Outreach Plan

Connection Creation Milestone

NREL Collegiate Wind Competition (CWC)

University of Colorado Boulder
Department of Mechanical Engineering
November 1st, 2021

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High-Level Goals

By putting forth a strong effort in the Connections Creation competition, our team hopes to educate young students and the surrounding community about wind energy. Without a doubt, wind energy will see a vast proliferation of interested individuals as the world transitions to renewable energy. We think it is important to educate young people about wind energy so that the next generation of engineers will continually strive to make advancements in wind turbine technology. We plan to display the technical knowledge gained throughout this project to the faculty and students at CU Boulder. Our ambition is to build a foundation for our university to become a leader in renewable energy education with a focus on wind energy. CU Boulder is positioned in a community that has a strong presence in green energy and sustainability and through our outreach events we want to push students into wanting to design their careers around fostering this ideology. We strive to establish an annually recurring CWC competition team with a club-like framework. This will provide students at any stage in their undergraduate degree with a chance to participate and learn about wind energy. Our current team is participating as a learn-along team for our Mechanical Engineering Capstone project. We envision a team with many more team members of a multitude of undergraduate disciplines, not just engineering. The Connection Creation competition gives us the opportunity to make this vision a reality through our community outreach plan.

Timeline

Date	Outreach Type	Details	Status
August 28st	Team Story	Creation of team story document where preliminary ideas and outline of what needs to be included and get background information from each teammate.	In Progress
September 15th	Team Photo	Created team photo to be used in all presentations and reviews	Completed
September 2nd	Social Media	Use Instagram account from last year's team and create Twitter account to begin	Completed
September 21st	Informational Interview 1	Informational Interview #1: Fiona Dunne, Siemens Gamesa Relationship: Connected by a professor Sector in the wind industry: Turbine Controls Email: fiona42@gmail.com Response if open to continue: Yes	Completed
October 7th	Informational Interview 2	Informational Interview #2: Sri Gunter, Siemens Gamesa Relationship: Connected by a professor Sector in the wind industry: Turbine Mechanical Loads Email: Srinivas.Guntur@siemensgamesa.com Response if open to continue: Yes	Completed
October 26th	Informational Interview 3	Informational Interview #3: David Molitor, Siemens Gamesa Relationship: Networking event connection	Completed

		Sector in the wind industry: Turbine blade design Email: david.molitor@siemensgamesa.com Response if open to continue: No	
NA	Information Interview 4	To Be Determined	In Progress
October 7th	Community Outreach	Met with Michael Arquin for info on KidWind and his role in facilitating activities	Completed
October 28th	Community Outreach	Wind Energy Overview Presentation for Kid Wind and KidWind Activity Projected Weeks for KidWind: (2/6/22 - 2/12/22 & 2/27/22 - 3/5/22)	In Progress
November 2nd	Social Media	Send outreach email to CU Boulder Today about the team's involvement in the CWC	Not Started
November 5th	Social Media	Connect with cuengineering instagram	Not Started
January 3rd	Community Outreach	Purchase Kidwind Engagement Kits	Not Started
March 1st	Community Outreach	Presentation of Turbine Prototype at Sustainability Lab Outreach Event	Not Started

Career Interview - Initial Contacts

Fiona Dunne - Siemens Gamesa - Interview conducted
Sri Gunter - Siemens Gamesa - Interview conducted
David Molitor - Siemens Gamesa - Interview conducted
Jahi Simbai - NREL Senior Manager

Proposed Outreach Events

<u>KidWind</u>

1. PowerPoint Presentation that covers questions such as:
   - What does a wind turbine do?
   - How many houses can a wind turbine power?
   - Where are wind turbines located (offshore and on land)?
   - How tall are wind turbines (off shore and traditional)?
   - How big are wind turbine blades (offshore and traditional)?

2. Carry out KidWind turbine build activity (using KidWind kits)

To initiate our team's connection with schools, we have met with Michael Arquin. He is the director of KidWind and will continue to help us with our outreach goals. Specifically, we spoke with him about obtaining KidWind kits provided for outreach activities and the connections he will provide to assist us in reaching out to schools. The schools we hope to collaborate with are Sunset Middle School, Casey Middle School, Flatirons Elementary School and University Hill Elementary School. We are

planning to meet with Micahel again to see what our next steps are with KidWind as well as to create a schedule for next semester that will work for both our team and the people assisting us on KidWind.

Early Engineering Exposure Fair

Hosted by CU Mechanical Engineering, this one day fair will be open to 7th grade students from Title 1 schools. Engineering groups across CU will showcase projects and research regarding sustainability and STEM. Our team will sign up for a slot and bring our turbine prototype as well as an informational poster to highlight the project components and CWC guidelines to educate young students about wind energy and the competition. This fair is meant to be an interactive way for young students to get excited about engineering, so we will showcase our turbine so that the students can play with the various components and develop an intuition for wind energy.

Relationships

Social Media

Instagram: @Cuwindteam

Twitter: CU Wind Team @cu_wind

Newspaper

CU Boulder Today: Email sent to all CU Boulder students which highlights student research/projects all across campus. This media outlet provides students the opportunity to promote their work and explain their collaboration process. The process to submit the CU Wind Team's story includes reaching out to the editor and providing brief interviews with team members to provide a well rounded picture of the project.

Outreach Content