sig. (2-tailed)	0.103	0.492	0.077	0.115	0.730	0.264
	benefits- develop UK bioenergy industry	benefits- income for Devonshire farmers	benefits- reduce greenhouse gases	benefits- environmental benefits of energy crops	benefits- encourage tourism	benefits- winter employment in agriculture
Mann-Whitney U	80,706.000	76,661.000	78,911.000	78,812.500	78,377.500	74,977.000
Wilcoxon W	241,167.000	118,856.000	121,106.000	121,007.500	120,572.500	117,172.000
Z	-0.757	-2.655	-1.480	-2.283	-2.530	-3.646
Asymp. Sig. (2-tailed)	0.449	0.008	0.139	0.022	0.011	0.000

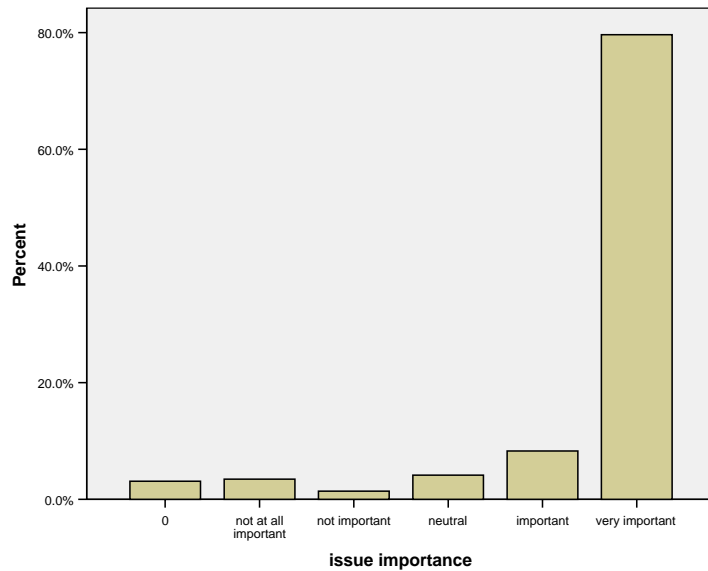
	benefits- diversion of biomass from landfill		alternatives- 50 large turbines	alternatives- 15 very large turbines	alternatives- WINBEG on industrial site	alternatives- 100 small bioenergy plant
Mann-Whitney U	78,595.000		79,017.500	81,131.000	77,642.500	63,021.500
Wilcoxon W	120,790.000		239,478.500	123,326.000	237,537.500	223,482.500
Z	-1.980		-0.947	-0.239	-1.297	-5.725
Asymp. Sig. (2-tailed)	0.048		0.344	0.811	0.194	0.000
	communication- SWRDA	communication- DCC	communication- TDC	communication- WPC	age group	gender
Mann-Whitney U	65,758.500	48,721.000	39,361.000	60,786.500	71,263.500	79,606.500
Wilcoxon W	226,219.500	208,051.000	198,691.000	219,552.500	229,466.500	235,567.500
Z	-5.528	-10.494	-13.078	-6.283	-3.142	-0.444
Asymp. Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.002	0.657

Appendix C Demographic characteristics

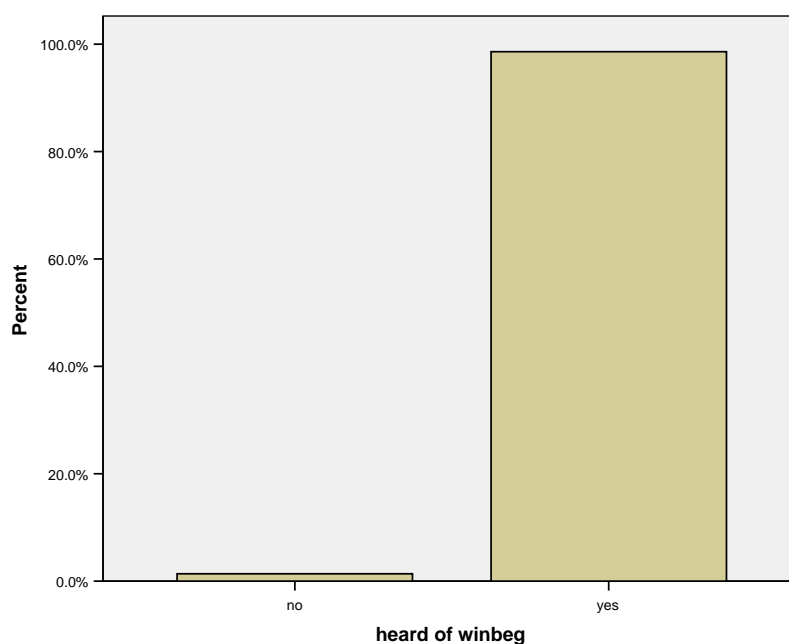


Appendix D Bar charts: questionnaire responses

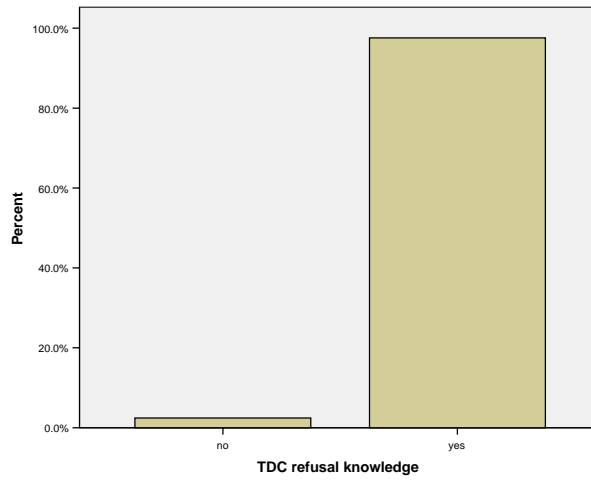
Question 1. On a scale of 1 to 5, how important an issue *for you* is the WINBEG proposal?



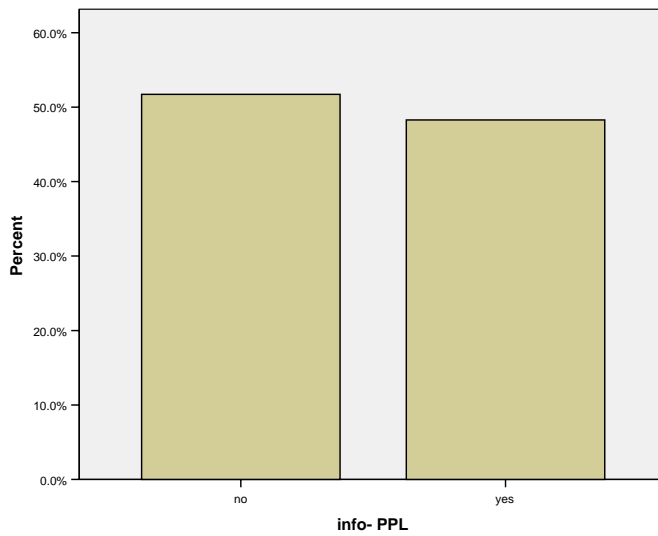
Question 2. Before reading this questionnaire, had you heard of the proposal to build a bioenergy power station (WINBEG) on the old Winkleigh airfield?

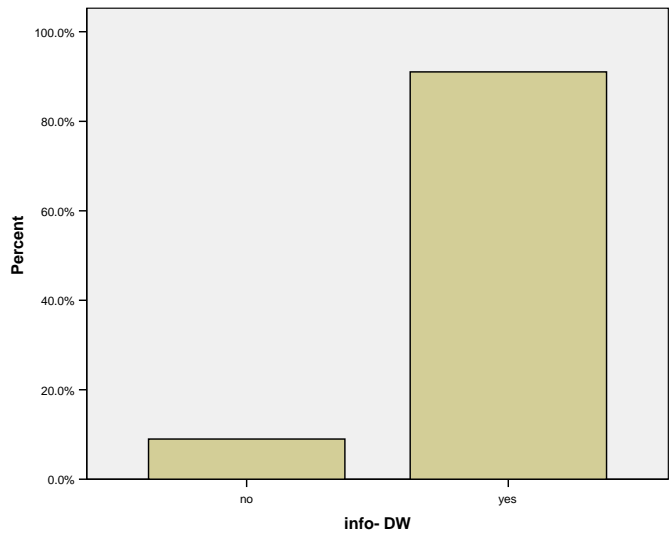
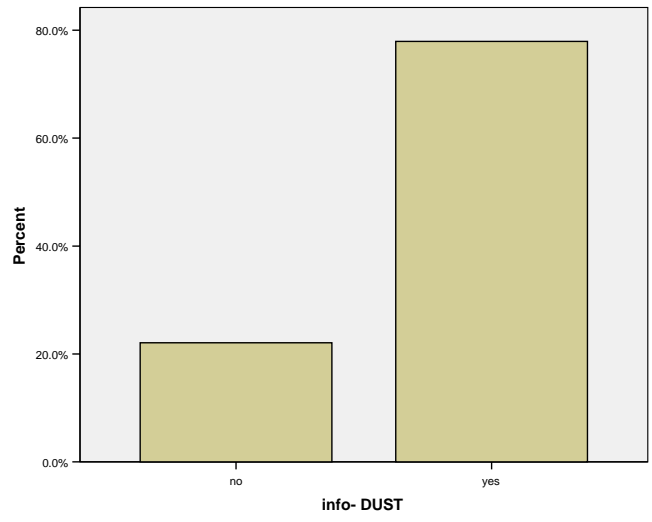


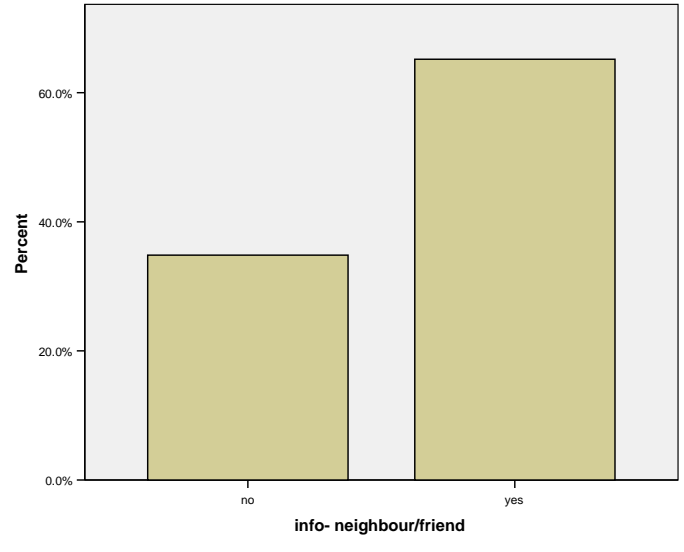
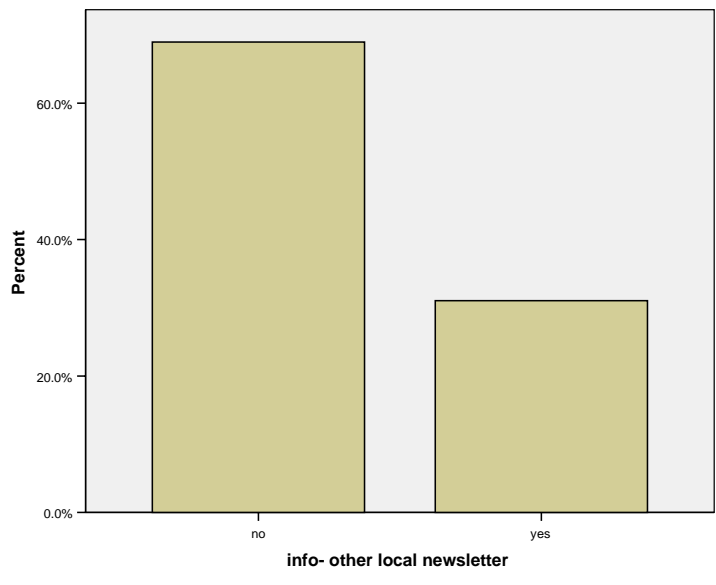
Question 3. Before reading this questionnaire were you aware that Torridge District Council had refused planning permission for WINBEG in 2006?

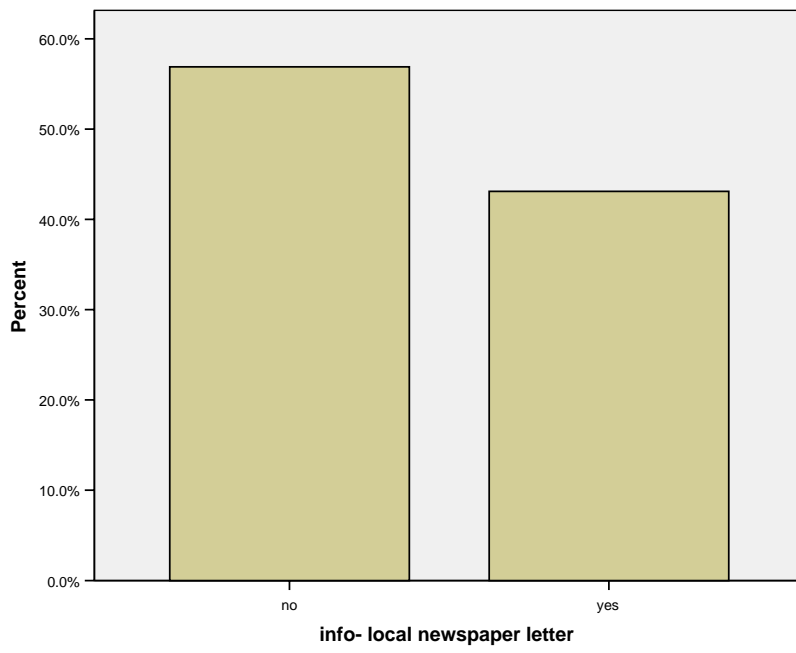
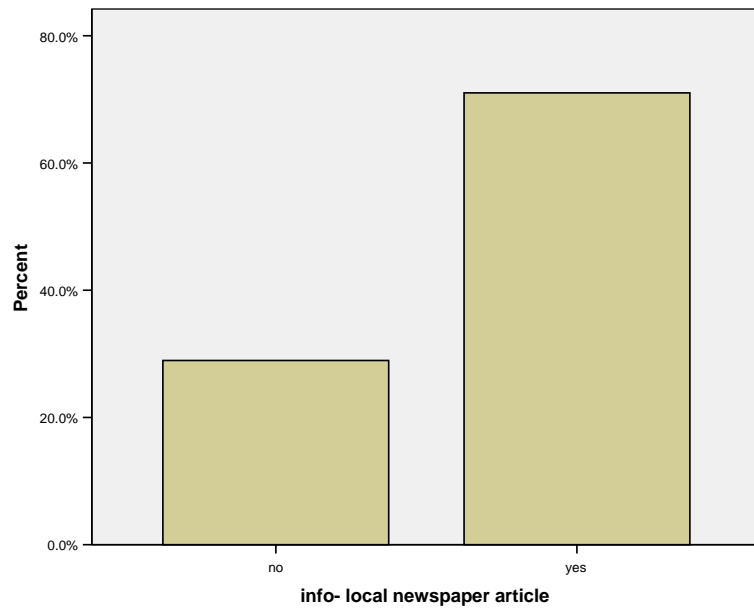


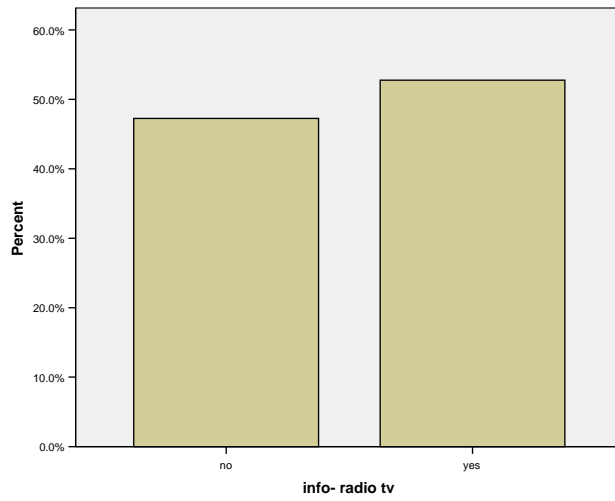
Question 4. If you had heard about WINBEG before, from what information sources did you hear about it?



