

Challenges and Solutions in a Biodiesel Cooperative

Created with free software



Linux

+



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Why we started



How our co-op works

- Members pay a \$100 one-time fee
- Work in exchange for fuel
 - Oil collection
 - Fuel production
 - Cleanup
 - Administrative
- Fuel cost, \$2.25/gal (including taxes)
 - About half of that is profit



Greatly abridged and mostly accurate history of GoBiodiesel Co-op

10/2002 – First meeting (4 people)

2/2003 – Incorporated as co-op

4/2003 – First test batch of biodiesel from Mk I processor

7/2003 – Mk II processor

11/2003 – Distribution to members begins from Mk III processor

12/2003 – 9/2005 – New site selection/prep + hibernation

9/2005 – General Manager appointed

11/2005 – Processor Mk IV complete – 104 members



Legal issue #1: selling to the public

Feds require ASTM testing to sell commercial fuel
Fed/state requires payment of excise taxes
Liability issues with fuel



Solution: Cow Share Model

Why a cow share model?



Result of Cow Share model

Sell only to members

Excise tax still remitted to Fed/State from co-op

Membership requires signing a waiver



Work and distribution: what's fair?

How to juggle many different needs?

Fact: biodiesel doesn't make itself



Our solution: all members must work if they want fuel

– We calculate this with a spreadsheet

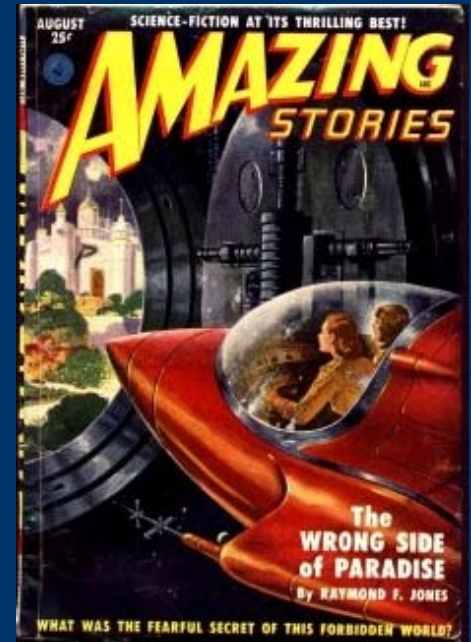
Send me an email if you want this spreadsheet–

brian @ gobiobdiesel.org

Someone has to be paid

Our biggest mistake:
Relying on member self-organization

Solution:
Hiring a part-time general manager



Banish the word “volunteer”

Our second biggest mistake:

Using the word “volunteer”



Production legalities

Storage of methanol

Fire box and/or sprinkler system

In zoned areas, storage limits likely



Mixing

Legal grey area

Resist being thrown in with petroleum fuel manufacturing

Much education is required



Distribution

Not selling to public greatly eases distribution

We use a simple pump and meter, not a “service station” type setup



DIY issues

Benefits

cheaper

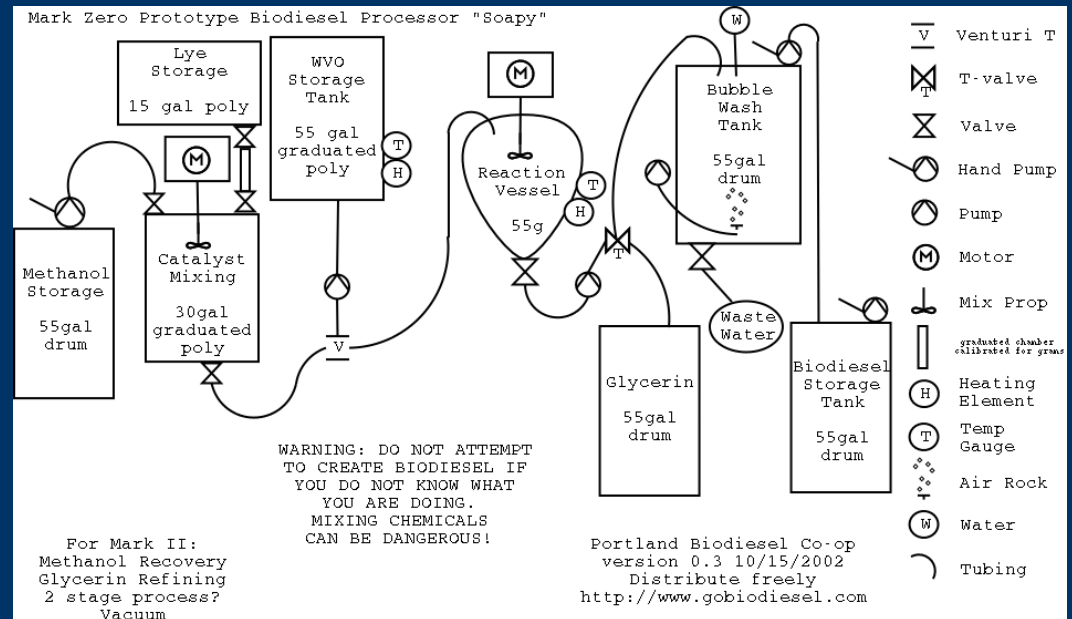
purpose-built

Disadvantages:

reinventing the wheel

Appleseed processor

no expertise in biodiesel a major disadvantage



Equipment Failures

Few parts are strictly rated for biodiesel

- Impellers, hose, connectors, all potential points of failure



Safety issues

- Methanol requires ventilation
 - VOC cartridges not effective
- Lye requires proper handling guidelines
- Processor design should be sparkless, venting only to outside
- Design for lots of air flow
- Spill containment



Don't ever do this!

Thank you!

“Whether you believe you can do a thing or not, you are right.”

-Henry Ford

Thanks also the members of GoBiodiesel Cooperative

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