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(54) **Title:** PROCESS FOR PRODUCTION OF RENEWABLE FUELS FROM ALCOHOLS

SCHEMATIC OF LOW ENERGY PRODUCTION PROCESS 100

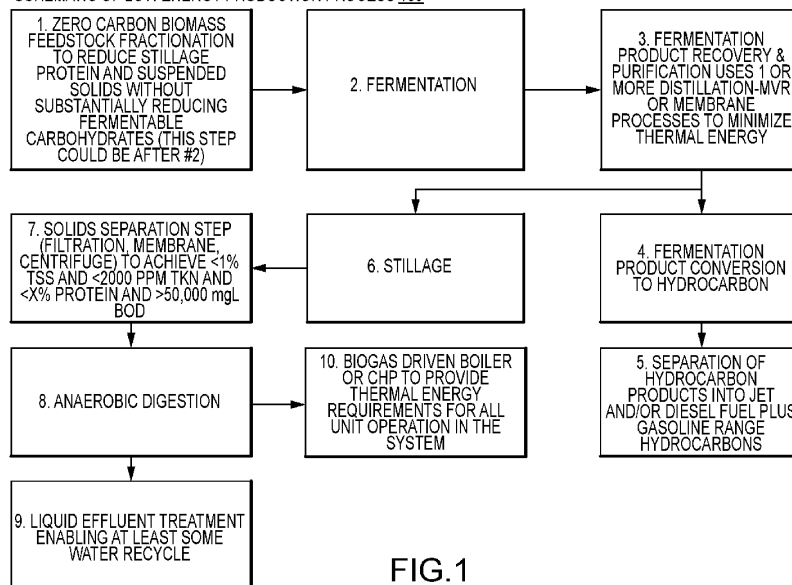


FIG. 1

(57) **Abstract:** Disclosed are systems, methods, and compositions for producing renewable alcohols, conversion of  $C_1$ - $C_5$  alcohols to a mixture of  $C_2$ - $C_7$  olefins to generate stream for recycle to the alcohol conversion step to create or separate oligomerization conversion to generate a predominantly  $C_4$ + stream, oligomerizing stream into fuel range olefins to create a stream, separating stream into fractions appropriate for use as gasoline, jet, and diesel fuels. The disclosure also provides systems, methods, and compositions of bio-based ethanol that can be converted to ethylene and subsequently to mixtures of  $C_3$ - $C_8$  olefins in a single-step.

[Continued on next page]

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