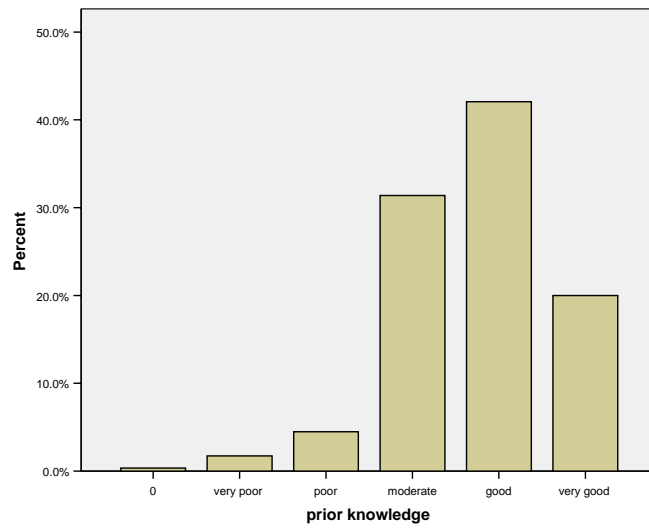




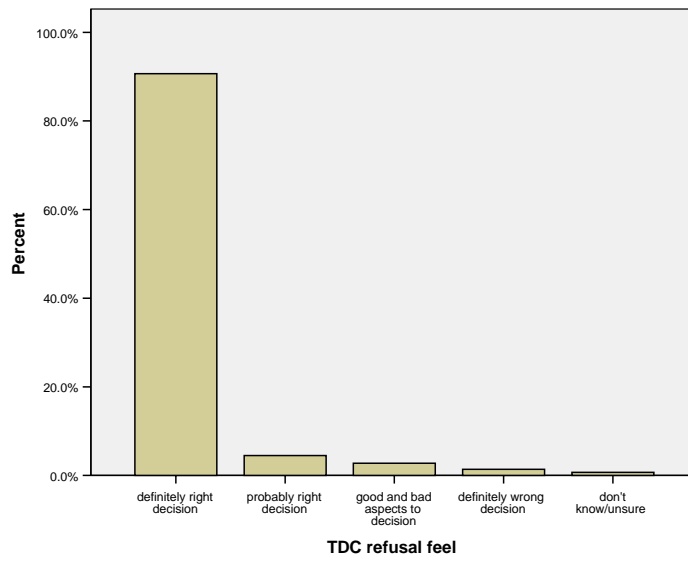




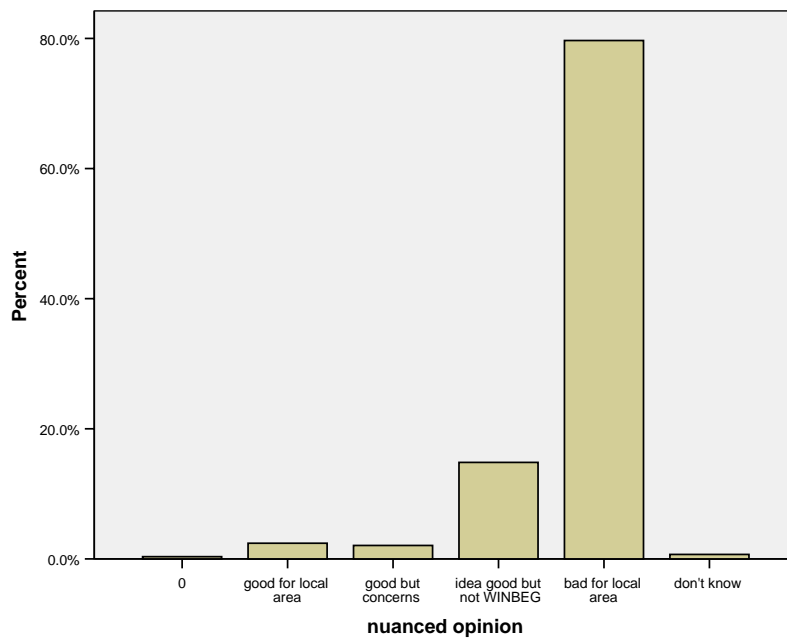
Question 5. How would you rate your level of knowledge of WINBEG?



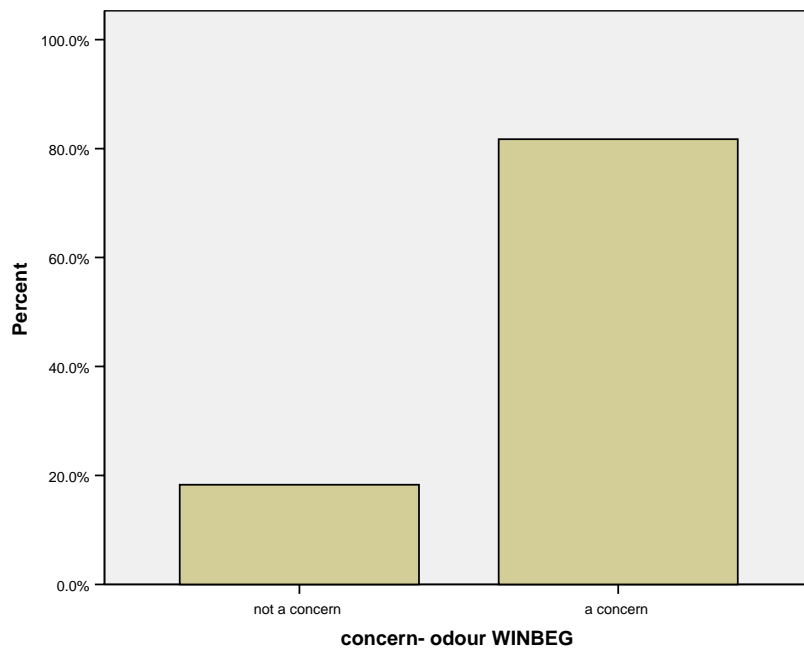
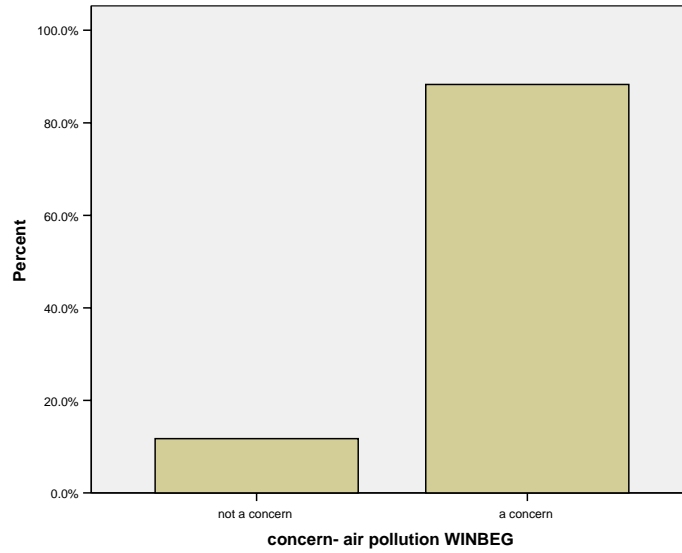
Question 6. How do you feel about the decision of Torr ridge District Council to refuse WINBEG planning permission?

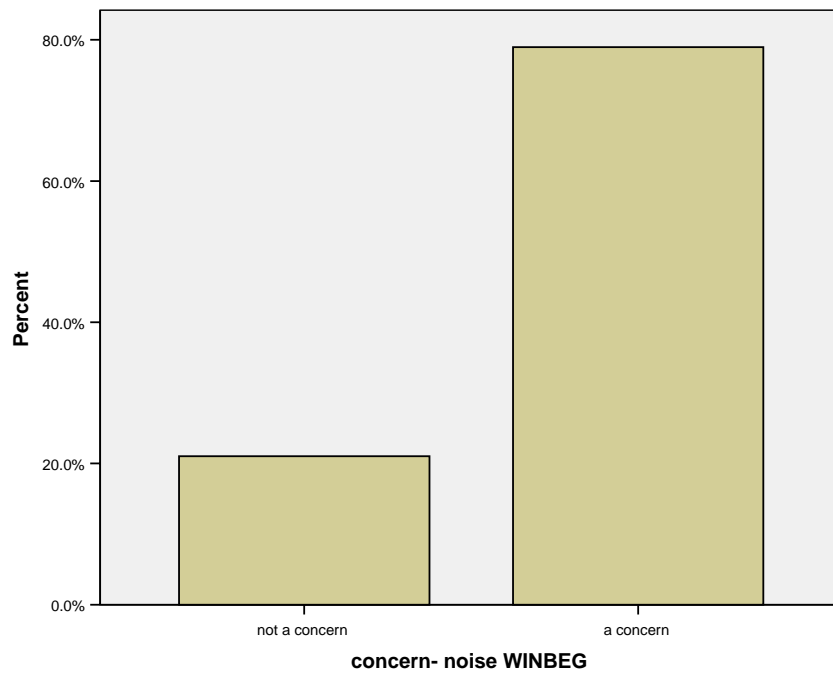
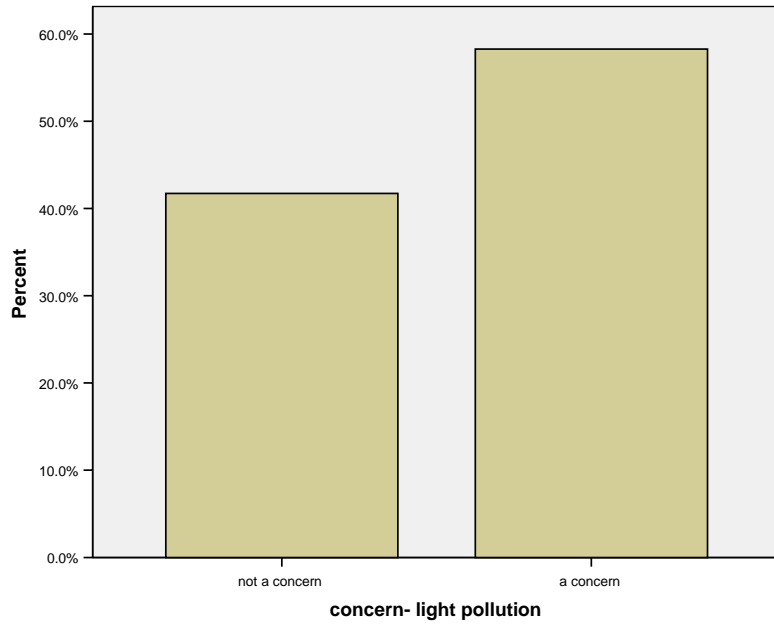


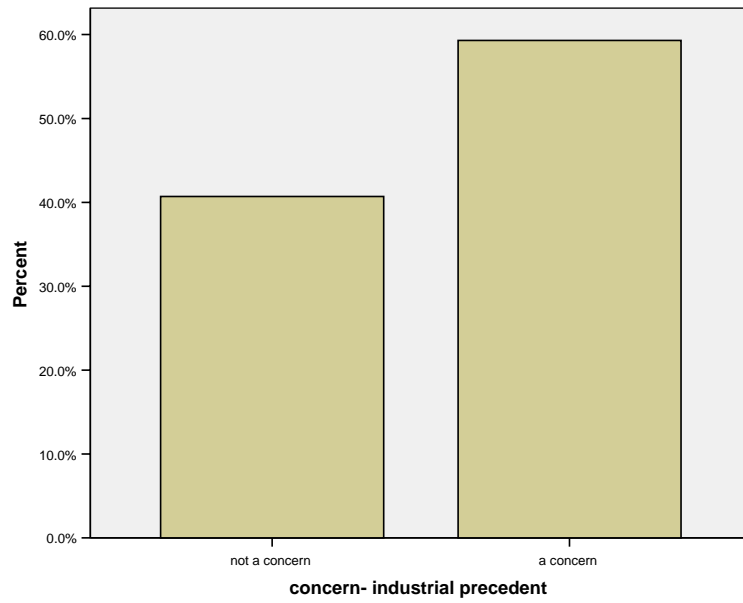
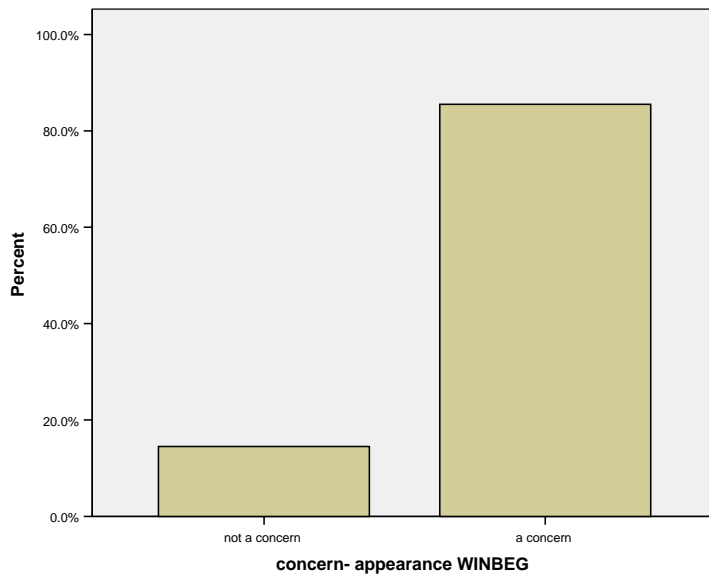
Question 7. Which of the following is nearest to your own opinion?

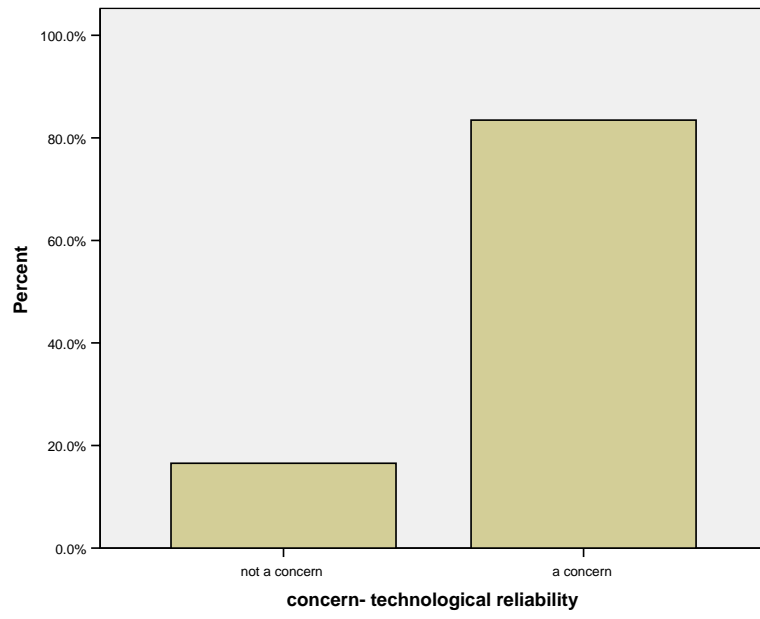
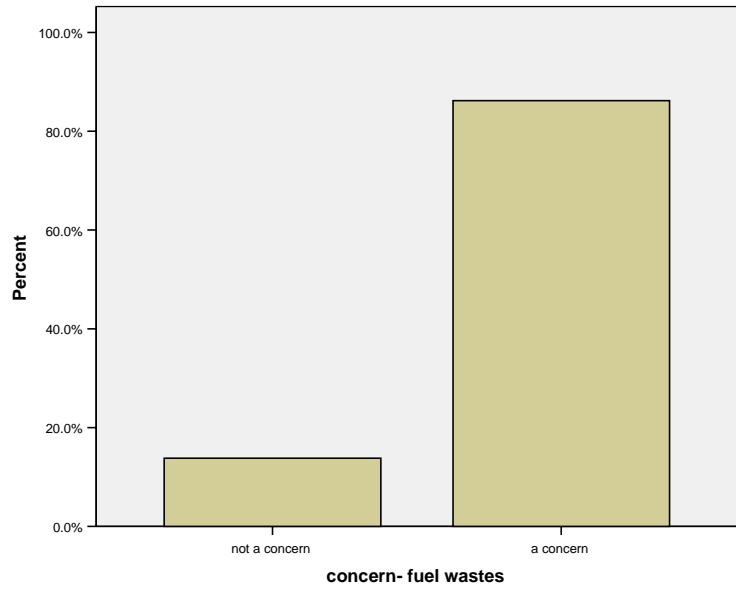


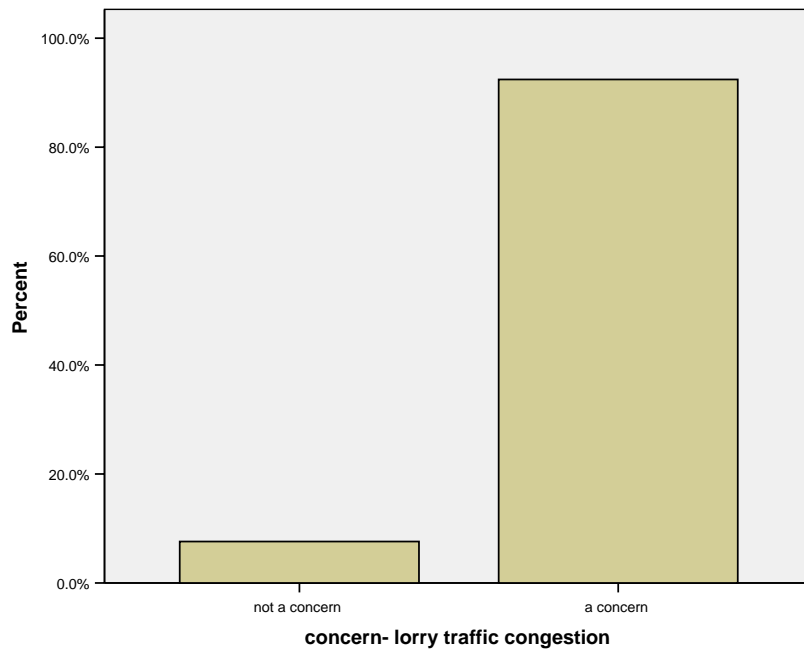
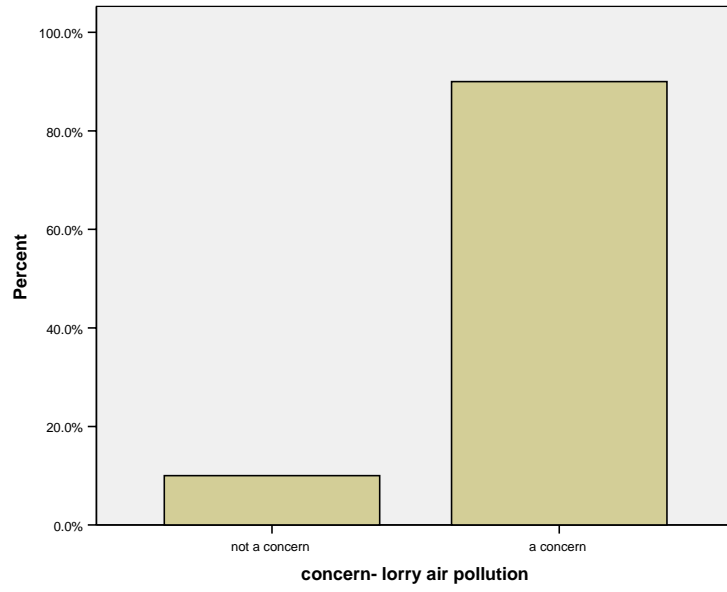
Question 8. Which of the following potentially negative aspects of WINBEG have concerned you over the past few years?

