CLAIMS:

1. A hydrotreated catalytic slurry oil composition comprising a density at ~15°C of about 0.92 g/cc to about 1.02 g/cc, a T50 distillation point of about 340°C to about 390°C, and a T90 distillation point of about 450°C to about 525°C, the hydrotreated catalytic slurry oil composition comprising about 1.0 wt% or less of n-heptane insolubles, about 50 wt% to about 70 wt% aromatics, a sulfur content of about 1000 wppm or less, and a hydrogen content of about 10.0 wt% to 12.0 wt%, a ~700°F-(~371°C-) portion of the hydrotreated catalytic slurry oil composition comprising less than about 5.0 wt% paraffins.

2. The hydrotreated catalytic slurry oil composition of claim 1, wherein the hydrotreated catalytic slurry oil composition comprises about 0.5 wt% or less of n-heptane insolubles.

3. The hydrotreated catalytic slurry oil composition of claim 1, wherein the hydrotreated catalytic slurry oil composition exhibits an energy content of at least about 40.0 MJ/kg.

4. The hydrotreated catalytic slurry oil composition of claim 1, wherein a ~371°C+ portion of the hydrotreated catalytic slurry oil composition comprises a) at least about 55 wt% aromatics, b) a BMCI value of at least about 70, c) a pour point of about 30ºC or less, d) an energy content of at least about 40.0 MJ/kg, e) a combination of two or more of a)-d), or f) a combination of all of a)-d).

5. The hydrotreated catalytic slurry oil composition of claim 1, wherein the hydrotreated catalytic slurry oil composition exhibits a T10 distillation point of at least about 250°C.

6. A hydrotreated catalytic slurry oil fraction comprising a density at ~15°C of about 0.84 g/cc to about 0.96 g/cc, a T10 distillation point of at least about 200°C, and a T90 distillation point of about 371°C or less, the hydrotreated catalytic slurry oil fraction comprising about 5.0 wt% or less of paraffins, at least about 50 wt%

naphthenes, at least about 30 wt% aromatics, a sulfur content of about 50 wppm or less, and a hydrogen content of at least about 11.0 wt%, the hydrotreated catalytic slurry oil fraction having a cetane index (D4737) of at least about 25 and an energy content of at least about 41.0 MJ/kg.

7. The hydrotreated catalytic slurry oil fraction of claim 6, wherein the hydrotreated catalytic slurry oil fraction comprises about 3.0 wt% or less of paraffins, at least about 50 wt% naphthenes, or a combination thereof.

8. The hydrotreated catalytic slurry oil fraction of claim 6, wherein the hydrotreated catalytic slurry oil fraction exhibits a cetane index (D4737) of at least about 25, an energy content of at least about 41.0 MJ/kg,or a combination thereof.

9. The hydrotreated catalytic slurry oil fraction of claim 6, wherein the hydrotreated catalytic slurry oil fraction comprises a cloud point of about -25ºC to about -70ºC.

10. A hydrotreated catalytic slurry oil fraction comprising a density at about 15ºC of at least about 0.96 g/cc, a T10 distillation point of at least about 340ºC, and a T90 distillation point of about 450ºC to about 525ºC, the hydrotreated catalytic slurry oil fraction comprising about 1.0 wt % or less of n-heptane insolubles, about 60 wt % to about 80 wt % aromatics, a sulfur content of about 1000 wppm or less, and a hydrogen content of about 9.5 wt % to 12.0 wt %, the hydrotreated catalytic slurry oil fraction having a BMCI value of at least about 70 and a CCAI value of about 870 or less.

11. The hydrotreated catalytic slurry oil fraction of claim 10, wherein the hydrotreated catalytic slurry oil fraction comprises a T10 distillation point of at least about 370ºC, a kinematic viscosity at 50ºC of about 1000 mm^2/s or less, or a combination thereof.

12. A fluid catalytic cracking effluent fraction comprising a C_3 to ~430°F (~221°C) portion, the C_3 to ~430°F (~221°C) portion comprising an aromatics content of less than about 30 wt% and a weight ratio of olefins to saturates of at least about 1.0, the C_3

to ~430°F (~221°C) portion comprising at least 20 wt% of combined C_4 and C_5 compounds.

13. The fluid catalytic cracking effluent fraction of claim 12, wherein the fluid catalytic cracking effluent fraction comprises a weight ratio of combined C_4 and C_5 olefins to combined C_4 and C_5 paraffins of at least about 2.5.

14. The fluid catalytic cracking effluent fraction of claim 12, wherein the C_3 to ~430°F (~221°C) portion comprises at least about 5 wt% of combined napthenes and aromatics, about 20 wt% or less of aromatics, or a combination thereof.

15. The fluid catalytic cracking effluent fraction of claim 12, wherein the fluid catalytic cracking effluent fraction comprises a weight ratio of C_6 olefins to C_6 paraffins of at least about 2.0.

16. The fluid catalytic cracking effluent fraction of claim 12, wherein the fluid catalytic cracking effluent fraction comprises a weight ratio of C_3 olefins to C_3 paraffins of at least about 9.0.

17. The fluid catalytic cracking effluent fraction of claim 12, wherein the C_3 to ~430°F (~221°C) portion comprises at least 50 wt% of C_3-C_7 olefins.

18. A fluid catalytic cracking effluent fraction comprising a C_3 to ~430°F (~221°C) portion, the C_3 to ~430°F (~221°C) portion comprising a ratio of combined C_4 and C_5 olefins to combined C_4 and C_5 paraffins of at least about 0.9, a C_6 to ~430°F (~221°C) portion having a weight ratio of cyclic compounds to aliphatic compounds of at least about 1.0.

19. The fluid catalytic cracking effluent fraction of claim 18, wherein the fluid catalytic cracking effluent fraction comprises a weight ratio of C_3 olefins to C_3 paraffins of at least about 5.0.

20. A catalytic naphtha composition comprising a C_6 to ~430°F (~221°C) portion, the C_6 to ~430°F (~221°C) portion comprising at least about 60 wt% aromatics and at least about 80 wt% of combined aromatics and naphthenes, the C_6 to ~430°F (~221°C) portion comprising an isoparaffin to n-paraffin weight ratio of at least about 6.