

Renewable Energy Development: Choices Choices Choices

Presented to:
Tribal Energy Program Review
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Presented by:
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Integrated Energy Model



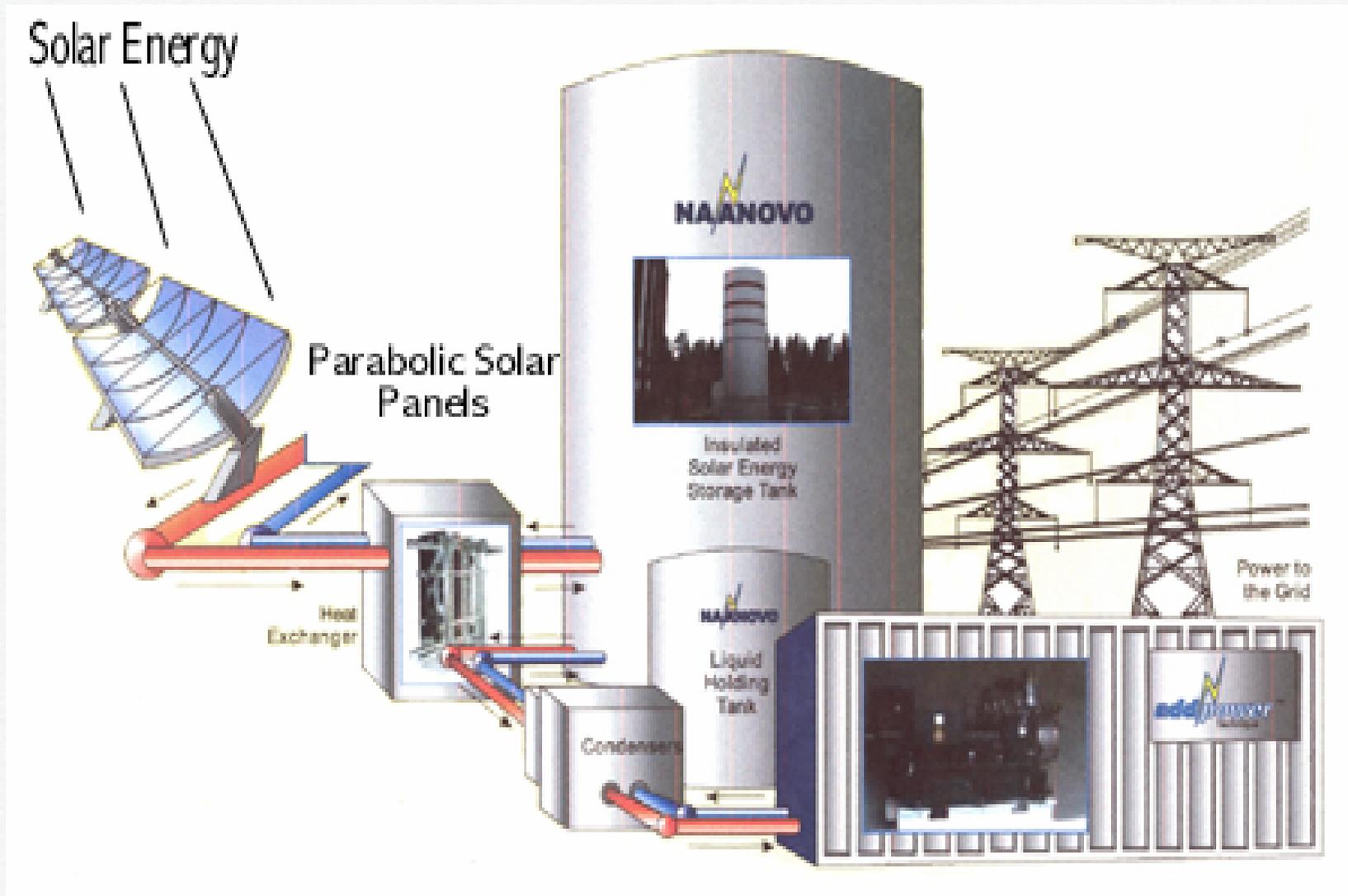
Illustration courtesy of ORNL

Edited by CNH

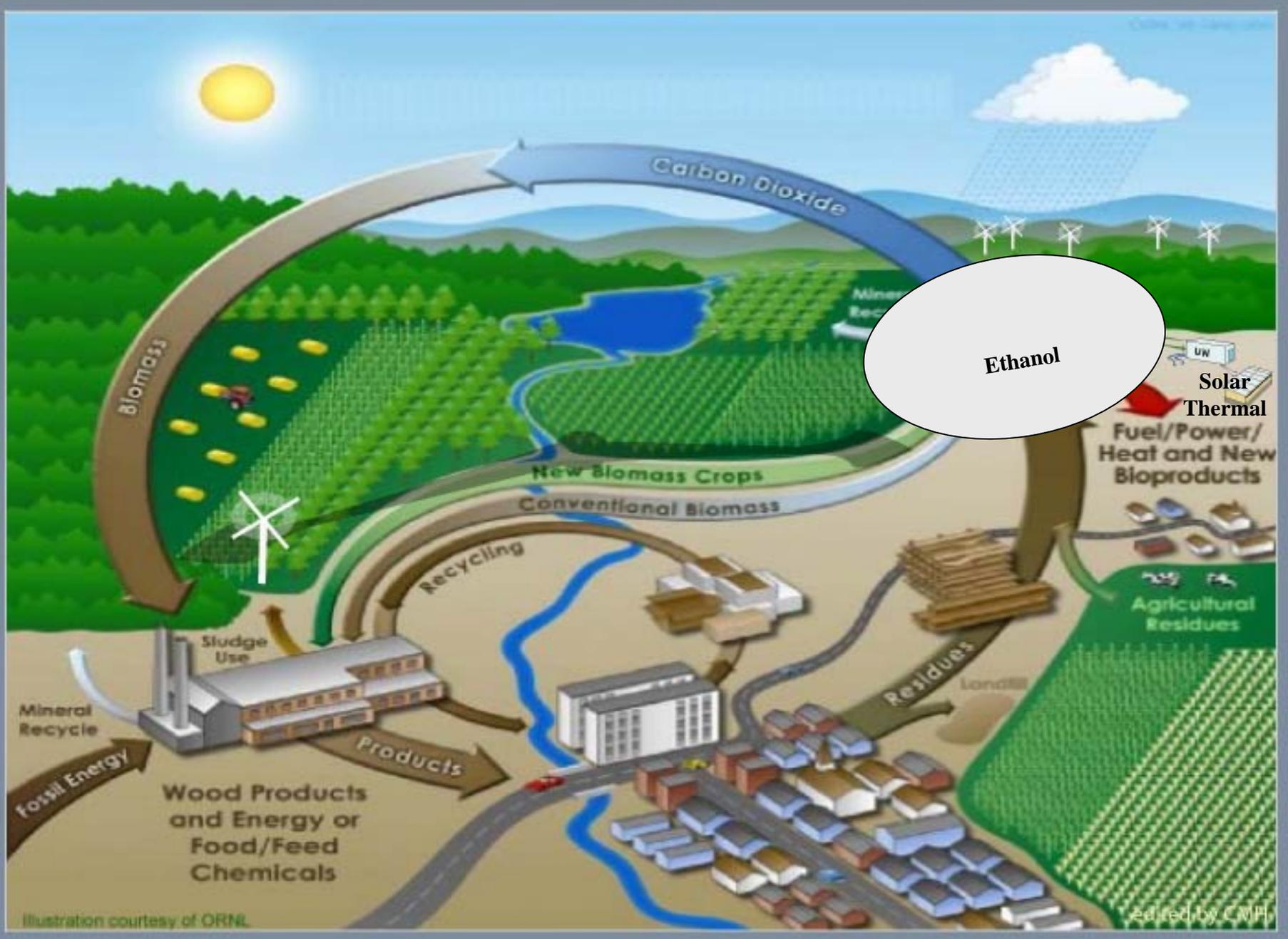