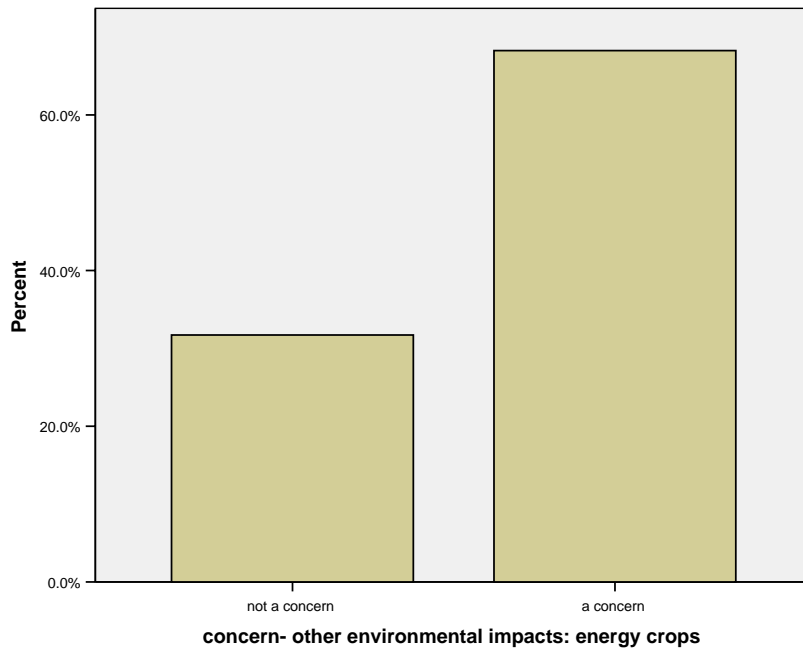
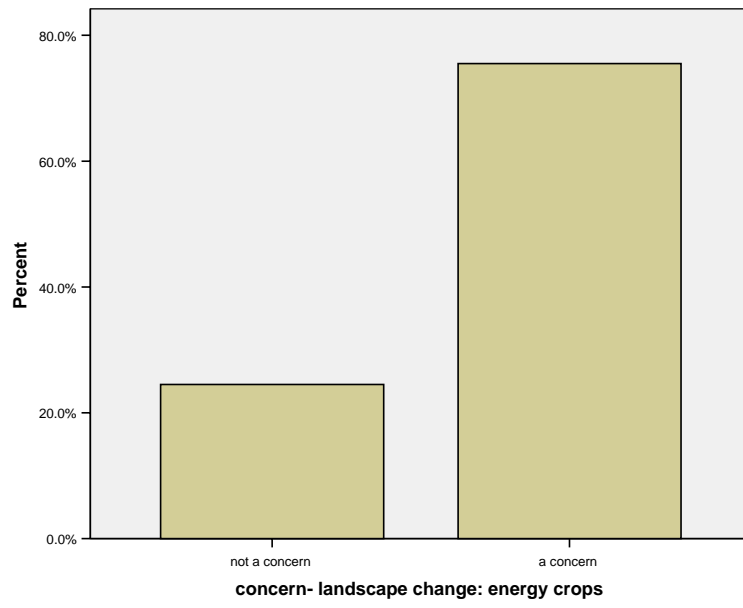


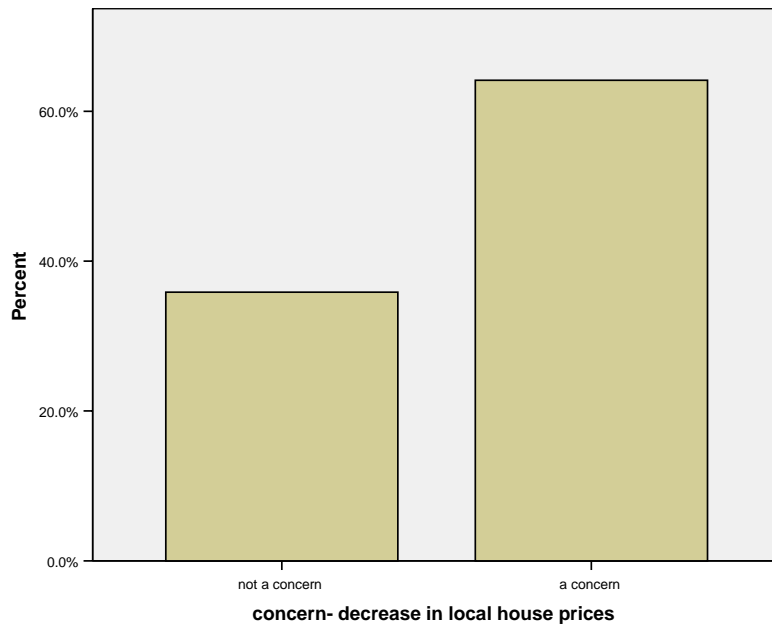
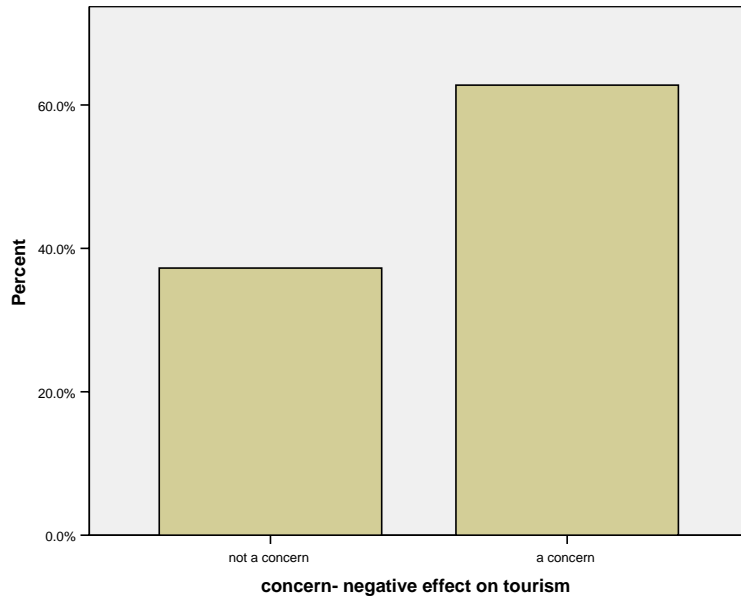




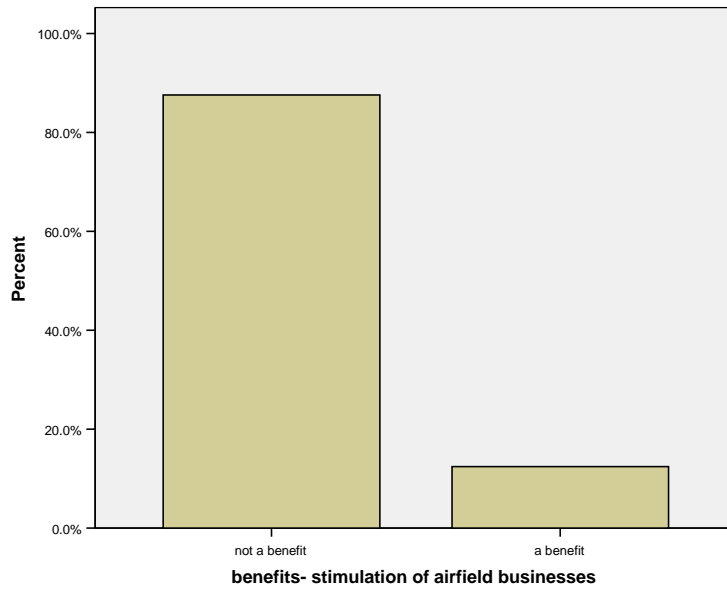
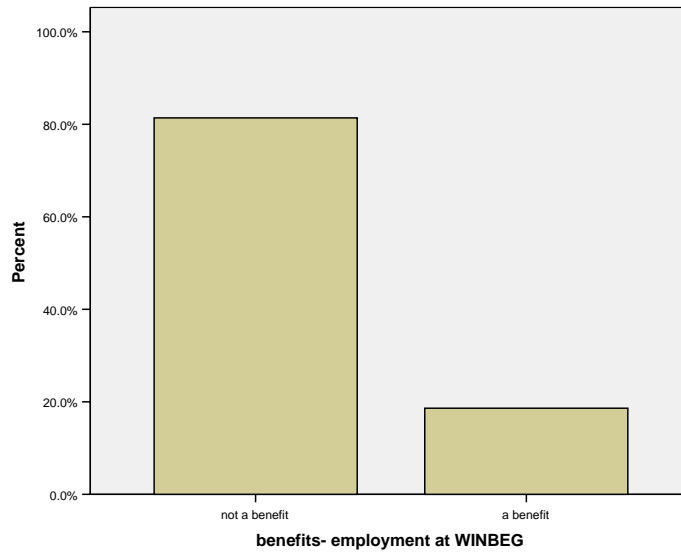


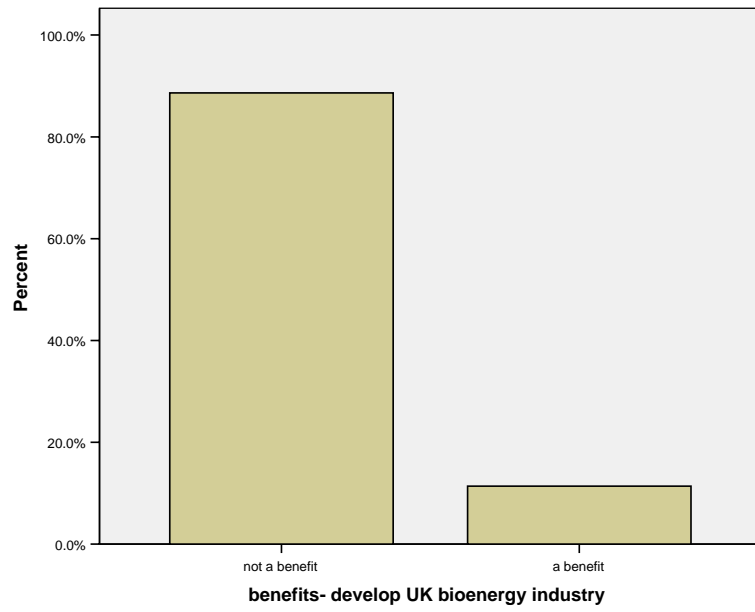
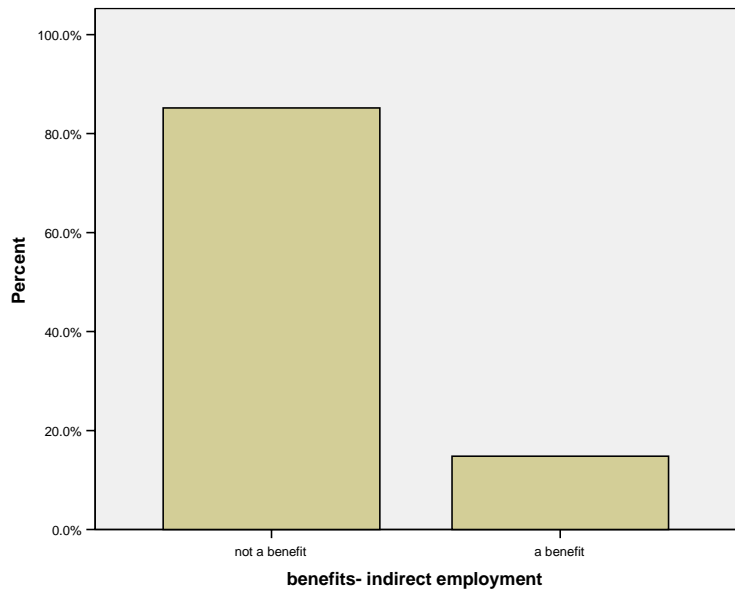


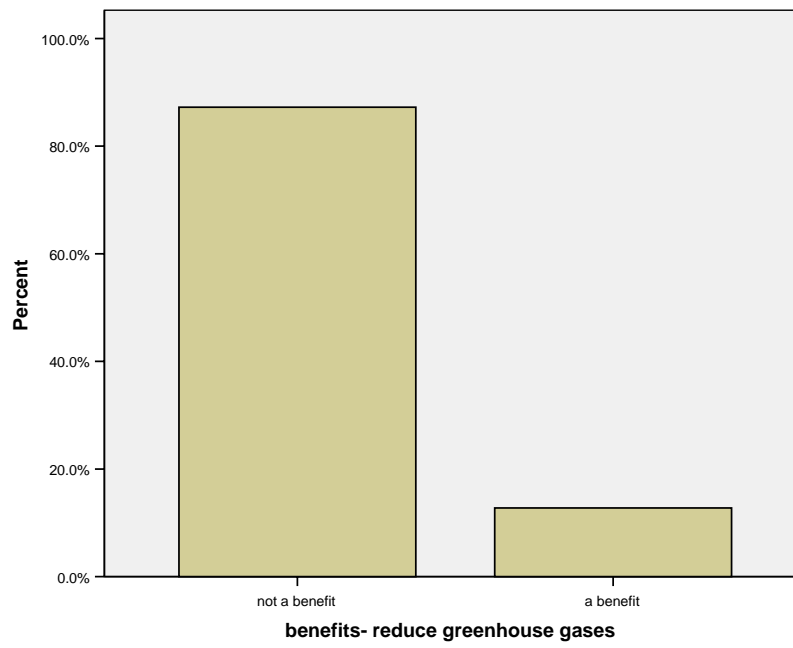
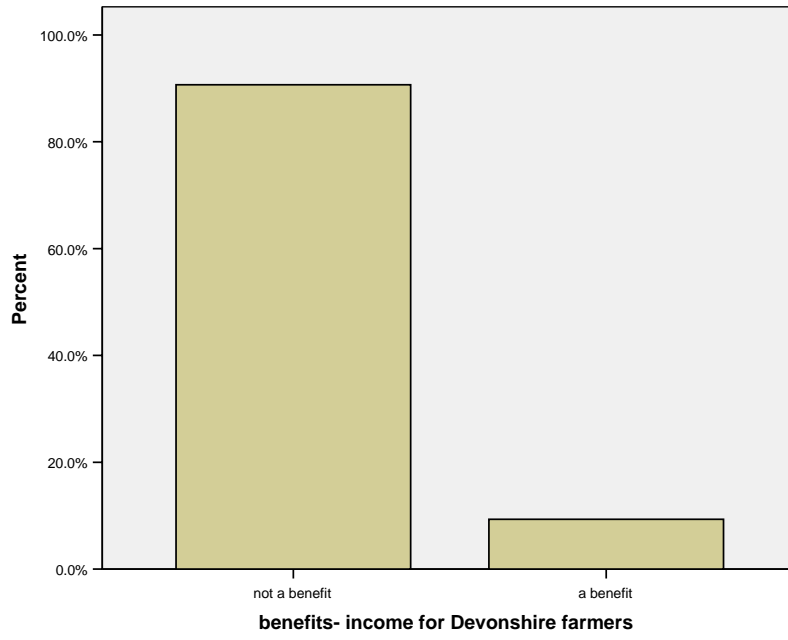


