



Statement of Whole Energy Fuels to the ARFVTP Pre-Solicitation Workshop January 11, 2013

Whole Energy recommends that the California Energy Commission further encourage the use of the co-products of biofuel production. The development of co-products encourages a bio-refinery mindset.

Specifically, Whole Energy is focused on glycerin produced as a co-product of biodiesel production itself. Glycerin produced as a co-product of biodiesel production, produced at a rate of approximately 10-12% by volume, can improve the economic benefit of biofuel production in many ways, including:

- Through the process of glycerolysis, glycerin can be used to upgrade brown grease and other low quality vegetable oil by reducing the level of free fatty acids in the feedstock.
- Glycerin can be used to improve the quantity and quality of biogas produced from digesters:
  - Glycerin added to bio-digesters increases the output of biomethane, supporting the additional opportunity to extend economical biogas production to less nutrient-dense digester feedstocks.
  - Glycerin can be used to purify biogas produced from digesters, thus increasing the value of the biogas and making it more readily suitable for use in vehicles. Glycerin used to purify biomethane can then be used to enrich feedstock to the digester itself.

In addition to the important economic benefits of co-products, the utilization of co-products also weaves together California's biofuel producers into an integrated bio-economy that Californians want to lead.

Thank you.