Build Intermediates to make Branches

- Bio-engineering to build ideal branches.
- Chemical engineering to build leaves.
- Leverages investment in bio and power of chemistry.
- Economics of commodity chemicals creates a challenging market entry.

Bio & Chemical Catalysis

Diacids/Diols

Multifunctionals

Fatty Acids/Alcohols

Pyrones

Furans

Starch / Cellulose

Alkanes/Cycloalkanes/Aromatics

ETYLENE
- makes ethylene oxide
- ethyl alcohol
- ethylene oxide
- ethylene glycol
- ethylene chloride
- ethylene oxide polymers

PROPYLENE
- propylene oxide
- propylene glycol
- propylene carbonate
- propylene acrylate

BIOETHYLENE
- bioethanol
- cellulosic ethanol
- bioethylene
- bioethanol polymers

METHANE
- makes synthetic gas
- makes methanol
- makes ethylene and propylene

BIO-EXTRACTED REFINED OILS
- makes biodiesel
- makes polyethylene
- makes polypropylene
- makes polyesters

ETHYLMETHACRYLATE
- makes acrylic polymers
- makes acrylonitrile Butadiene Styrene (ABS)
- makes polycarbonate

ETHYLACETATE
- makes ethyl acetate
- makes vinyl acetate

BIOBUTYRIC ACID
- makes butyric acid
- makes butanol

BIOECONOMY
- makes biofuels
- makes bioplastics
- makes biochemicals
Thank you!!