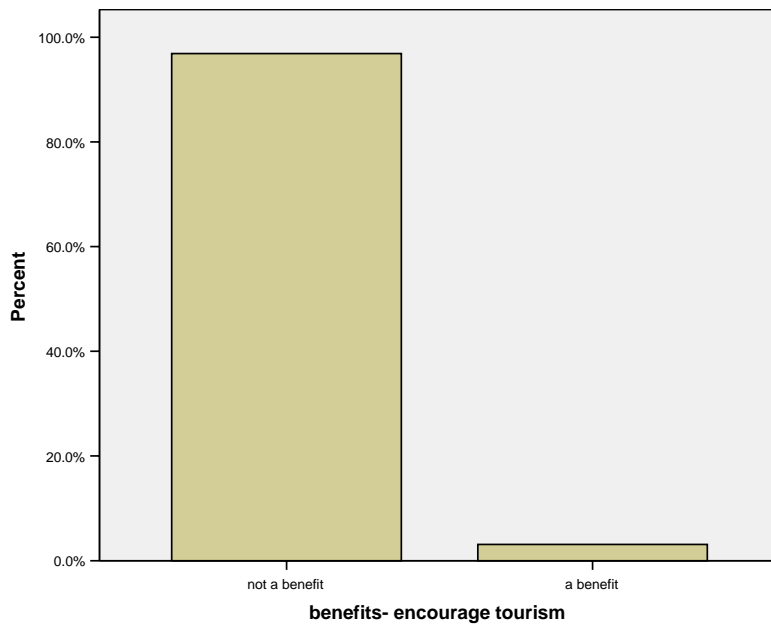
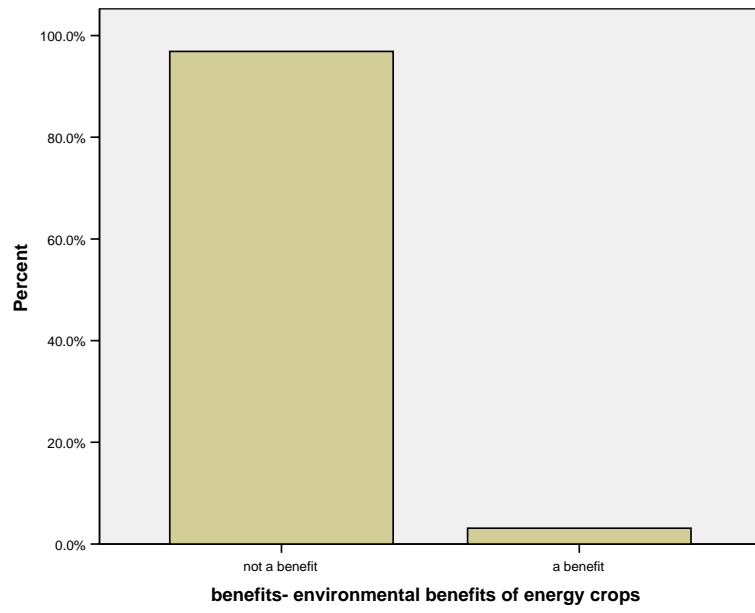


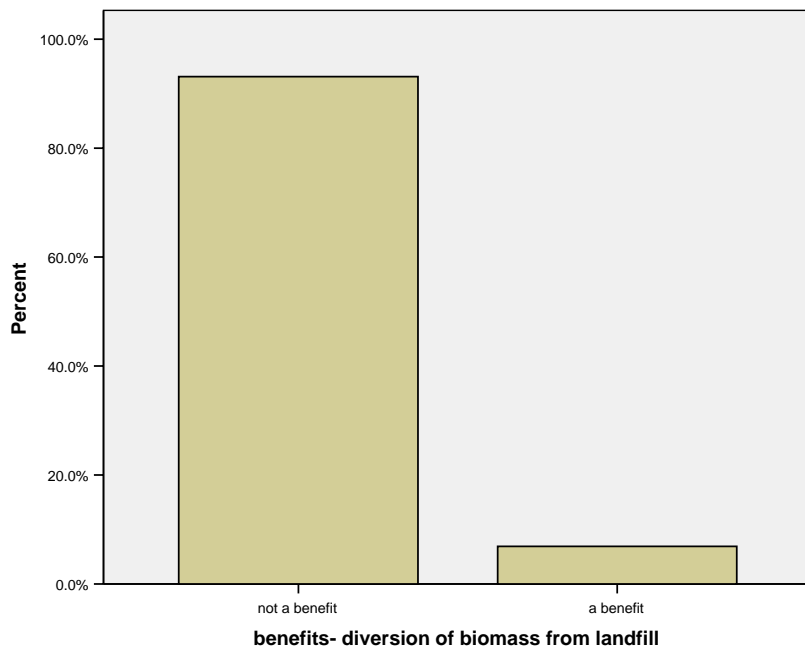
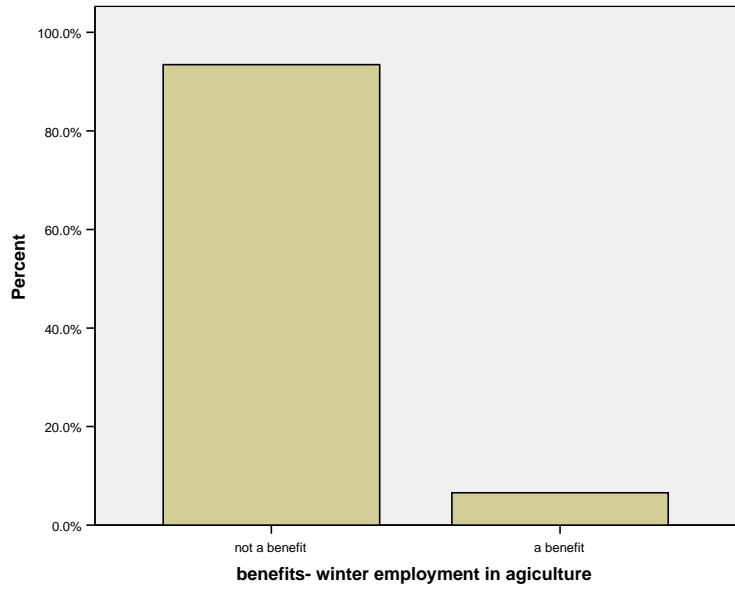
Question 9. Which of the following potentially positive aspects of WINBEG have you considered plausible over the past few years?



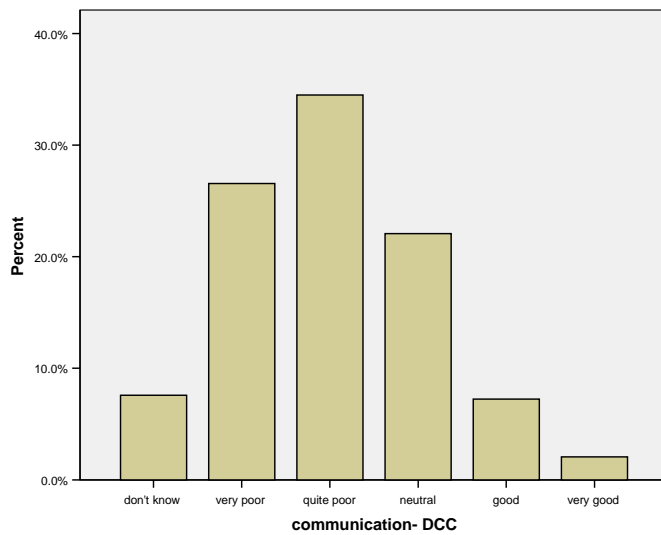
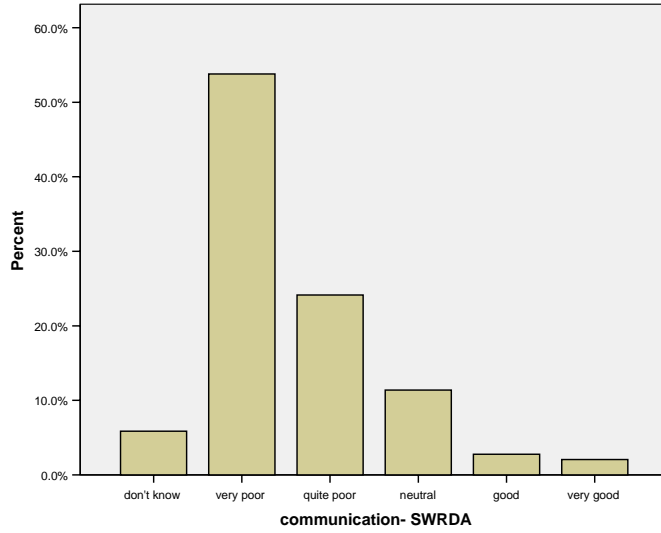


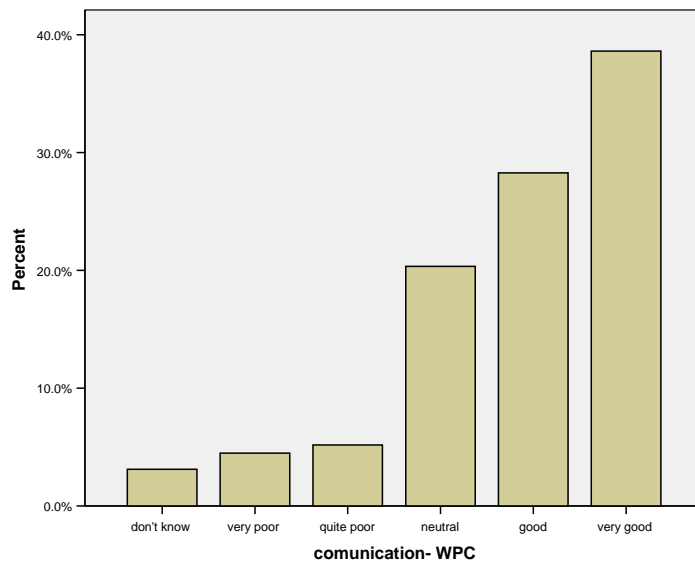
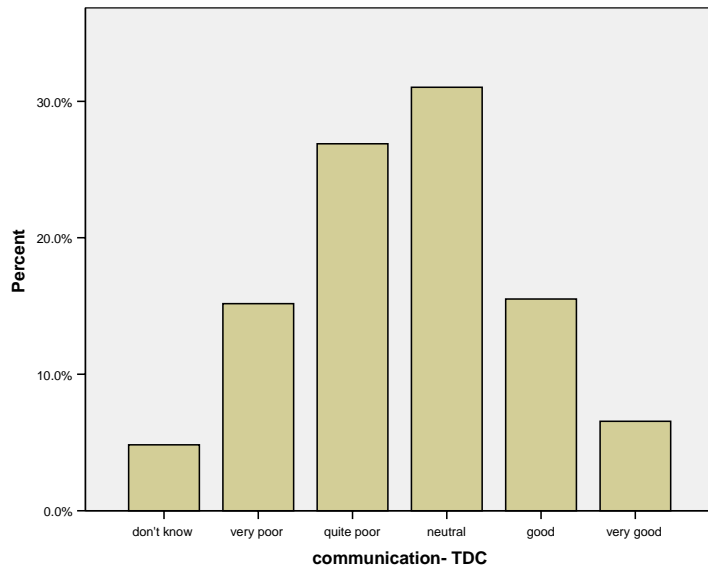




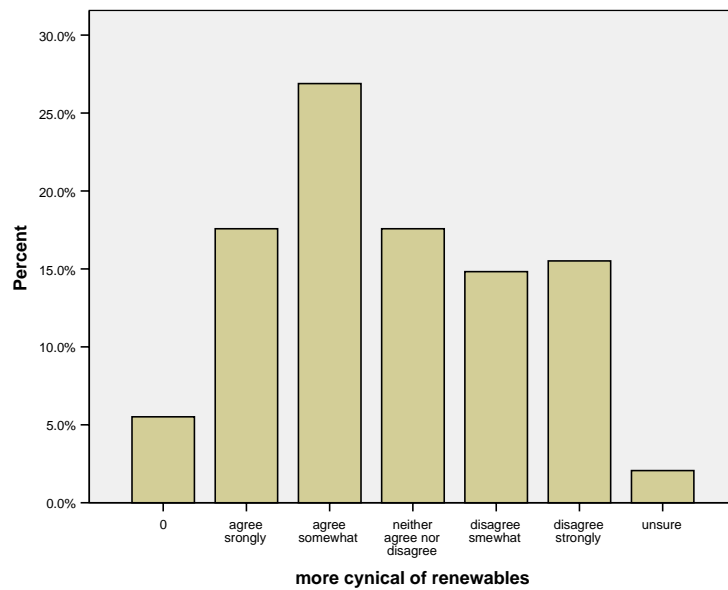
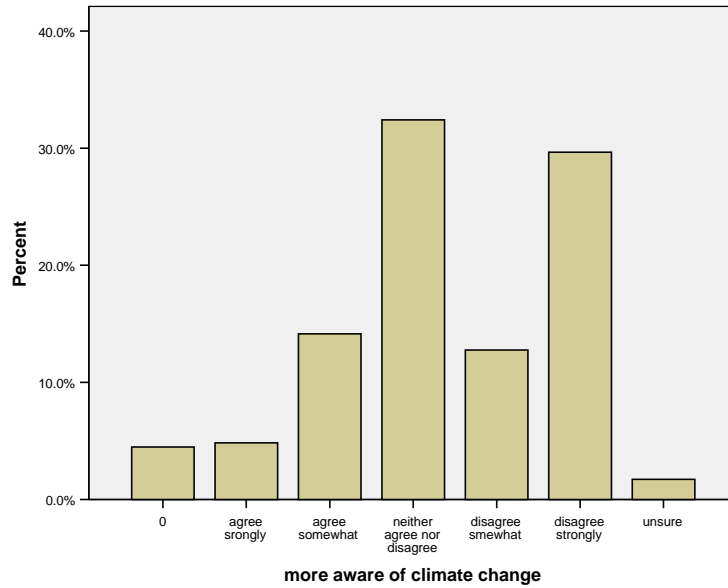


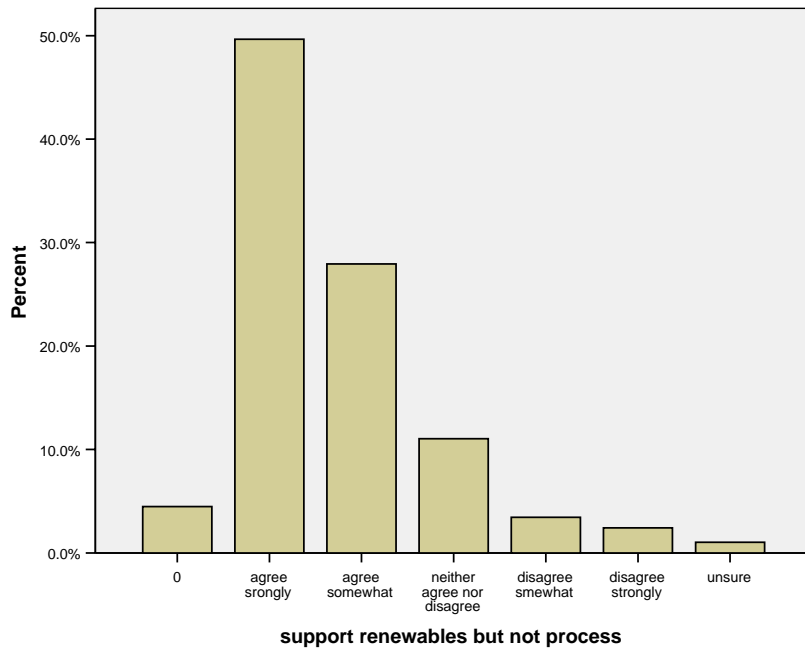
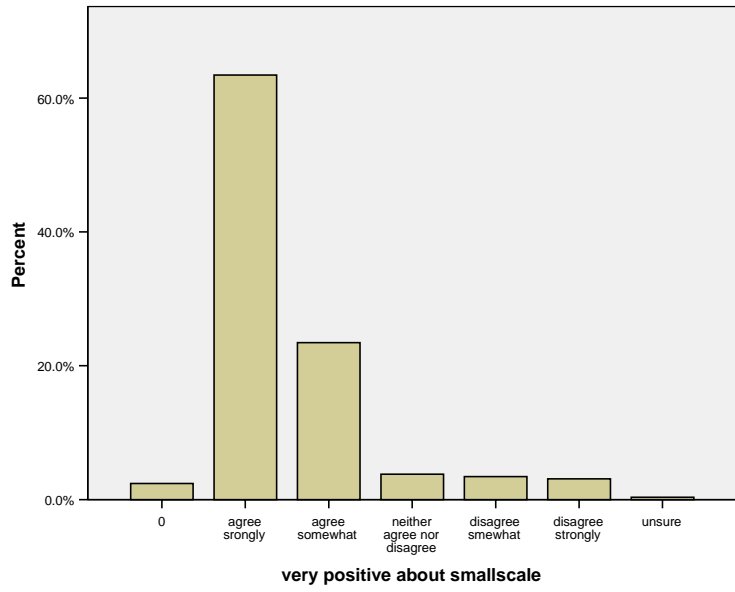
Question 10. Do you think the level of communication by public bodies, about WINBEG, has been adequate?

