Wind Power Proposal

Your task is to determine the optimum design for a Wind Farm and in doing so compare the energy generated to another form of energy production (coal, nuclear, solar, hydro etc). In your proposal, you will need to “test” 3 different variables, and include the data (in table & graph form) for each test. From the 3 “tests” you will need to select and support the best design. The proposal will be prepared using google slides, the data tables and graphs will be made using excel, and then the overall presentation will be given orally to the class.

Some variable you may wish to test include:

* number of households
* number of kwhrs each household uses (this will address conservation)
* load factor
* turbine size (this will have no impact on land requirements other than to lower the number of turbines, unless the load factor or land area per 1000kw also changes)
* Various combinations of the above.

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| --- | --- | --- | --- |
| Task | expectation  not attempted | expectation somewhat attempted | met  expectation |
| **Proposal** | | | |
| **Background on Wind Energy** |  |  | 10 |
| **Optimum Design Claim**   * Keep it concise * List possible variables tested and the make claim   5 |  |  | Claim is scientifically correct and complete |
| **Evidence**  3 data tables  4 graphs  35 | Does not provide evidence, or only provides inappropriate evidence (evidence that does not support claim) | Provides appropriate but insufficient evidence to support claim. | Provides appropriate and sufficient evidence to support claim |
| **Reasoning**  **20** | The links between the evidence and the claim are based on incorrect ideas | Most of the evidence is tied to the claim by scientific principles established in the context of the project. | All of the evidence is tied to the claim by scientific principles established in the context of the project. |
| **Comparison**  **20** | No comparison was made | Optimum wind design and system requirements are somewhat compared to another energy source. | Optimum wind design and system requirements are affectively compared to another energy source. Benefits and drawback for both sources are included. |
| **Oral Presentation** | | | |
| **Oral Presentation**  **20** | No presentation given. | Ideas learned during project were somewhat conveyed to audience. | All ideas learned during project were affectively conveyed to audience. |

**Total / 110**