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## Real Fuel on Campus

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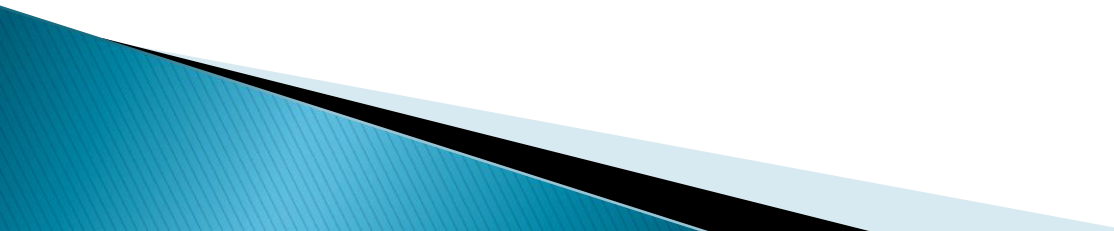
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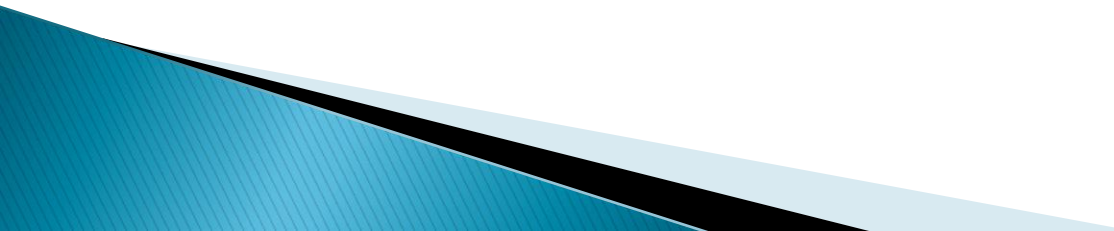
# Real Fuel on Campus

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# Steps to Success

- ▶ Original Plan: Purchase generator built to run on WVO
  - ▶ No generators available– retrofit diesel generator with automobile WVO system
  - ▶ Obstacles throughout process slowed progress, but engineering around them allows for new development
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# Why Vegetable oil?

- ▶ WVO contains no sulfur, the major carcinogenic component in diesel fuel—doesn't contribute to acid rain
  - ▶ Particulates (black soot) are reduced by as much as 30%.
  - ▶ “Non-toxic” if spilled it is quickly biodegradable back into the earth
  - ▶ Carbon Neutral
  - ▶ Its free!
- 


# Components to the Generator

- ▶ Generator Needs:
  - Mobile system
  - Fuel Injection
- ▶ Design Considerations:
  - Closed/Open water circuit
  - Simplify oil heating system
  - Design new heated fueling system

# Components to the Fuel

- ▶ Oil Needs:
  - Gathering oil and storage
  - Filtering & water separation
  - Developing a testing system for ideal oil conditions
  - Working with food services to facilitate ideal oil conditions

# Possibilities

- ▶ Develop a system ideal for use at restaurants, stadiums, golf courses, other veggie oil using venues.
  - ▶ Use no diesel—completely **carbon neutral** product
  - ▶ Automated filtration system
  - ▶ Test to see what features are necessary, cut the excess and develop the needs
  - ▶ Capture as much lost energy from generator, i.e. from exhaust
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# Generator Conversion