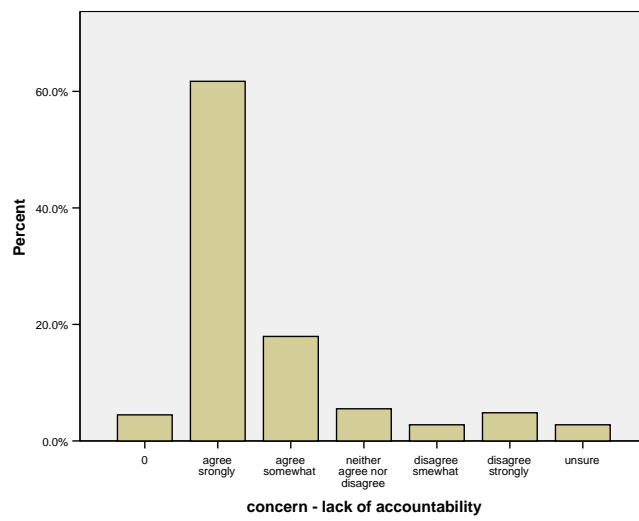
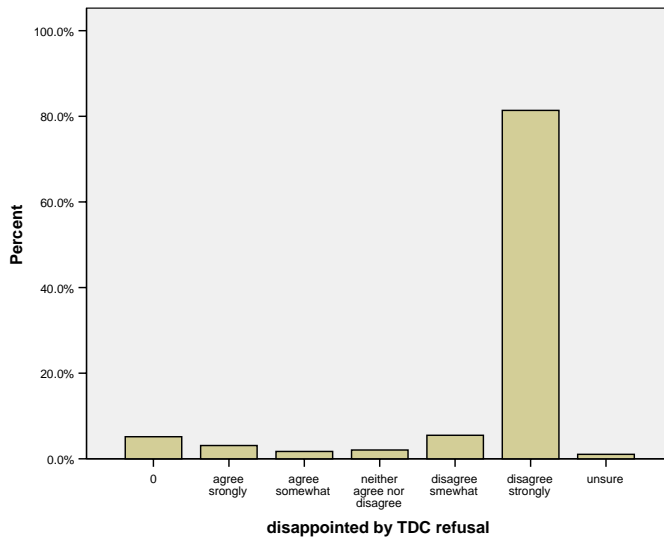


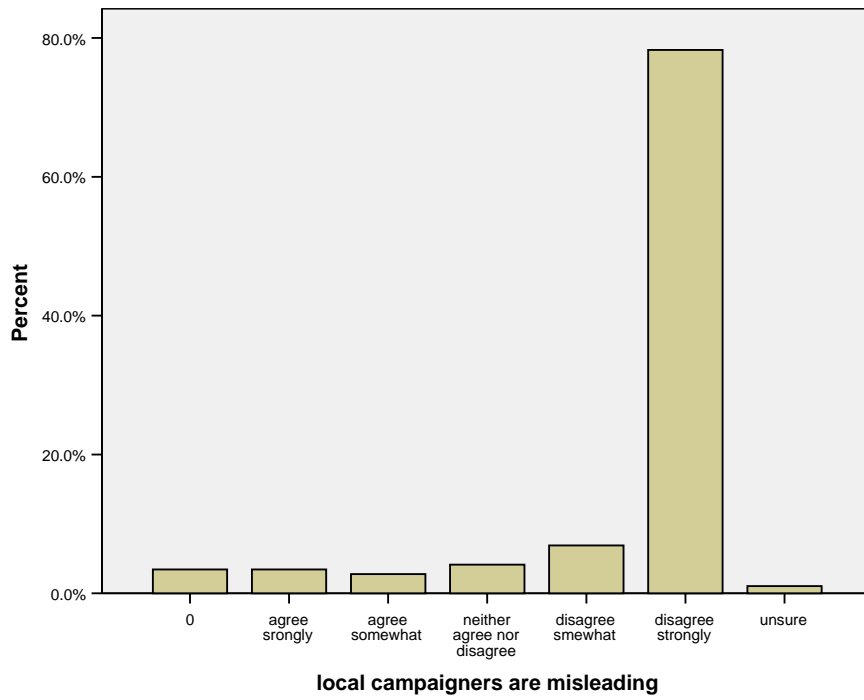
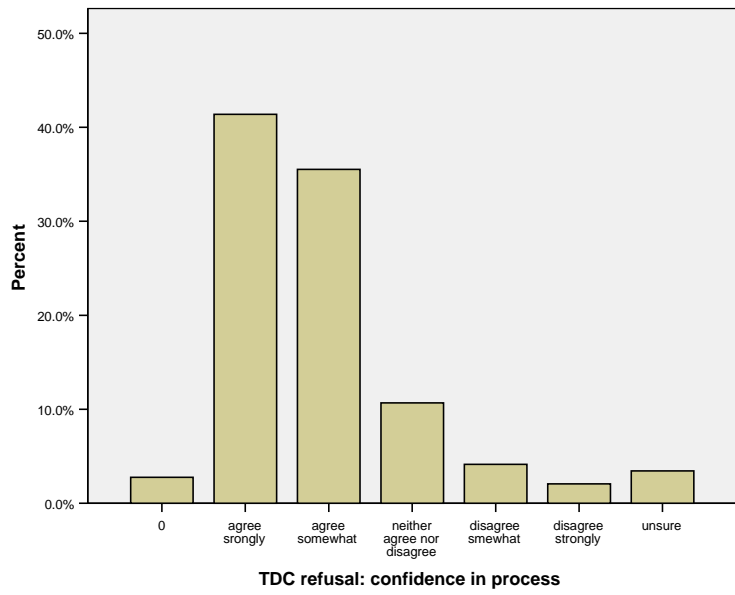


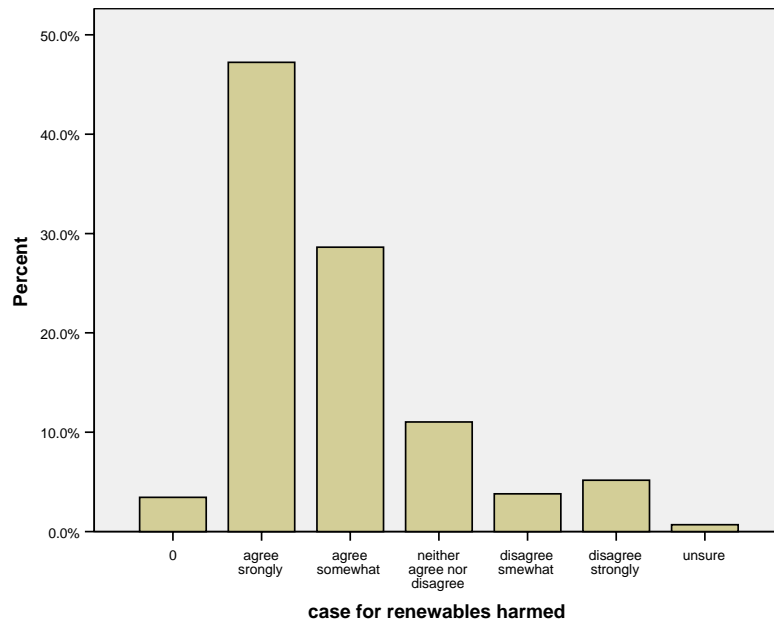
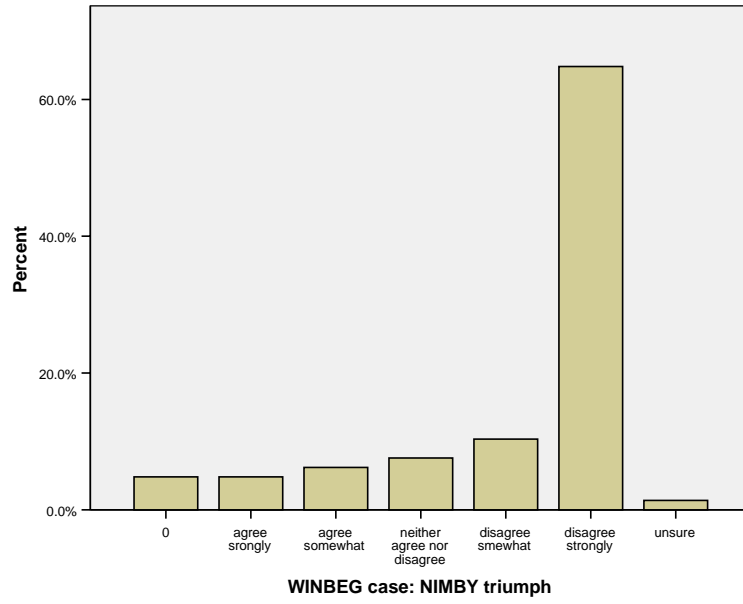
Question 11: How has WINBEG affected your awareness and knowledge of renewable energy? Please indicate your opinion with respect to each of the following statements.

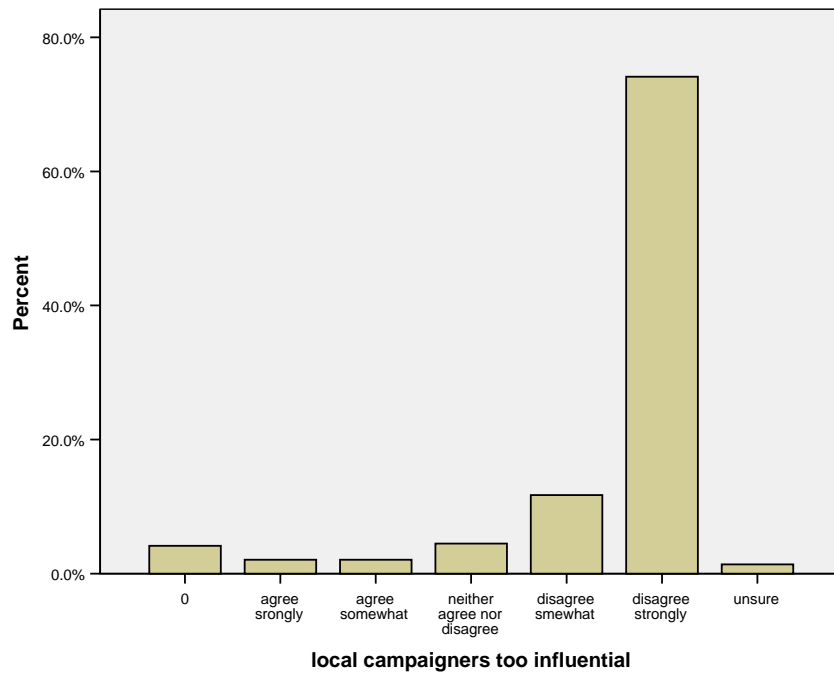
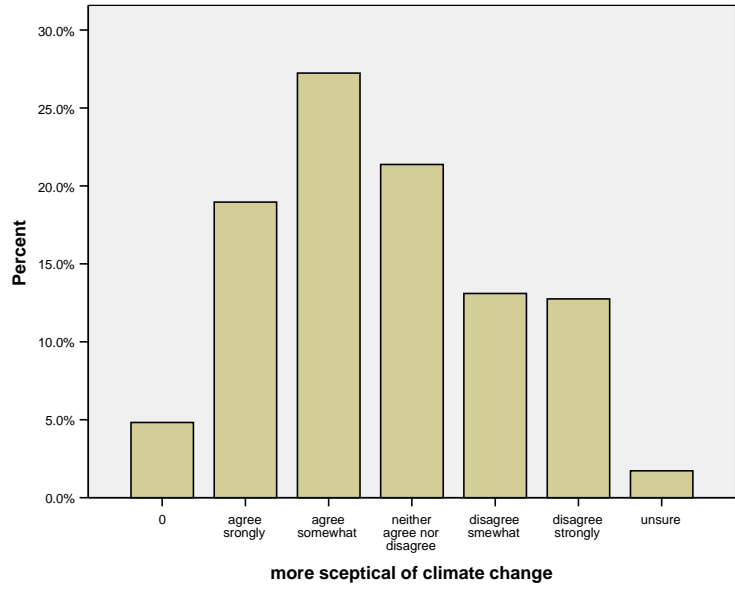


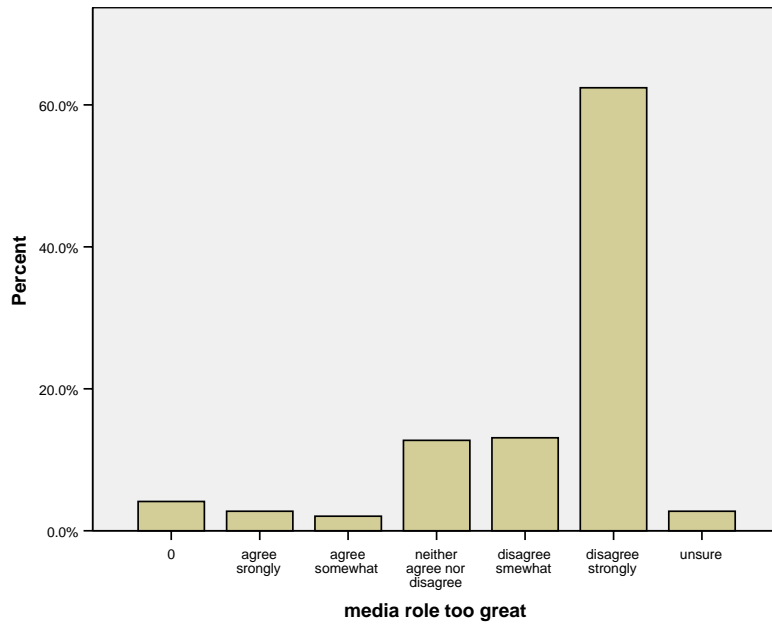
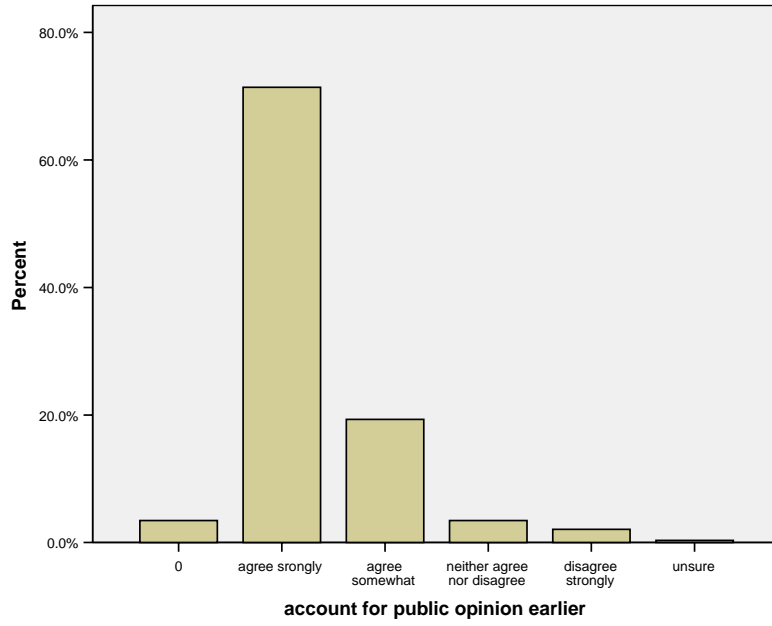


