CLAIMS

1. A process for producing a renewable hydrocarbon fuel product, the process comprising the steps of:

providing a renewable paraffinic feed stock comprising at least 95% C8-C20 hydrocarbons; and

reacting said renewable paraffinic feed stock in a Fluid Catalytic Cracking (FCC) reaction zone under conditions sufficient to crack at least a portion of said renewable paraffinic feed stock to produce a renewable hydrocarbon fuel product;

wherein the renewable paraffinic feed stock has not been isomerized.

~~2. The process of claim 1, wherein said reacting step comprises fluid catalytic cracking.~~

~~3~~2. The process of claim 1, wherein conditions sufficient to crack at least a portion of said renewable paraffinic feed stock comprise a reaction temperature ranging from 400 °C to 800 °C.

~~4~~3. The process of claim 1, wherein conditions sufficient to crack at least a portion of said renewable paraffinic feed stock comprise a reactor pressure ranging from greater than 0 to 80 psig.

~~5. The process of claim 1, further comprising the step of blending said renewable paraffinic feed stock with a petroleum-based feed to produce a renewable paraffinic feed stock blend.~~

~~6. The process of claim 5, wherein said renewable paraffinic feed stock blended with said petroleum-based feed is in a range selected from greater than 0% and less than 99%, greater than 0% and less than 80%, greater than 0% and less than 70%, greater than 0% and less than 60%, greater than 0% and less than 50%, greater than 0% and less than 40%, greater than 0% and less than 30%, greater than 0% and less than 20%, or greater than 0% and less than 10% by volume of said renewable paraffinic feed stock.~~

~~7~~4. The process of claim 1, further comprising the step of blending said renewable hydrocarbon fuel product with a petroleum fuel product and/or with one or more renewable fuels.

~~85~~. The process of claim 1, further comprising the step of separating said renewable hydrocarbon fuel product into two or more constituent streams.

~~96~~. The process of claim ~~85~~, wherein said two or more constituent streams comprise at least two of a fuel gas stream, an ethylene stream, a propylene stream, a butylene stream, an LPG stream, a naphtha stream, an olefin stream, a diesel stream, a gasoline stream, a light cycle oil stream, a jet fuel stream, and a cat unit bottoms (slurry/decant oil) stream.

~~107~~. The process of claim ~~96~~, wherein at least one constituent stream is an olefin stream, and further comprising the step of feeding said olefin stream to an alkylation unit and/or a dimersol unit.

~~118~~. The process of claim 1, wherein said reacting step is performed in the absence of a sulfur removal pre-treatment step of said renewable paraffinic feed stock.

~~12. A renewable hydrocarbon fuel product produced in an industrially relevant amount by the process according to claim 1.~~

~~13. A renewable hydrocarbon fuel product having a ^{14}C isotopic ratio characteristic of a blend of petroleum and at least 1% by volume non-petroleum origin and comprising less than about 5% coke.~~

~~14. Gasoline comprising at least 1% by volume of the renewable hydrocarbon fuel product of claim 13.~~

~~15. Aviation fuel comprising at least 1% by volume of the renewable hydrocarbon fuel product of claim 13.~~

~~16. Light cycle oil or diesel comprising at least 1% by volume of the renewable hydrocarbon fuel product of claim 13.~~

~~17. The product of claim 13, wherein said renewable hydrocarbon fuel product has an octane rating ranging from about 40 to about 110.~~

~~18. The product of claim 13, wherein said renewable hydrocarbon fuel product has a specific gravity between about 0.55 and about 0.92.~~

~~19. The product of claim 13, wherein said renewable hydrocarbon fuel product has a sulfur content of less than about 0.2 % by weight of a total weight of said renewable hydrocarbon fuel product.~~

~~20. The product of claim 13, wherein said renewable hydrocarbon fuel product has a cloud point between about -20 °C and about 50 °C.~~

~~21. The product of claim 13, wherein said renewable hydrocarbon fuel product has an isoparaffin to normal paraffin ratio of about 0.0 to about 9.0.~~

~~22. A blended renewable hydrocarbon product, comprising a first component comprising renewable hydrocarbon fuel product having a ^{14}C isotopic ratio characteristic of a blend of petroleum and at least 1% by volume non-petroleum origin and comprising less than about 5% coke, and a second component comprising at least one of one or more petroleum fuel products and one or more renewable fuels.~~