



## 2021 STEM VIRTUAL INNOVATION CHALLENGE

The Center for Energy Workforce Development (CEWD), energy companies, and high school education partners are joining together to help energize the next generation energy workforce through the STEM VIRTUAL INNOVATION CHALLENGE! The Challenge is designed to help high school students learn about careers in energy and its connections to STEM and other business disciplines. The Challenge will run from February 1, 2021 – April 15, 2021.

### THE CHALLENGE

Students today want to solve problems that are meaningful and relevant to themselves, their families, and their local communities. They want to feel that they can make a difference. The Challenge problem to solve is: **When thinking of efficiency and sustainability as it relates to your school and transportation to and from, develop an innovative plan to reduce your school's carbon footprint, increase comfort conditions, and have a net-zero impact to your community.**

### CHALLENGE OVERVIEW

- Students eligible to participate will be determined by school staff / leadership. Students enrolled in STEM, business, and/or related coursework are encouraged to participate. Each school is allowed up to two 8-10-person student teams.
- Where possible, Industry partners will serve as competition mentors for schools in their region during the Challenge.
- The teams will research the Challenge problem and they must explain how, based on research, their plan has the greatest impact on reducing their school's carbon footprint, increases comfort conditions, and has a net-zero impact on their community. Teams should review the rubric that will be used in the evaluation of entries.
- Student teams will present their solutions on April 1<sup>st</sup> to industry subject matter experts in videos that are no more than ten minutes in length. Videos should be posted to YouTube (See Presentation Guidelines) on a regional level. Winners from each region: North, South, East, and West will be invited to a virtual National Shark Tank Competition on April 15<sup>th</sup> designed to recognize student achievement and industry collaboration.
- Videos over ten minutes in length will not be evaluated and will not be eligible for awards.

- Sponsors of participating teams (educators or energy company representatives) must complete and submit the online registration form at [STEM Virtual Innovation Challenge](#) no later than March 1, 2021 to be eligible for awards. Late entries will not be accepted.
- Students under 18 will be required to have a form authorizing participation in competitions at the regional and/or national level signed by a parent or guardian.
- CEWD is not responsible for lost, damaged, mislabeled or misdirected entries.

## **PRESENTATION GUIDELINES**

The participants will present their findings to CEWD subject matter experts in a video that is a maximum of 10 minutes in length and posted to YouTube. All videos must include the following components:

### **I. Proposed Plan**

- a. What factors led to the identification of areas where your school's carbon footprint can be improved upon
- b. What scientific research was utilized in determining your plan
- c. Explanation of your plan by describing and differentiating the plan's features and subsequent benefits that create a competitive advantage for your school by reducing the carbon footprint
- d. Visual representation of the plan

### **II. Video Presentation**

- Present as if speaking to potential community members. Sell the benefits of the plan.
- Focus on key points to stay within 10-minute guidelines.
- Be visually creative when presenting ideas.
- Overall creative, any special effects may be used to enhance your overall video presentation.

For evaluation details, please see the Presentation Evaluation Rubric.

## **PRESENTATION JUDGING**

Subject matter experts from each region: North, South, East and West, will select the top overall team. From the final four teams, a national winning team will be selected in a Shark Tank type competition. The national winner's video will be featured on CEWD's [Get Into STEM](#) and [Get Into Energy](#) websites.

## **AWARD and RECOGNITION**

The school sponsoring the team selected as the national winner will receive a \$1,000.00 award and all students on that team will receive a small prize. Students and schools selected as regional winners will receive commendation certificates and a small prize.