CLAIMS

WHAT IS CLAIMED IS:

1. A blended jet boiling range composition comprising: 1.0 vol% to 99 vol% of an isoparaffinic blend component containing 80 vol% or more of isoparaffins, 5.0 vol% or less of olefins, and 5.0 vol% or less of C_{19+} hydrocarbons, the isoparaffinic blend component having a ratio of Hd hydrogens to Hc_2 hydrogens of 1.01 to 1.35; and 1.0 vol% to 99 vol% of a synthetic jet boiling range fraction, the synthetic jet boiling range fraction a) containing less than 80 wt% isoparaffins, b) having a ratio of Hd hydrogens to Hc_2 hydrogens of 1.6 or more, c) having a ratio of Hd hydrogens to Hc_2 hydrogens of 1.0 or less, d) a combination of a) and b), or e) a combination of a) and c), wherein the blended jet boiling range composition comprising a T10 distillation point of 205°C or less, a final boiling point of 300°C or less, a freeze point of -40°C or lower, and 1.0 wt% or more of $C_{17} – C_{18}$ hydrocarbons.

2. A blended jet boiling range composition comprising: 1.0 vol% to 99 vol% of an isoparaffinic blend component containing 80 wt% or more of isoparaffins, 5.0 wt% or less of olefins, and 5.0 wt% or less of C_{19+} hydrocarbons, the isoparaffinic blend component having a ratio of Hd hydrogens to Hc_2 hydrogens of 1.01 to 1.35; and 1.0 vol% to 99 vol% of a synthetic jet boiling range fraction, the synthetic jet boiling range fraction a) containing less than 80 wt% isoparaffins, b) having a ratio of Hd hydrogens to Hc_2 hydrogens of 1.6 or more, c) having a ratio of Hd hydrogens to Hc_2 hydrogens of 1.0 or less, d) a combination of a) and b), or e) a combination of a) and c), the blended jet boiling range composition comprising a T10 distillation point of 205°C or less, a final boiling point of 300°C or less, a freeze point of -40°C or lower, and i) 10 wt% or more of C_9 hydrocarbons, ii) a flash point of 50°C or higher, or iii) a combination of i) and ii).

3. The composition of claim 2, wherein the composition comprises 1.0 vol% to 30 vol% of the isoparaffinic blend component.

4. The composition of any of claims 1 – 3, wherein the composition comprises 30 vol% to 99 vol% of the isoparaffinic blend component, the composition optionally comprising 1.5 wt% or more of $C_{17} – C_{18}$ hydrocarbons.

5. The composition of any of claims 1 or 2, wherein the synthetic jet boiling range fraction comprises a bio-derived fraction, a Fischer-Tropsch fraction, a jet boiling range fraction derived from a non-conventional source, or a combination thereof.

6. The composition of any of claims 1 or 2, wherein the composition comprises 10 vol% or more of the isoparaffinic blend component, 10 vol% or more of the synthetic jet boiling range fraction, or a combination thereof.

7. The composition of any of claims 1 or 2, wherein the composition further comprises 1.0 wt% or more of a conventional jet fuel, a mineral jet boiling range fraction, or a combination thereof.

8. The composition of any of claims 1 or 2, wherein the composition comprises a ratio of Hd hydrogens to Hc_2 hydrogens of 1.10 to 2.20, or wherein the composition comprises a ratio of Hd hydrogens to Hc_2 hydrogens of 0.50 to 1.0.

9. The composition of any of claims 1 or 2, wherein the isoparaffinic blend component contains 1.0 vol% or less of aromatics, or wherein the composition comprises 20 wt% or less of aromatics, or a combination thereof.

10. The composition of any of claims 1 or 2, wherein the composition comprises 0.1 wt% to 1.0 wt% of C_{19+} hydrocarbons.

11. The composition of any of claims 1 or 2, i) wherein the isoparaffinic blend component comprises 8.0 wt% or less of compounds different from isoparaffins and iso-olefins; ii) wherein the isoparaffinic blend component comprises a T10 distillation point of 205°C or less, a final boiling point of 300°C or less, and a freeze point of -40°C or lower; or iii) a combination of i) and ii).

12. The composition of any of claims 1 or 2, wherein the composition comprises 3.0 wt% or less of C_{8-} compounds.