



2024 Oral Component Scenario

Renewable Energy for a Sustainable Future

The Scenario:

After learning that Pennsylvania ranks 45th in the country in energy production from wind, solar, and hydropower; state officials are planning to increase the requirements for use of energy efficiency efforts and renewable energy production.

In the last decade, PA has developed only enough renewable energy to power two percent of the state's households. Since 2013, only two new wind farms in Pennsylvania were built and the other existing wind farms are nearing the end of their lifespan. Despite the fact that solar energy has tripled in production, solar energy only produces 11 percent of the state's total renewable electricity. PA does rank higher in energy from biomass resources such as wood, in sales of electric vehicles, and in installation of electric vehicle charging ports. Continuing to grow the renewable energy sector in PA is a key to healthier communities and to addressing climate change.

To improve the state's ranking in energy savings and renewable energy production by 2029, State officials are requesting each county to establish a community action committee. The committee will be tasked with developing a sustainable energy education, outreach, and implementation plan to meet new state requirements. State funding and incentives will be provided to support community action plans that meet the specified requirements.

The Presentation:

As an Envirothon team, you are presenting to your community action committee comprised of environmental advocates, community leaders, businesses, residents, and stakeholders. The committee is tasked with developing outreach and education regarding the need for renewable energy regionally and globally and presenting a proposal to include the following tasks.

Develop a 12-minute presentation that addresses the following tasks:

- I. **Task 1: Traditional / Current Energy Infrastructure** – What factors of the existing community energy system are limiting? Explain the traditional infrastructure, its advantages, disadvantages, and future threats. Discuss one example of a local energy problem or limitation.

II. **Task 2: Renewable Energy / Infrastructure** - What renewable energy opportunities could help? Discuss the advantages, disadvantages, and threats of adding one or more renewable energy sources. Discuss one example of a renewable energy source and how it may be utilized for your community.

III. **Task 3: Renewable Energy / Natural Resources** – How do renewable energy sources impact natural resources and the local and global environment? Identify actions or innovative approaches to address negative impacts from renewable energy on natural resources and the environment. Discuss one example of an approach to mitigate negative impacts of one or more renewable energy sources.

IV. **Task 4: Global Perspectives on Renewable Energy** – Describe the landscape of renewable energy across various regions of the world and in Pennsylvania, including strengths and challenges. Discuss one example of a barrier to transitioning to renewable energy and identify solutions to this barrier, considering the roles of economic and political policy, public perception, community advocacy, and scientific advancements in a successful transition to renewable energy.

V. **Task 5: Local Action and Energy Equity**- Identify actions that can be taken on an individual and local level to support renewable energy. Explain the components of Energy Justice and how these interact with the transition to renewable energy. Include advantages and disadvantages in real-life situations.

Personal Action: As an example to the Committee, present an energy efficiency practice to be used in your own home/school/business/community organization. Each member must briefly mention a personal renewable energy action and how to reduce obstacles to that action. Students may select similar actions to each other without penalty.

References:

Be sure to incorporate/cite at least three (3) spoken, relevant, and reputable references as you present, such as a formal publication or information provided in the 2024 Current Issue Resources.

Examples of references:

1. "According to _____'s publication entitled _____, [fact that supports scenario]."
2. "Research from [organization/agency/etc.] outlined in their article _____, suggests [fact that supports scenario]."
3. "An article entitled _____, on _____'s website, says [fact that supports scenario]."

Final Notes:

While preparing, teams should feel free to include details of their choosing, not specifically referenced in the scenario, to aid the presentation. **The Pennsylvania Envirothon will not answer any questions regarding the scenario – the team must interpret and respond as it sees fit.**

There is a maximum of 20 slides allowed in your PowerPoint. The video submitted should mimic as closely as possible the team standing in front of a panel and presenting it to them in person. The entire team should be present and using its developed PowerPoint/Google Slides as a visual aid. The only visual aid acceptable is a PowerPoint/Google Slide presentation that the team develops. No video editing, animation, etc., is allowed. The goal of the video is to be a single take of the team using its PowerPoint as a visual aid and presenting its information addressing the points of the scenario to the panel of judges. The team will lose points if it edits its video and may be subject to disqualification. Note cards or cue cards are acceptable for use, however students will be judged on their delivery and style. Please read the full Oral Component Rules on our website.