



Florida Section
AIR & WASTE MANAGEMENT
ASSOCIATION

2020 Virtual Joint Coastal Plains/Alabama Chapters & Florida Section Conference

University students, can you solve...

The Environmental Challenge?

2020 Joint Coastal Plains/Alabama Chapters & Florida Section

A&WMA Virtual Conference

October 29 - 30, 2020

The Environmental Challenge (ECi) gives student teams the opportunity to develop solutions to an environmental problem and present their solution to a panel of environmental professionals. We are very interested in hearing about how you interpreted the challenge, the issues you identified, your approach, how you arrived at the conclusions, and how well you can communicate and defend your thoughts and position. We want you to learn and have fun during the entire process! This exercise provides the professionals of tomorrow an opportunity to address one of Florida's most challenging issues while interacting with the professionals of today.

The ECi is designed to promote the formation of student teams with the broadest feasible range of environmental disciplines including engineering, planning, policy, economics, and various other sciences. Teams must research the problem background, as well as the technical, social, economic, and political aspects of the situation. Teams must stay apprised of ongoing events related to the problem adjusting their solutions appropriately leading up to and during the conference.

Although winning solutions to the proposed problem must have sound engineering and technical bases, the solution does not require a full engineering design presentation. Solutions are expected to provide reasonable resolutions applying basic engineering and scientific knowledge to research scenarios and critical questions. Student teams should start to form following the posting of the problem. Just as corporations and other organizations pull together teams from their staff to most effectively address any given project, so too should each student team begin by identifying and recruiting representatives from appropriate disciplines as needed to address the problem holistically.

Student teams must register for the ECi by emailing flawmaeci@gmail.com by October 16th at 5:00 pm. The email should be sent by one team member and have the subject "FL A&WMA: 2020 – ECi Registration." In the body of the email, you should include 1.) Your team name, 2.) The academic institution your team represents, and 3.) The name and email of each team member.

Please note: Each team member must also register for the 2020 A&WMA virtual conference in addition to registering for the ECi.

[Click HERE for Conference Registration!](#)

PROBLEM STATEMENT

Electric utility companies across the U.S. are establishing industry leading goals to reduce greenhouse gas emissions by 2030 and decarbonize by 2050. A European investor – Euro-Technologies has acquired a technology company that also includes large land holdings in the southeast and a diverse electric generation and transmission portfolio which includes coal, gas and solar generation assets. Euro-Technologies has adopted goals to address climate change challenges focused on corporate social responsibility to connect to the local community and seeks to incorporate sustainable and social accountability into their long-term strategy. While they recognize that the path to zero carbon includes a transition to non-carbon renewable energy, they want to maximize current operations and infrastructure to maintain a competitive advantage.

Euro-Technologies is required to develop a resource plan for the recently acquired asset which balances reliability, affordability, safety and resilience while considering the social and environmental impacts of facility operations. Based on their initial due-diligence, they agreed to continue the operation of the coal-fired generation station through 2030, continue the operation of the fleet of natural gas generation facilities through 2050, site two to three additional natural gas generation stations (500 MWs each) and meet demand growth by expanding their renewable generation sources and modernize their transmission and distribution system. They want to reduce carbon emissions by 2050 while still utilizing coal and natural gas to maintain a diverse fuel mix. This Resource Plan must be presented to the Euro-Technologies Board of Investors for funding and the Southeast Public Service Commission (SEPSC) for approval. Public meetings are a part of the SEPSC review (and approval) process.

THE CHALLENGE

Euro-Technologies is interested in hiring a firm to prepare and present a Resource Plan which will support the path to reduce GHG by 2030 and achieve zero carbon by 2050 based on a diverse portfolio approach. The challenge is to research the environmental regulations, policies and technologies related to coal, gas and renewable energy generation and convince the Euro-Technologies Board of Investors to modernize the assets through 2050. This will require a substantial investment over what was originally contemplated during the approval to acquire the asset. (Note that several of the Board members are not familiar with US regulations).

- Include a discussion on the regulatory requirements and environmental issues and challenges associated with the continued operation of the coal and gas fired generation stations as outlined above. (Include key assumptions and regulatory references used to formulate your discussion).
- Are there emerging technologies that should be considered that would mitigate the environmental issues and support their goal to reduce carbon and also maintain and operate a diverse portfolio of assets?

- What are your recommendations to the Board to proactively build support and foster good relationships with the NGOs, regulatory stakeholders and local community knowing that they will challenge the use of fossil fuels and gas beyond 2025.