Solar Thermal

Solar Thermal Module



Drawing courtesy of Naanovo



Ethanol

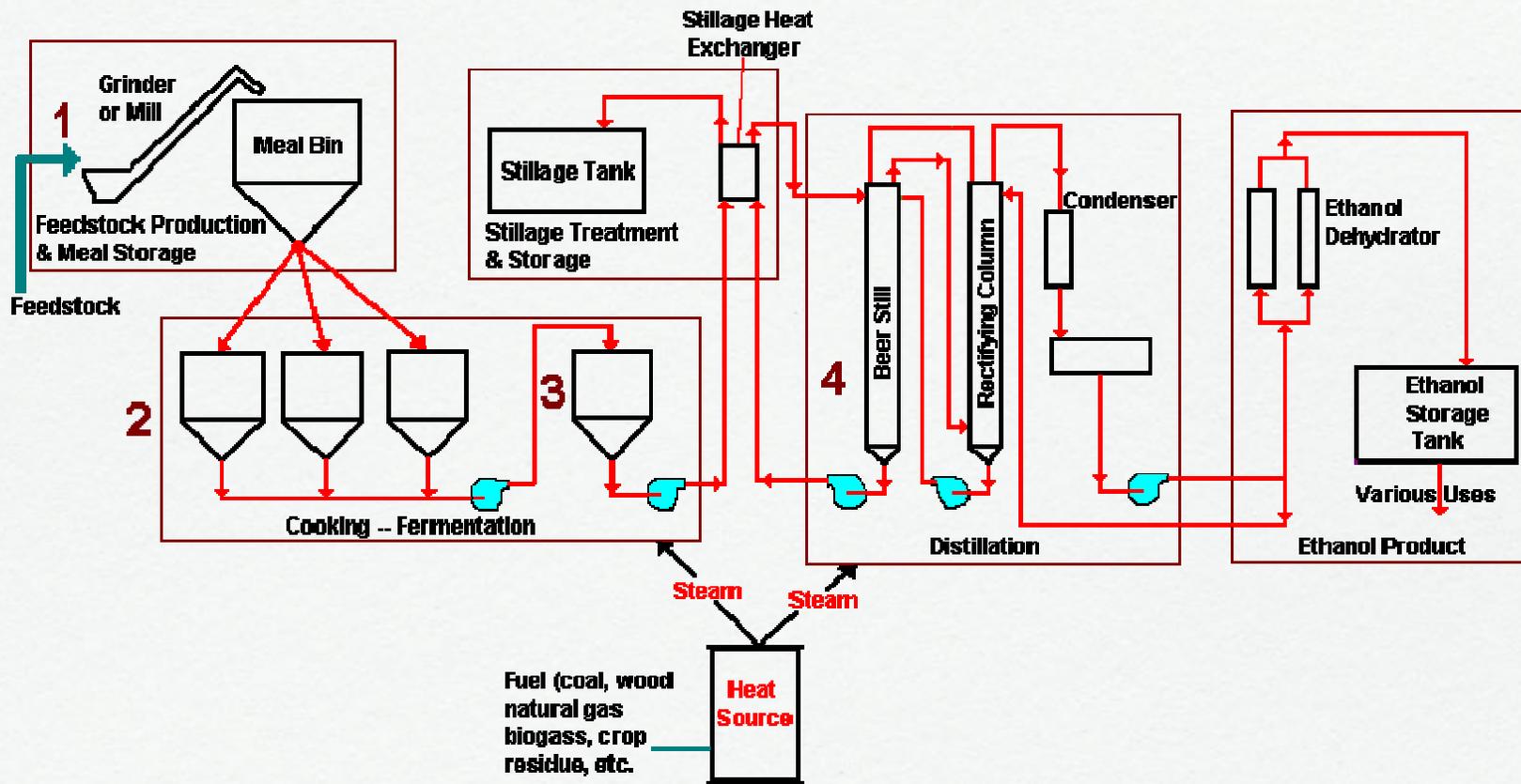
Illustration courtesy of ORNL