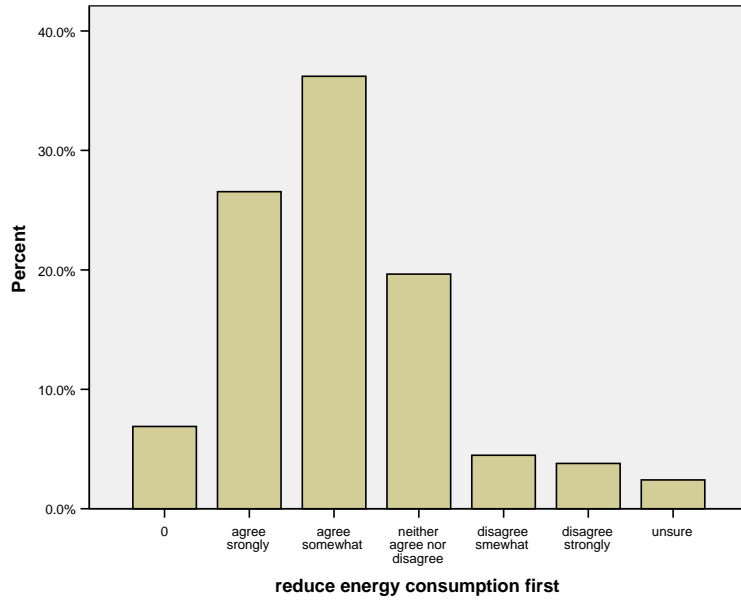




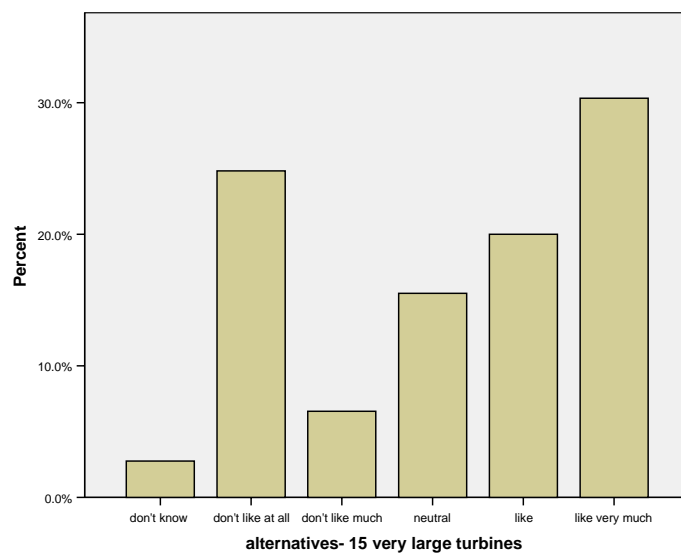
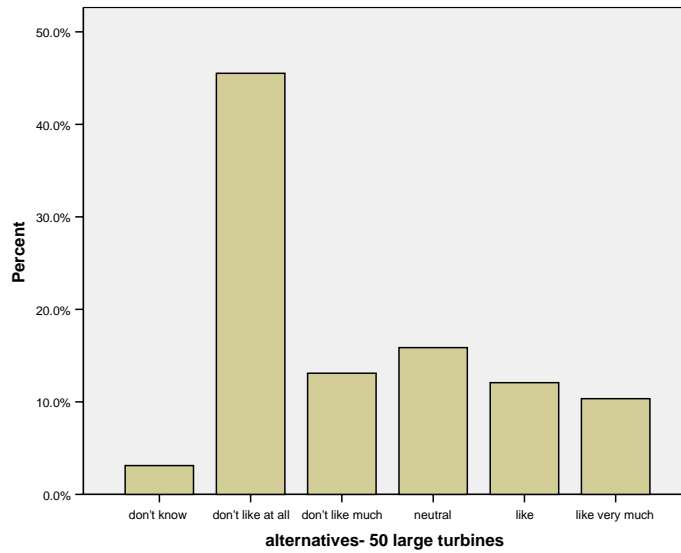


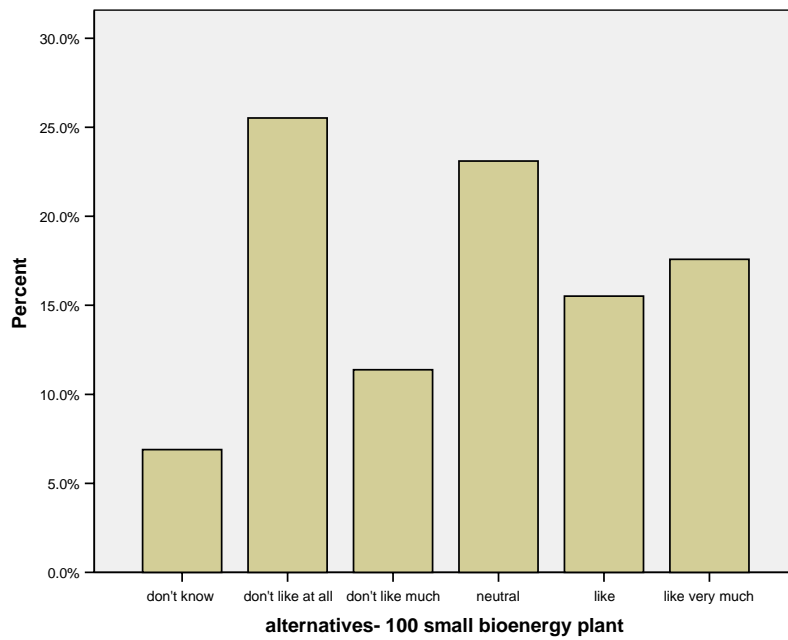
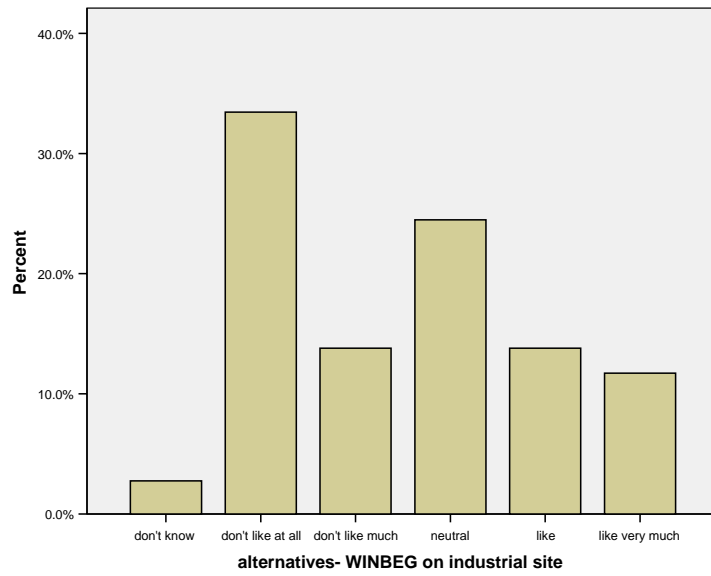




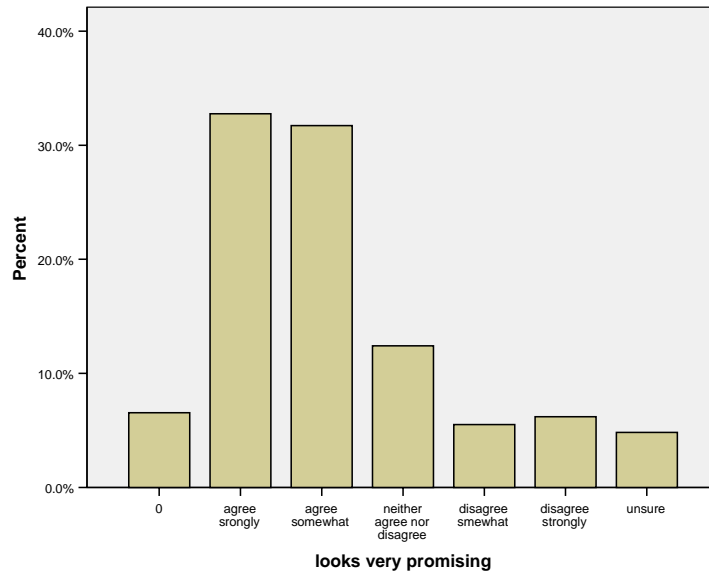
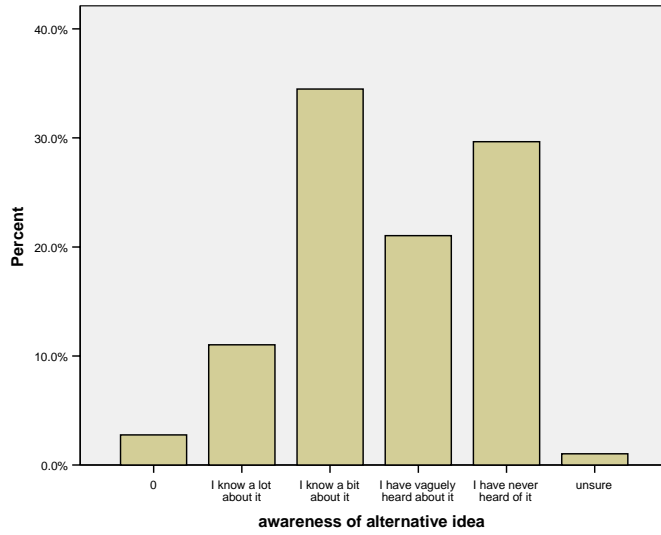


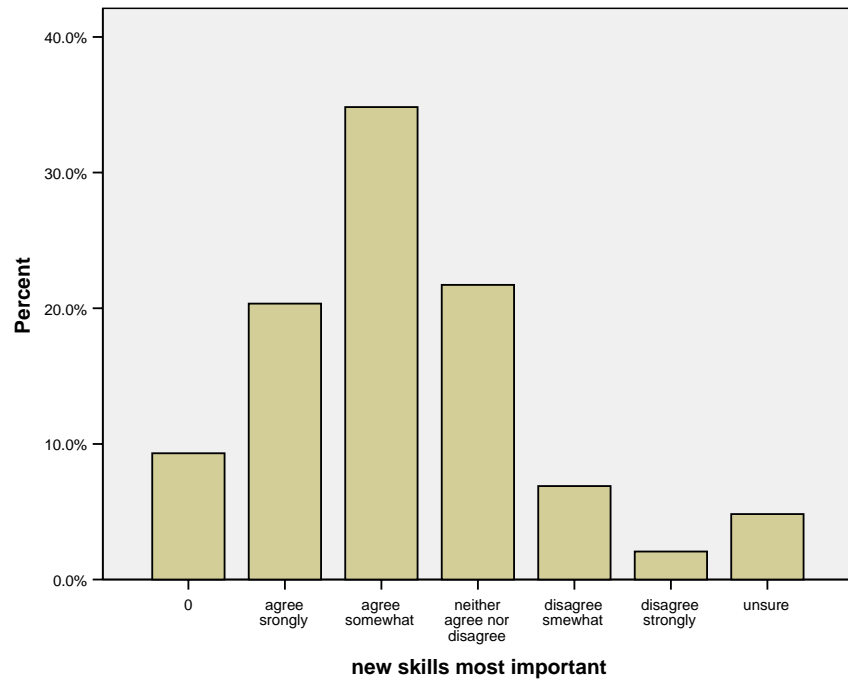
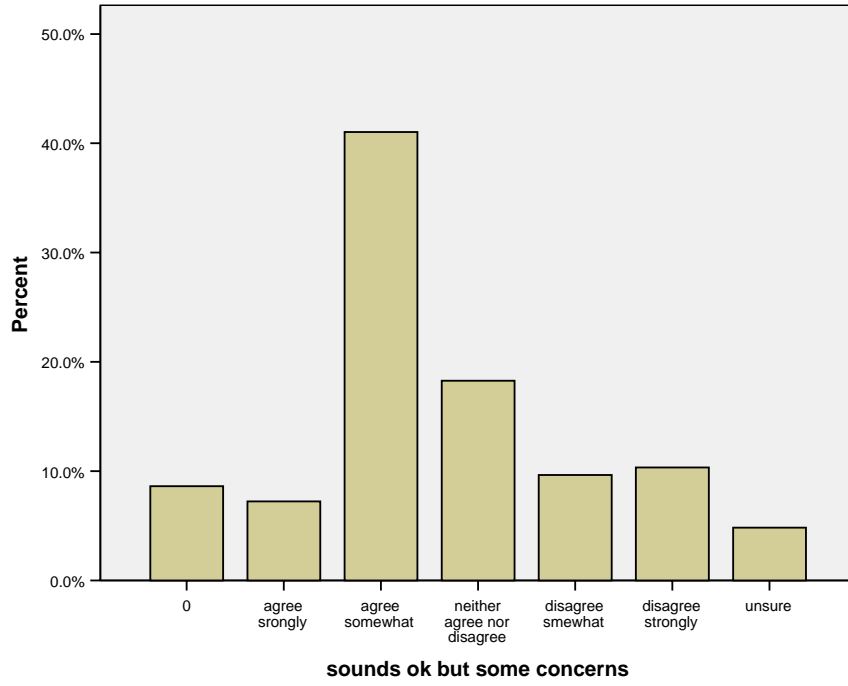
Question 12. Below are some alternatives to WINBEG, all of which would provide a similar amount of renewable energy. These alternatives are not alternative proposals for the Winkleigh site: they are other renewable energy options for the district. To what extent do you like each alternative?

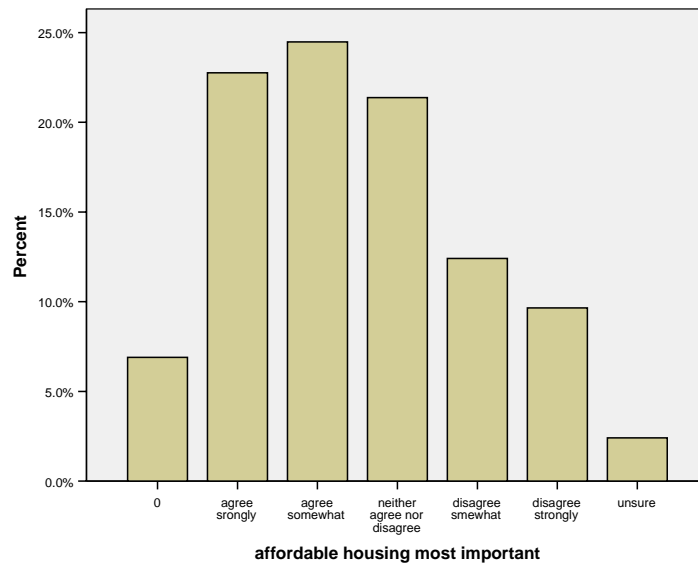
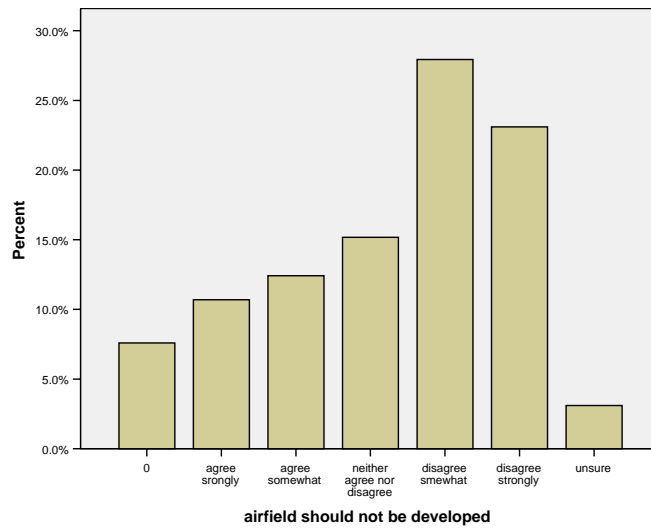


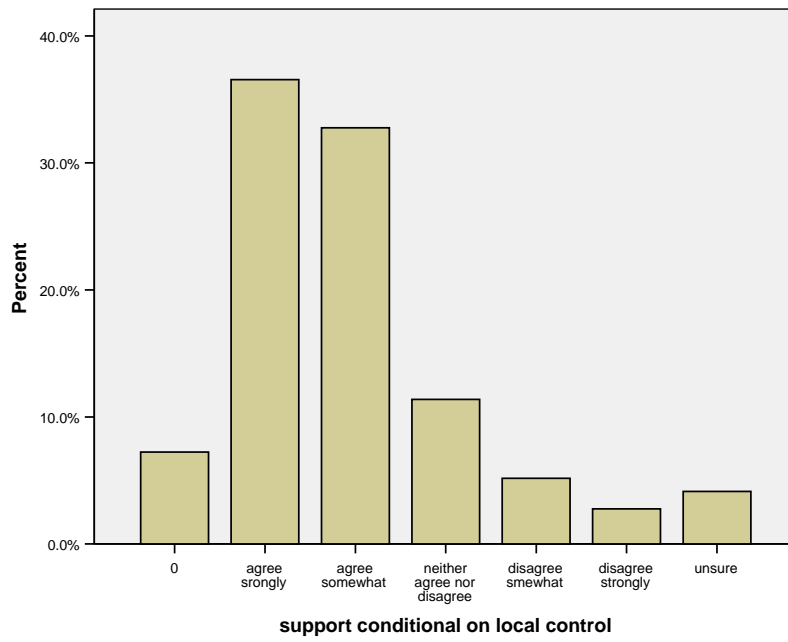
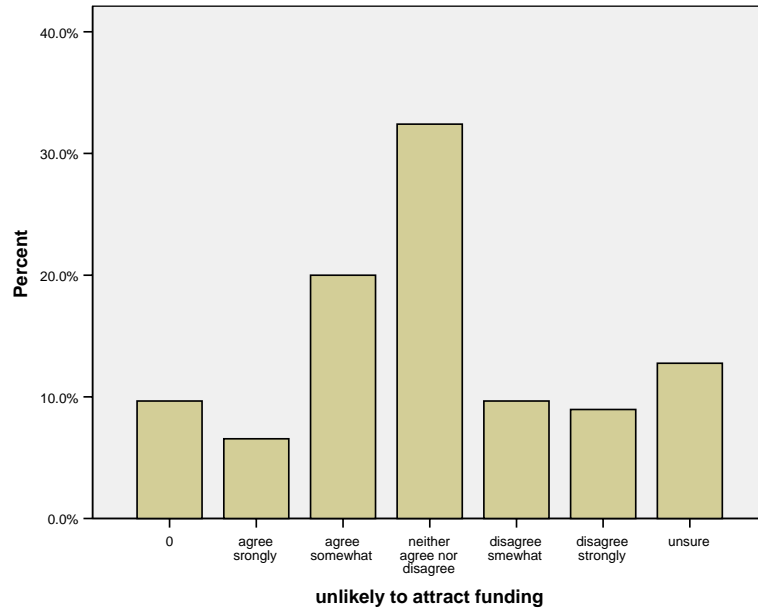


