

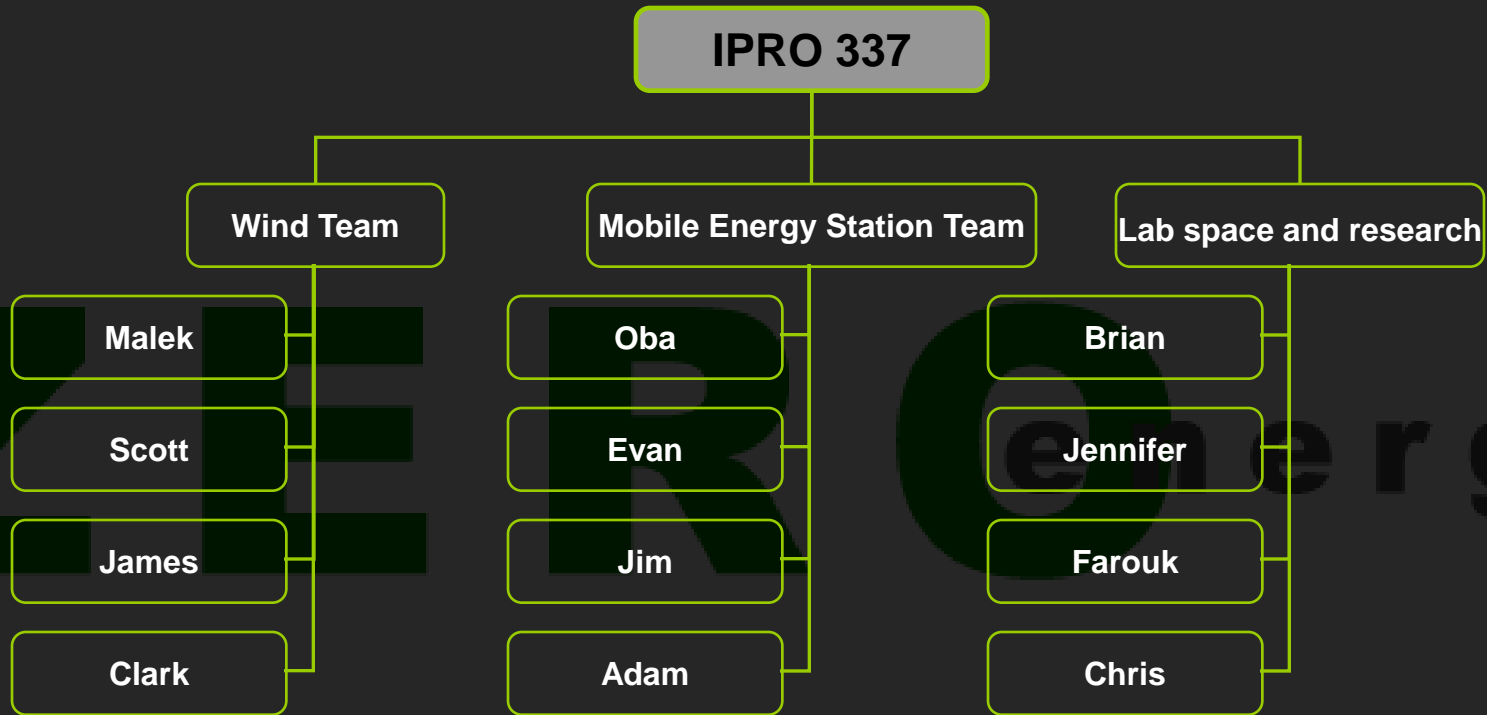
ZERO energy

Recalling the past to create a sustainable future

Problem

- Comprehensive Zero Energy Solution
 - Existing Solar Power
 - New power sources (wind)
 - Mobile energy station
 - Passive heating and cooling
 - Integration of systems
- Transform existing space for collaboration between scientists and engineers

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Project goals

- Research new energy sources in order to take lab off grid
- Research environmentally friendly heating/cooling system suitable for research
- Prepare 6000ft² space for future lab use
- Research and build mobile battery bank capable of distributing localized power in lab
- Prepare budget, cost analysis, and schedule for work to be completed

Progress

- Wind turbine: Compiled wind studies, took wind measurements, have turbine ready to be put together
- Golf Cart: Got golf cart, cleaned golf cart, came up with designs, electrical systems
- Electrical System: Designed integrated system that includes solar, wind, and mobile energy solution
- Lab space and Research: Compiled research on various alternative systems and designing space to integrate new technology

Obstacles

- Mobile energy station storage
- Electrical design
 - Wind turbine
 - Mobile energy station
 - Windmill lighting
- Clearing Space

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Anticipated Problems

- Money
- Lab clutter
 - Garbage
 - Equipment
 - Anchor
- Windmill mounting
- Adequate consistent localized wind speed
- Electrical capacity for windmill

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Q&A

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