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Ethanol Module



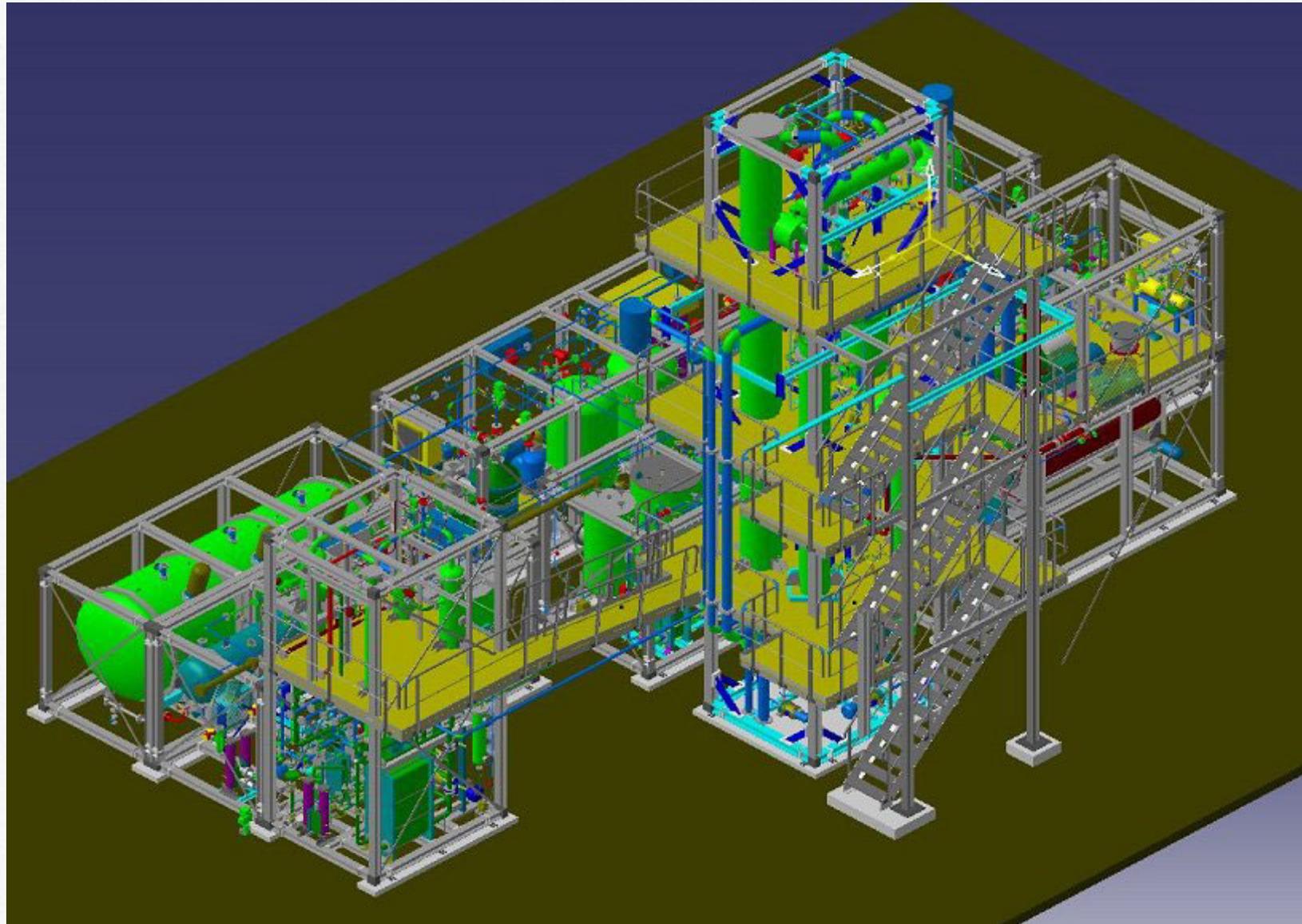
Ethanol Production Very Basic Process-With Integration is Large Scale Production Necessary?