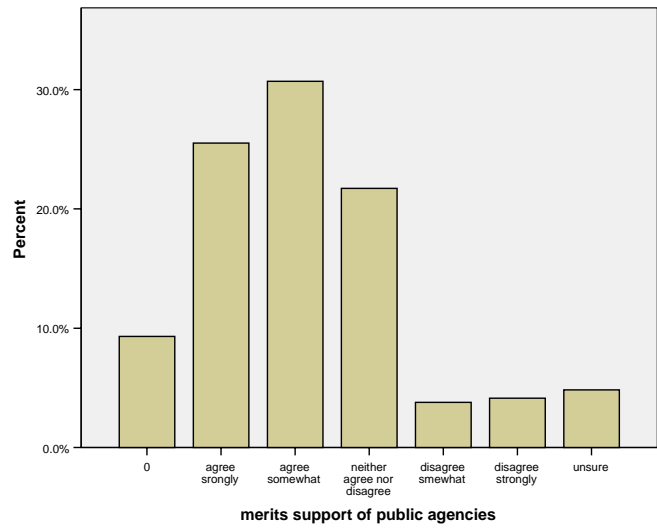
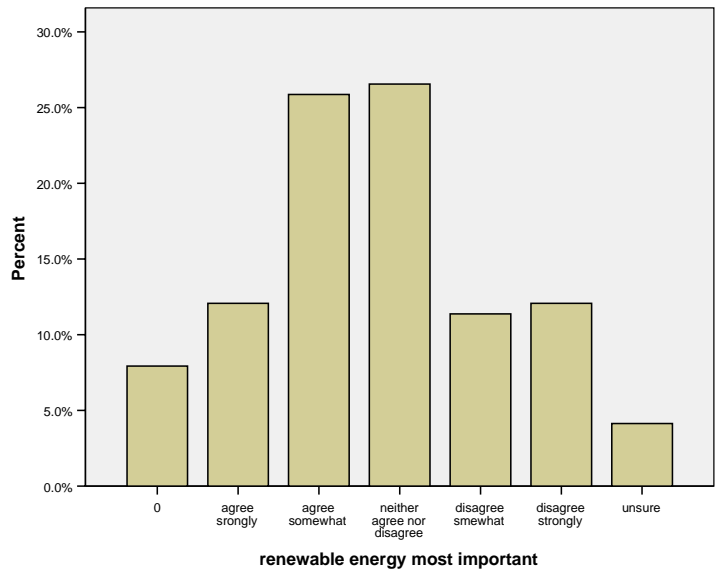
Question 13: An alternative renewable energy project has been proposed for a small part of the Winkleigh airfield. To what extent are you aware of this alternative?











Appendix E Numerical frequency tables

issue importance

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	9	3.1	3.1	3.1
not at all important	10	3.4	3.4	6.6
not important	4	1.4	1.4	7.9
neutral	12	4.1	4.1	12.1
important	24	8.3	8.3	20.3
very important	231	79.7	79.7	100.0
Total	290	100.0	100.0	

heard of winbeg

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid no	4	1.4	1.4	1.4
yes	286	98.6	98.6	100.0
Total	290	100.0	100.0	

TDC refusal knowledge

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid no	7	2.4	2.4	2.4
yes	283	97.6	97.6	100.0
Total	290	100.0	100.0	

info- PPL

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid no	150	51.7	51.7	51.7
yes	140	48.3	48.3	100.0
Total	290	100.0	100.0	

info- DUST

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid no	64	22.1	22.1	22.1
yes	226	77.9	77.9	100.0
Total	290	100.0	100.0	

info- DW

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid no	26	9.0	9.0	9.0
yes	264	91.0	91.0	100.0
Total	290	100.0	100.0	

info- other local newsletter

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid no	200	69.0	69.0	69.0
yes	90	31.0	31.0	100.0
Total	290	100.0	100.0	

info- neighbour/friend

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid no	101	34.8	34.8	34.8
yes	189	65.2	65.2	100.0
Total	290	100.0	100.0	

info- local newspaper article

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid no	84	29.0	29.0	29.0
yes	206	71.0	71.0	100.0
Total	290	100.0	100.0	

info- local newspaper letter

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid no	165	56.9	56.9	56.9
yes	125	43.1	43.1	100.0
Total	290	100.0	100.0	

info- radio tv

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid no	137	47.2	47.2	47.2
yes	153	52.8	52.8	100.0
Total	290	100.0	100.0	

prior knowledge

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	1	.3	.3	.3
very poor	5	1.7	1.7	2.1
poor	13	4.5	4.5	6.6
moderate	91	31.4	31.4	37.9
good	122	42.1	42.1	80.0
very good	58	20.0	20.0	100.0
Total	290	100.0	100.0	

TDC refusal feel

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid definitely right decision	263	90.7	90.7	90.7
probably right decision	13	4.5	4.5	95.2
good and bad aspects to decision	8	2.8	2.8	97.9
definitely wrong decision	4	1.4	1.4	99.3
don't know/unsure	2	.7	.7	100.0
Total	290	100.0	100.0	

nuanced opinion

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	1	.3	.3	.3
good for local area	7	2.4	2.4	2.8
good but concerns	6	2.1	2.1	4.8
idea good but not WINBEG	43	14.8	14.8	19.7
bad for local area	231	79.7	79.7	99.3
don't know	2	.7	.7	100.0
Total	290	100.0	100.0	

concern- air pollution WINBEG

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a concern	34	11.7	11.7	11.7
	a concern	256	88.3	88.3	100.0
	Total	290	100.0	100.0	

concern- odour WINBEG

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a concern	53	18.3	18.3	18.3
	a concern	237	81.7	81.7	100.0
	Total	290	100.0	100.0	

concern- light pollution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a concern	121	41.7	41.7	41.7
	a concern	169	58.3	58.3	100.0
	Total	290	100.0	100.0	

concern- noise WINBEG

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a concern	61	21.0	21.0	21.0
	a concern	229	79.0	79.0	100.0
	Total	290	100.0	100.0	

concern- appearance WINBEG

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a concern	42	14.5	14.5	14.5
	a concern	248	85.5	85.5	100.0
	Total	290	100.0	100.0	

concern- industrial precedent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a concern	118	40.7	40.7	40.7
	a concern	172	59.3	59.3	100.0
	Total	290	100.0	100.0	

concern- fuel wastes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a concern	40	13.8	13.8	13.8
	a concern	250	86.2	86.2	100.0
	Total	290	100.0	100.0	

concern- technological reliability

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a concern	48	16.6	16.6	16.6
	a concern	242	83.4	83.4	100.0
	Total	290	100.0	100.0	

concern- lorry air pollution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a concern	29	10.0	10.0	10.0
	a concern	261	90.0	90.0	100.0
	Total	290	100.0	100.0	

concern- lorry traffic congestion

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a concern	22	7.6	7.6	7.6
	a concern	268	92.4	92.4	100.0
	Total	290	100.0	100.0	

concern- landscape change: energy crops

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a concern	71	24.5	24.5	24.5
	a concern	219	75.5	75.5	100.0
	Total	290	100.0	100.0	

concern- other environmental impacts: energy crops

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a concern	92	31.7	31.7	31.7
	a concern	198	68.3	68.3	100.0
	Total	290	100.0	100.0	

concern- negative effect on tourism

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a concern	108	37.2	37.2	37.2
	a concern	182	62.8	62.8	100.0
	Total	290	100.0	100.0	

concern- credibility of developer

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a concern	38	13.1	13.1	13.1
	a concern	252	86.9	86.9	100.0
	Total	290	100.0	100.0	

concern- decrease in local house prices

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a concern	104	35.9	35.9	35.9
	a concern	186	64.1	64.1	100.0
	Total	290	100.0	100.0	

benefits- employment at WINBEG

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a benefit	236	81.4	81.4	81.4
	a benefit	54	18.6	18.6	100.0
	Total	290	100.0	100.0	

benefits- stimulation of airfield businesses

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a benefit	254	87.6	87.6	87.6
	a benefit	36	12.4	12.4	100.0
	Total	290	100.0	100.0	

benefits- indirect employment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a benefit	247	85.2	85.2	85.2
	a benefit	43	14.8	14.8	100.0
	Total	290	100.0	100.0	

benefits- develop UK bioenergy industry

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a benefit	257	88.6	88.6	88.6
	a benefit	33	11.4	11.4	100.0
	Total	290	100.0	100.0	

benefits- income for Devonshire farmers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a benefit	263	90.7	90.7	90.7
	a benefit	27	9.3	9.3	100.0
	Total	290	100.0	100.0	

benefits- reduce greenhouse gases

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a benefit	253	87.2	87.2	87.2
	a benefit	37	12.8	12.8	100.0
	Total	290	100.0	100.0	

benefits- environmental benefits of energy crops

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a benefit	281	96.9	96.9	96.9
	a benefit	9	3.1	3.1	100.0
	Total	290	100.0	100.0	

benefits- encourage tourism

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a benefit	281	96.9	96.9	96.9
	a benefit	9	3.1	3.1	100.0
	Total	290	100.0	100.0	

benefits- winter employment in agriculture

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a benefit	271	93.4	93.4	93.4
	a benefit	19	6.6	6.6	100.0
	Total	290	100.0	100.0	

benefits- diversion of biomass from landfill

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not a benefit	270	93.1	93.1	93.1
	a benefit	20	6.9	6.9	100.0
	Total	290	100.0	100.0	

communication- SWRDA

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	don't know	17	5.9	5.9	5.9
	very poor	156	53.8	53.8	59.7
	quite poor	70	24.1	24.1	83.8
	neutral	33	11.4	11.4	95.2
	good	8	2.8	2.8	97.9
	very good	6	2.1	2.1	100.0
	Total	290	100.0	100.0	

communication- DCC

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	don't know	22	7.6	7.6	7.6
	very poor	77	26.6	26.6	34.1
	quite poor	100	34.5	34.5	68.6
	neutral	64	22.1	22.1	90.7
	good	21	7.2	7.2	97.9
	very good	6	2.1	2.1	100.0
	Total	290	100.0	100.0	

communication- TDC

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	don't know	14	4.8	4.8	4.8
	very poor	44	15.2	15.2	20.0
	quite poor	78	26.9	26.9	46.9
	neutral	90	31.0	31.0	77.9
	good	45	15.5	15.5	93.4
	very good	19	6.6	6.6	100.0
	Total	290	100.0	100.0	

communication- WPC

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	don't know	9	3.1	3.1	3.1
	very poor	13	4.5	4.5	7.6
	quite poor	15	5.2	5.2	12.8
	neutral	59	20.3	20.3	33.1
	good	82	28.3	28.3	61.4
	very good	112	38.6	38.6	100.0
	Total	290	100.0	100.0	

more aware of climate change

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	13	4.5	4.5	4.5
	agree strongly	14	4.8	4.8	9.3
	agree somewhat	41	14.1	14.1	23.4
	neither agree nor disagree	94	32.4	32.4	55.9
	disagree somewhat	37	12.8	12.8	68.6
	disagree strongly	86	29.7	29.7	98.3
	unsure	5	1.7	1.7	100.0
	Total	290	100.0	100.0	

more cynical of renewables

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	16	5.5	5.5	5.5
	agree strongly	51	17.6	17.6	23.1
	agree somewhat	78	26.9	26.9	50.0
	neither agree nor disagree	51	17.6	17.6	67.6
	disagree somewhat	43	14.8	14.8	82.4
	disagree strongly	45	15.5	15.5	97.9
	unsure	6	2.1	2.1	100.0
	Total	290	100.0	100.0	

very positive about small scale

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	7	2.4	2.4	2.4
	agree strongly	184	63.4	63.4	65.9
	agree somewhat	68	23.4	23.4	89.3
	neither agree nor disagree	11	3.8	3.8	93.1
	disagree somewhat	10	3.4	3.4	96.6
	disagree strongly	9	3.1	3.1	99.7
	unsure	1	.3	.3	100.0
	Total	290	100.0	100.0	

support renewables but not process

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	13	4.5	4.5	4.5
	agree strongly	144	49.7	49.7	54.1
	agree somewhat	81	27.9	27.9	82.1
	neither agree nor disagree	32	11.0	11.0	93.1
	disagree somewhat	10	3.4	3.4	96.6
	disagree strongly	7	2.4	2.4	99.0
	unsure	3	1.0	1.0	100.0
	Total	290	100.0	100.0	

disappointed by TDC refusal

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	15	5.2	5.2	5.2
	agree strongly	9	3.1	3.1	8.3
	agree somewhat	5	1.7	1.7	10.0
	neither agree nor disagree	6	2.1	2.1	12.1
	disagree somewhat	16	5.5	5.5	17.6
	disagree strongly	236	81.4	81.4	99.0
	unsure	3	1.0	1.0	100.0
	Total	290	100.0	100.0	

concern - lack of accountability

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	13	4.5	4.5	4.5
	agree strongly	179	61.7	61.7	66.2
	agree somewhat	52	17.9	17.9	84.1
	neither agree nor disagree	16	5.5	5.5	89.7
	Disagree somewhat	8	2.8	2.8	92.4
	Disagree strongly	14	4.8	4.8	97.2
	unsure	8	2.8	2.8	100.0
	Total	290	100.0	100.0	

TDC refusal: confidence in process

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	8	2.8	2.8	2.8
	agree strongly	120	41.4	41.4	44.1
	agree somewhat	103	35.5	35.5	79.7
	neither agree nor disagree	31	10.7	10.7	90.3
	disagree somewhat	12	4.1	4.1	94.5
	disagree strongly	6	2.1	2.1	96.6
	unsure	10	3.4	3.4	100.0
	Total	290	100.0	100.0	

local campaigners are misleading

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	10	3.4	3.4	3.4
	agree strongly	10	3.4	3.4	6.9
	agree somewhat	8	2.8	2.8	9.7
	neither agree nor disagree	12	4.1	4.1	13.8
	disagree somewhat	20	6.9	6.9	20.7
	disagree strongly	227	78.3	78.3	99.0
	unsure	3	1.0	1.0	100.0
	Total	290	100.0	100.0	