Each project team must develop a proposal that includes approach and strategies. If selected for the short list, your team must then present its Resource Plan at the AWMA conference in a venue simulating a presentation to the SEPSC. Euro-Technologies will need Public Service Commission approval to continue operations beyond 2025. A very organized and vocal NGO opposes the existing and ongoing use of fossil-fuel and has already notified Euro-Technologies that they will attend the SEPSC hearings.

As noted above, the environmental challenge will simulate the public forum environment and a number of parties (both pro and con) are likely to be present.

Clarity of vision and logic of presentation are critical. Remember you can come up with assumptions, but they need to be able to pass the straight face test. This is effectively the real world! We have the following expectations with regard to both your Proposal and Presentation.

PROPOSAL

The proposal is limited to eight 8 x 11 pages (not including the cover page) and must be 12 font and 1.1 spacing. Not meeting these requirements will negatively impact your scoring. Teams should be comprised of three to five individuals. Everyone should have a primary role in the research of the issues and proposed solutions. The Proposal should identify all team members by name and assumed project roles (e.g., specialty areas may include public policy, planning, public relations/communications, engineering, financial analyst, attorney, etc.). The proposals should include:

- Problem Statement
- Methods
- Resources
- Proposed Solutions/Strategies
- Conclusions

Persuasive and concise writing is critical to address the issues within the page limit.

Each team must submit, via email to flawmaeci@gmail.com, the written proposal to address the problem. **The proposal must be received by 5:00 p.m. EST on October 23, 2020.**

The Tweak

No matter how much you research and preparation you conduct, unexpected events and changing expectations can and do occur in real life. To this end, we **may** share some late breaking information that might impact your approach to the solution. Look for this late breaking news “tweak” on October 24th, 2020.

PRESENTATION

Depending on the number of proposals submitted, all teams may not be selected to move on to the next round. If your team is selected to present, your team will need to demonstrate your understanding of the topic presented in your proposal. Your presentation may be a more advanced development of the ideas presented in your proposal. While faculty guidance may be sought, you must present an approach based on your own research and work. Winning will hinge on approach, clarity, and creativity.

Presentations are required to be prepared using Microsoft PowerPoint or similar slide show format and will be presented in a virtual session, which will allow viewing of the slides as well as video-conferencing with team members and judges. You should plan for **no more than a 15-minute presentation** followed by 5 minutes of questions and answers.

THE CHALLENGE EVENT

Teams will present their proposed approach/solution during virtual sessions on **Thursday, October 29, 2020; 8:30 AM - 11:30 AM EST**. Presentation order will be chosen randomly. Each team will be given a specific time slot prior to the event.

Your team should be capable to make persuasive technical arguments to support your positions. Your team can build its arguments using all means available. Given your team is comprised of various specialists, the team should confer and ensure that all its arguments are sound.

Presentation Guidelines and Tips:

- Your presentation needs to flow in a logical manner: present the issue, discuss the Scope of Work in a manner and order you choose, and provide solutions.
- Practice good presentation skills – if you use a PowerPoint presentation, do not read from the slides. Let them be a summary of what you present.
- Make sure presentation materials are legible, clear, and concise.
- Recognize other contributors to your team's efforts – other team members not present or mentors.
- All team members present should have a speaking part during the presentation.
- Come up with a game plan for answering questions.
- Clearly state the main points, assumptions, and conclusions.
- Provide a little background on the topic – don't assume the Board Members know everything about the topic – but be succinct.
- If you had challenges completing the assignment, state what those were and how you addressed the challenges. If you made assumptions, please state those as well.
- Remember practice makes you perfect! However, we aren't looking for perfection – we want each team to have fun and learn as much as you can about the topic you are exploring.
- Practice your timing and dress for success.

Please email questions regarding the assignment to: flawmaeci@gmail.com.

AWARDS

The 2020 Joint Coastal Plains/Alabama Chapters & Florida Section A&WMA ECI winners will be announced at a virtual Awards Ceremony on Thursday, October 29, 2020 at 5:00 PM EST which will be part of an overall Student Awards session. They will also be posted on the FL A&WMA website. All participants will receive a congratulatory letter and certificate.

Presentations will be recorded and posted on the FL A&WMA website, so that the teams will have a chance to have their work viewed by thousands of site visitors. The award winners will be given special recognition on the website.

*ECi Competition Prize denominations are subject to sponsorship level and will be determined closer to the conference.