Biodiesel

Biodiesel Module



Drawing courtesy of Energea

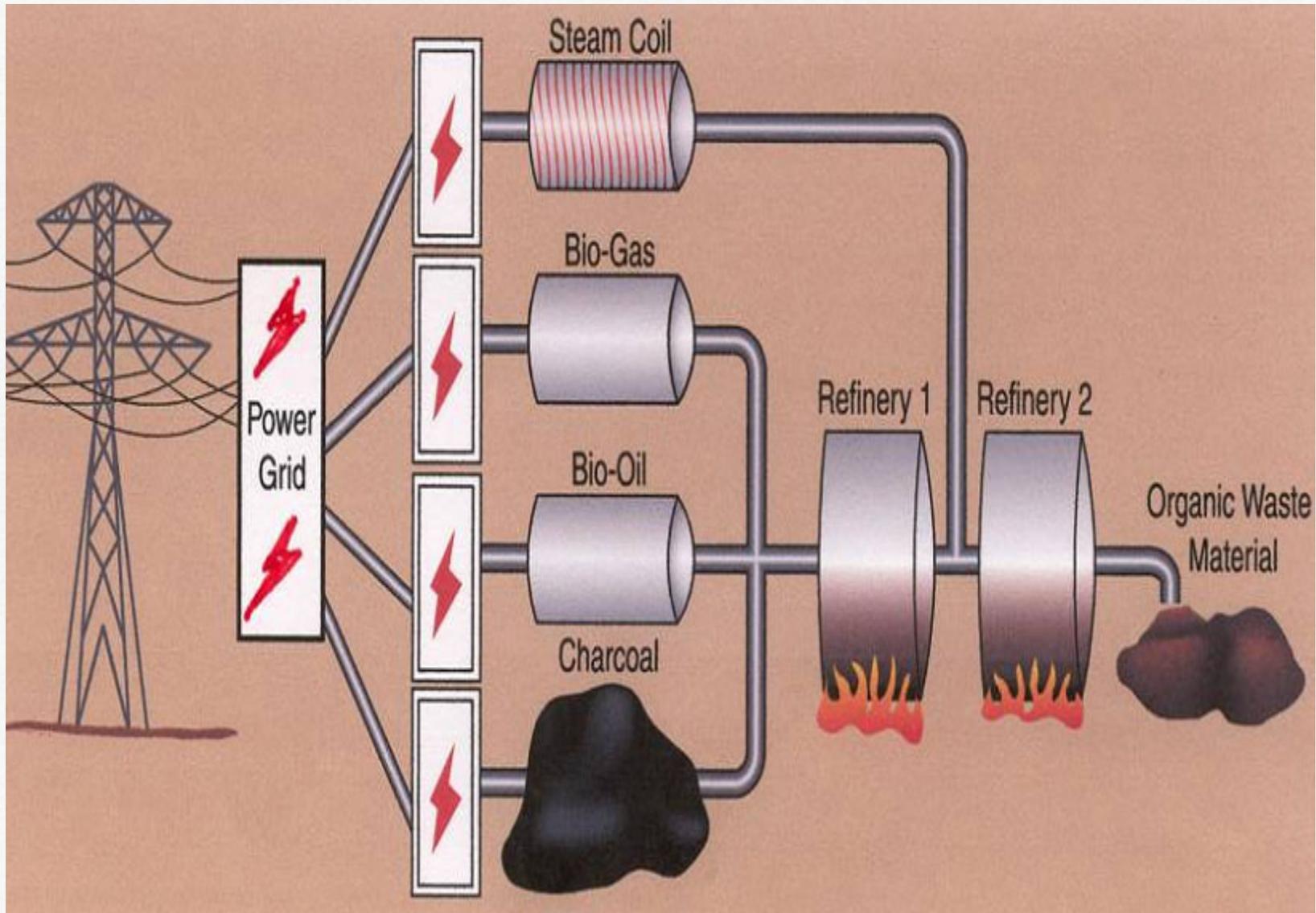


Bio Oil

Illustration courtesy of ORNL

Edited by CWH

BioOil Module



Drawing courtesy of JFBioenergy

Integrated System



Illustration courtesy of ORNL

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Development opportunities

- ❑ Wind -- break even and viewed as ugly by some tribal members
- ❑ biodigester -- 5 cent power but need cows
- ❑ biodiesel -- no proven oil crop except for cotton seed. Currently good market for cottonseed. Questions about use of biodiesel in high powered farm equipment.

- photovoltaic -- 25 cent power
- concentrated photovoltaic -- 10 cent power
- thermal solar 1 -- still possibility for 500 MW installation details unavailable
- thermal solar 2 -- 6 MW installation possible 7 cent power - need engineering surety
- ethanol -- 1 million gal plant - possible \$2 a gal. Corn yields need test plot. Needs to operate in tandem with feedlot.

Recommendations

- ❑ Slow and steady wins the race
- ❑ Technology is advancing
- ❑ Efficiencies are improving
- ❑ Develop infrastructure (such as a tribal utility) to manage energy
- ❑ Possibilities exist for tribal control of renewable energy developments
- ❑ When a technology looks good do a thorough analysis to be sure. Then go see the banker, developer etc and install it.

A spiral-bound notebook with a white cover and a black spiral binding at the top. The notebook is open to a page featuring a photograph of a dense forest. The trees are covered in thick green moss, and the ground is covered with fallen leaves and ferns. The text "Thank You" is written in a large, green, serif font across the center of the photograph.

Thank You

A spiral-bound notebook with a white cover and a black spiral binding at the top. The notebook is open to a page with a background image of a dense forest of evergreen trees, partially obscured by a thick layer of white mist or fog. The text is centered on the page in a monospaced font.

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