WINBEG case: NIMBY triumph

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	14	4.8	4.8	4.8
	agree strongly	14	4.8	4.8	9.7
	agree somewhat	18	6.2	6.2	15.9
	neither agree nor disagree	22	7.6	7.6	23.4
	disagree somewhat	30	10.3	10.3	33.8
	disagree strongly	188	64.8	64.8	98.6
	unsure	4	1.4	1.4	100.0
	Total	290	100.0	100.0	

case for renewables harmed

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	10	3.4	3.4	3.4
	agree strongly	137	47.2	47.2	50.7
	agree somewhat	83	28.6	28.6	79.3
	neither agree nor disagree	32	11.0	11.0	90.3
	disagree somewhat	11	3.8	3.8	94.1
	disagree strongly	15	5.2	5.2	99.3
	unsure	2	.7	.7	100.0
	Total	290	100.0	100.0	

more sceptical of climate change

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	14	4.8	4.8	4.8
	agree strongly	55	19.0	19.0	23.8
	agree somewhat	79	27.2	27.2	51.0
	neither agree nor disagree	62	21.4	21.4	72.4
	disagree somewhat	38	13.1	13.1	85.5
	disagree strongly	37	12.8	12.8	98.3
	unsure	5	1.7	1.7	100.0
	Total	290	100.0	100.0	

local campaigners too influential

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	12	4.1	4.1	4.1
agree strongly	6	2.1	2.1	6.2
agree somewhat	6	2.1	2.1	8.3
neither agree nor disagree	13	4.5	4.5	12.8
disagree somewhat	34	11.7	11.7	24.5
disagree strongly	215	74.1	74.1	98.6
Unsure	4	1.4	1.4	100.0
Total	290	100.0	100.0	

account for public opinion earlier

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	10	3.4	3.4	3.4
agree strongly	207	71.4	71.4	74.8
agree somewhat	56	19.3	19.3	94.1
neither agree nor disagree	10	3.4	3.4	97.6
disagree strongly	6	2.1	2.1	99.7
unsure	1	.3	.3	100.0
Total	290	100.0	100.0	

media role too great

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	12	4.1	4.1	4.1
agree strongly	8	2.8	2.8	6.9
agree somewhat	6	2.1	2.1	9.0
neither agree nor disagree	37	12.8	12.8	21.7
disagree somewhat	38	13.1	13.1	34.8
disagree strongly	181	62.4	62.4	97.2
unsure	8	2.8	2.8	100.0
Total	290	100.0	100.0	

reduce energy consumption first

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	20	6.9	6.9	6.9
	agree strongly	77	26.6	26.6	33.4
	agree somewhat	105	36.2	36.2	69.7
	neither agree nor disagree	57	19.7	19.7	89.3
	disagree somewhat	13	4.5	4.5	93.8
	disagree strongly	11	3.8	3.8	97.6
	unsure	7	2.4	2.4	100.0
	Total	290	100.0	100.0	

alternatives- 50 large turbines

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	don't know	9	3.1	3.1	3.1
	don't like at all	132	45.5	45.5	48.6
	don't like much	38	13.1	13.1	61.7
	neutral	46	15.9	15.9	77.6
	like	35	12.1	12.1	89.7
	like very much	30	10.3	10.3	100.0
	Total	290	100.0	100.0	

alternatives- 15 very large turbines

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	don't know	8	2.8	2.8	2.8
	don't like at all	72	24.8	24.8	27.6
	don't like much	19	6.6	6.6	34.1
	neutral	45	15.5	15.5	49.7
	like	58	20.0	20.0	69.7
	like very much	88	30.3	30.3	100.0
	Total	290	100.0	100.0	

alternatives- WINBEG on industrial site

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	don't know	8	2.8	2.8	2.8
	don't like at all	97	33.4	33.4	36.2
	don't like much	40	13.8	13.8	50.0
	Neutral	71	24.5	24.5	74.5
	Like	40	13.8	13.8	88.3
	like very much	34	11.7	11.7	100.0
	Total	290	100.0	100.0	

alternatives- 100 small bioenergy plant

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	don't know	20	6.9	6.9	6.9
	don't like at all	74	25.5	25.5	32.4
	don't like much	33	11.4	11.4	43.8
	Neutral	67	23.1	23.1	66.9
	Like	45	15.5	15.5	82.4
	like very much	51	17.6	17.6	100.0
	Total	290	100.0	100.0	

awareness of alternative idea

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	8	2.8	2.8	2.8
	I know a lot about it	32	11.0	11.0	13.8
	I know a bit about it	100	34.5	34.5	48.3
	I have vaguely heard about it	61	21.0	21.0	69.3
	I have never heard of it	86	29.7	29.7	99.0
	unsure	3	1.0	1.0	100.0
	Total	290	100.0	100.0	

looks very promising

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	19	6.6	6.6	6.6
	agree strongly	95	32.8	32.8	39.3
	agree somewhat	92	31.7	31.7	71.0
	neither agree nor disagree	36	12.4	12.4	83.4
	disagree somewhat	16	5.5	5.5	89.0
	disagree strongly	18	6.2	6.2	95.2
	Unsure	14	4.8	4.8	100.0
	Total	290	100.0	100.0	

sounds ok but some concerns

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	25	8.6	8.6	8.6
	agree strongly	21	7.2	7.2	15.9
	agree somewhat	119	41.0	41.0	56.9
	neither agree nor disagree	53	18.3	18.3	75.2
	disagree somewhat	28	9.7	9.7	84.8
	disagree strongly	30	10.3	10.3	95.2
	Unsure	14	4.8	4.8	100.0
	Total	290	100.0	100.0	

new skills most important

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	27	9.3	9.3	9.3
agree strongly	59	20.3	20.3	29.7
agree somewhat	101	34.8	34.8	64.5
neither agree nor disagree	63	21.7	21.7	86.2
disagree somewhat	20	6.9	6.9	93.1
disagree strongly	6	2.1	2.1	95.2
Unsure	14	4.8	4.8	100.0
Total	290	100.0	100.0	

airfield should not be developed

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	22	7.6	7.6	7.6
agree strongly	31	10.7	10.7	18.3
agree somewhat	36	12.4	12.4	30.7
neither agree nor disagree	44	15.2	15.2	45.9
disagree somewhat	81	27.9	27.9	73.8
disagree strongly	67	23.1	23.1	96.9
Unsure	9	3.1	3.1	100.0
Total	290	100.0	100.0	

affordable housing most important

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	20	6.9	6.9	6.9
agree strongly	66	22.8	22.8	29.7
agree somewhat	71	24.5	24.5	54.1
neither agree nor disagree	62	21.4	21.4	75.5
disagree somewhat	36	12.4	12.4	87.9
disagree strongly	28	9.7	9.7	97.6
Unsure	7	2.4	2.4	100.0
Total	290	100.0	100.0	

unlikely to attract funding

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	28	9.7	9.7	9.7
agree strongly	19	6.6	6.6	16.2
agree somewhat	58	20.0	20.0	36.2
neither agree nor disagree	94	32.4	32.4	68.6
disagree somewhat	28	9.7	9.7	78.3
disagree strongly	26	9.0	9.0	87.2
Unsure	37	12.8	12.8	100.0
Total	290	100.0	100.0	

support conditional on local control

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	21	7.2	7.2	7.2
agree strongly	106	36.6	36.6	43.8
agree somewhat	95	32.8	32.8	76.6
neither agree nor disagree	33	11.4	11.4	87.9
disagree somewhat	15	5.2	5.2	93.1
disagree strongly	8	2.8	2.8	95.9
unsure	12	4.1	4.1	100.0
Total	290	100.0	100.0	

renewable energy most important

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	23	7.9	7.9	7.9
agree strongly	35	12.1	12.1	20.0
agree somewhat	75	25.9	25.9	45.9
neither agree nor disagree	77	26.6	26.6	72.4
disagree somewhat	33	11.4	11.4	83.8
disagree strongly	35	12.1	12.1	95.9
Unsure	12	4.1	4.1	100.0
Total	290	100.0	100.0	

merits support of public agencies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	27	9.3	9.3	9.3
	agree strongly	74	25.5	25.5	34.8
	agree somewhat	89	30.7	30.7	65.5
	neither agree nor disagree	63	21.7	21.7	87.2
	disagree somewhat	11	3.8	3.8	91.0
	disagree strongly	12	4.1	4.1	95.2
	Unsure	14	4.8	4.8	100.0
	Total	290	100.0	100.0	

age group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	1.0	1.0	1.0
	21-25	3	1.0	1.0	2.1
	26-35	16	5.5	5.5	7.6
	36-45	14	4.8	4.8	12.4
	46-54	39	13.4	13.4	25.9
	55-64	89	30.7	30.7	56.6
	65+	126	43.4	43.4	100.0
	Total	290	100.0	100.0	

gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	5	1.7	1.7	1.7
	female	141	48.6	48.6	50.3
	male	144	49.7	49.7	100.0
	Total	290	100.0	100.0	

Appendix F Questionnaire

Please see overleaf

Follow-up Postal Questionnaire: Your Opinion on Possible Bio-Energy Development at Winkleigh

Dear Parishioner

This questionnaire is a follow-up to that distributed by the Tyndall Centre Manchester in June 2004, in relation to the proposed Winkleigh Biomass Powerstation (WINBEG). Even if you have not heard of WINBEG, or know very little about it, we would still like to know your views.

Background

The long-running controversy regarding a proposal for a large bio-energy power station on the airfield at Winkleigh is well-known locally. The project was promoted by the company Peninsula Power Limited, with the initial backing of the Department of Trade and Industry and the South West Regional Development Agency (SWRDA). In 2006 Torridge District Council refused planning permission for WINBEG and Peninsula Power Limited has appealed against this.

Torridge District Council is working with the local community and the South West Regional Development Agency to draw up a Development Brief for the wider site as required by the Torridge Local Plan. This survey by the Tyndall Centre is an independent piece of research unconnected to the preparation of the Development Brief. Further community consultation regarding the Development Brief will be carried out during the autumn of 2007.

Previous Survey

The Tyndall Centre's earlier survey in 2004 assessed local opinion regarding the desirability or otherwise of WINBEG and aimed to understand the reasons for opposition. The study was funded under *SuperGen*, a major programme of research into sustainable energy supply for the UK, sponsored by the Research Councils. The results of the survey were published and distributed to the main agencies and individuals involved in the WINBEG development. The results of the first survey can be viewed at the Research Outputs section of the website: <http://www.supergen-bioenergy.net/>

Purpose of the Present Survey

Given the changed context, we are surveying local public opinion again regarding WINBEG, to assess how and whether local opinion has changed. We also aim to find out what people think about an alternative proposal for renewable energy development at Winkleigh airfield. The questionnaire is designed to take about 20 minutes to complete.

The results will be given to government policymakers and are intended to help improve bioenergy policy and planning. Your personal answers will remain confidential. We will send a copy of the results to national, local and regional organisations later in 2007, and will also post them on the above website.

Dr. Paul Upham
Tyndall Centre Manchester
The University of Manchester

PART A: THE WINBEG PROPOSAL

In Part A we ask for your opinion of WINBEG in the light of what has happened over the past few years since the first survey was conducted.

Question 1. On a scale of 1 to 5, how important an issue *for you* is the WINBEG proposal?

Please circle one number (1 = not at all important, 5 = very important) or tick 'unsure / don't know':

Not at all important 1 2 3 4 5 Very important

Unsure / don't know

Question 2. Before reading this questionnaire, had you heard of the proposal to build a bioenergy power station (WINBEG) on the old Winkleigh airfield?

Yes No

Question 3. Before reading this questionnaire were you aware that Torridge District Council had refused planning permission for WINBEG in 2006?

Yes No

Question 4. If you had heard about WINBEG before, from what information sources did you hear about it? Please **tick all that apply**:

- Peninsular Power Ltd Leaflet
- DUST leaflet/website
- Distinctly Winkleigh newsletter
- Other local Newsletter
- Neighbour or friend

- Local Newspaper article
- Local newspaper letter
- Local radio or television
- Other (please specify)

Question 5. How would you rate your level of knowledge of WINBEG? Please tick **one** only:

- Very poor
- Poor
- Moderate
- Good
- Very good

Question 6. How do you feel about the decision of Torridge District Council to refuse WINBEG planning permission? Please tick **one** only:

- Definitely the right decision
- Probably the right decision
- Good and bad aspects to the decision
- Definitely the wrong decision
- Don't know / unsure

Question 7. Which of the following is nearest to your own opinion? Please tick **one** box only:

- WINBEG sounds as if it probably would have been good for the local area
- WINBEG sounds as if it might be good for the local area, but I have some concerns about it
- I don't like WINBEG itself, but I support some of the ideas behind the project
- WINBEG sounds as if it would be bad for the local area
- Don't know

Question 8. Which of the following potentially negative aspects of WINBEG have concerned you over the past few years?

PLEASE TICK ALL THAT APPLY

- Air pollution from the WINBEG powerplant
- Odour or smell from the WINBEG powerplant
- Light pollution from the WINBEG powerplant
- Noise pollution from the WINBEG powerplant
- The visual appearance of the WINBEG powerplant
- WINBEG as a precedent for industrial development of the airfield
- The wastes that WINBEG may use as fuel
- The reliability of WINBEG's technologies
- Air pollution from lorries bringing biomass fuel
- Traffic congestion from lorries bringing biomass fuel
- Change in landscape arising from miscanthus grass and other energy crop cultivation
- Adverse environmental impacts of energy crops such as miscanthus grass
- Negative effects on tourism
- The credibility of the developer
- A decrease in local house prices

Please list any other concerns about WINBEG if they are important to you:

Question 9. Which of the following potentially positive aspects of WINBEG have you considered plausible over the past few years?

PLEASE TICK ALL THAT APPLY

- Employment at the WINBEG powerplant
- Stimulation of other businesses at the airfield site
- Indirect employment through maintenance/manufacturing services
- Development of UK capacity in the bioenergy sector
- A reliable and long term income for Devonshire farmers
- Reduction in greenhouse gas emissions (especially CO₂)
- Environmental benefits of miscanthus and other energy crop cultivation
- Encouraging tourism in the area through the proposed visitor centre
- Winter employment of agricultural workers due to late harvesting of willow
- Diversion of food, catering and similar wastes from polluting landfill

Please list any other potential benefits of WINBEG if they are important to you:

Question 10. Do you think the level of communication by public bodies, about WINBEG, has been adequate?

Please circle one number for each public body

(1 = very poor communication, 5 = very good communication)

South West Regional Development Agency

Very poor communication 1 2 3 4 5 Very good communication

Don't know

Devonshire County Council

Very poor communication 1 2 3 4 5 Very good communication

Don't know

Torrige District Council

Very poor communication 1 2 3 4 5 Very good communication

Don't know

Winkleigh Parish Council

Very poor communication 1 2 3 4 5 Very good communication

Don't know

PART B: POSSIBLE OTHER OPTIONS FOR RENEWABLE ENERGY DEVELOPMENTS AT WINKLEIGH

In Part B we ask for your opinion of other possible renewable energy developments at Winkleigh and of renewable energy in general.

Question 11: How has WINBEG affected your awareness and knowledge of renewable energy? Please indicate your opinion with respect to each of the following statements. **Please tick only one option for each of the statements.**

Statement	Agree strongly	Agree somewhat	Neither agree nor disagree	Disagree somewhat	Disagree strongly	Unsure
WINBEG has made me much more aware of the need to take action on climate change						
I am now more cynical about the need for renewable energy						
I am very positive about small scale renewable energy developments, but WINBEG was far too big for Winkleigh						
I am in favour of renewable energy but am discouraged by the process by which the government gives support to projects						
I am disappointed that WINBEG was not approved by Torridge District Council because it would have encouraged more renewable energy developments						
The WINBEG case has given me cause for concern about the lack of accountability of public bodies that are promoting renewable energy technologies						

The decision of Torridge District Council not to grant planning permission has given me confidence that the planning process is up to the job of regulating renewable energy developments in this area						
Local campaigners opposed to WINBEG misrepresented the facts about the development and misled the public						
The WINBEG case demonstrates the triumph of Not In My Back Yard thinking over the greater interests of society at large						

Statement	Agree strongly	Agree some what	Neither agree nor disagree	Disagree some what	Disagree strongly	Unsure
WINBEG has harmed the cause of renewable energy						
WINBEG has made me more sceptical about the whole issue of climate change						
Local campaigners opposed to WINBEG had too much influence on the planning decision						
The WINBEG case demonstrates the need for public agencies as well as developers to listen to, and act upon, public opinion much earlier						
The media had too big a role in the decision to refuse planning permission to WINBEG						
The WINBEG case highlights the need to take action on reducing energy consumption before developing renewable energy						

Question 12. Below are some alternatives to WINBEG, all of which would provide a similar amount of renewable energy. These alternatives are not alternative proposals for the Winkleigh site: they are other renewable energy options for the district. To what extent do you like each alternative?

Pease circle one number for each alternative

(1 = Don't like at all, 5 = Like very much)

50 large wind turbines, each 55 metres (180 foot) high, sited across Torridge District

Don't like at all 1 2 3 4 5 Like very
much

15 very large wind turbines, each 90 metres (300 foot) high, sited offshore of Devon

Don't like at all 1 2 3 4 5 Like very
much

A Bioenergy powerplant similar to WINBEG, located in an industrial area of Devon

Don't like at all 1 2 3 4 5 Like very
much

100 small bioenergy powerplants, providing heat & power across Torridge District

Don't like at all 1 2 3 4 5 Like very
much

- I prefer WINBEG as currently conceived
- Don't know

Please add any comments below:

Question 13: An alternative renewable energy project has been proposed for a small part of the Winkleigh airfield. To what extent are you aware of this alternative?

- I know a lot about
- I know a bit about it
- I have vaguely heard about it
- I have never heard of it
- Unsure

Question 14: The principal aspects of the alternative project for a small part of the site have been suggested as follows: training in skills for sustainability; sustainability appraisal of individual buildings; demonstration of small-scale renewable technologies (micro-generation); and construction of a small affordable housing scheme for local people using local building materials. To what extent do you agree with the following statements about this alternative proposal? (Please tick only one option for each of the statements).

Statement	Agree strongly	Agree somewhat	Neither agree nor disagree	Disagree somewhat	Disagree strongly	Unsure
The alternative project looks very promising						
The alternative project sounds OK, but I have some concerns about it						
The focus on developing new skills is the most important aspect of the alternative project						
The airfield should not be developed any further						
The focus on affordable housing is the most important aspect of the alternative project						
The alternative project is unlikely to attract funding						

I would support the alternative project but only if it is controlled and managed by the local community						
The focus on renewable energy is the most important aspect of the alternative project						
The alternative project should be supported by public agencies						

Part C: About You

To help us check how representative the questionnaire replies are, it would help if you would answer the following questions about yourself.

Question 15. Please tick your age group:

- | | | |
|-------|-------|-------------|
| 11-17 | 26-35 | 55-64 |
| 18-20 | 36-45 | 65 or above |
| 21-25 | 46-54 | |

Question 16: Please tick your gender:

- Female
- Male

Question 17: Please write your postcode here:

We may supplement this questionnaire with telephone interviews. If you are interested in us talking to you further, please write your name and phone number here:

Thank you very much for taking the time to record your opinions. It is important that we receive the full range of views in the Winkleigh area.