What is claimed is:

1. A method of making a bimodal polyethylene, the method comprising:

feeding a bimodal catalyst system and a trim solution to a single reactor to establish an average steady-state trim/catalyst ratio, wherein the reactor has an average steady-state reactor residence time;

feeding ethylene and 1-hexene to the reactor to establish an average steady-state 1-hexene /ethylene ratio; and

performing a plurality of cycles of ratio adjustment, wherein each cycle of ratio adjustment comprises:

increasing the average steady-state trim/catalyst ratio to a relative maximum trim/catalyst ratio over a time interval that is from 5% to 15% of the average steady-state reactor residence time, while concurrently decreasing the average steady-state 1-hexene /ethylene ratio to a relative minimum 1-hexene /ethylene ratio;

decreasing the relative maximum trim/catalyst ratio to a relative minimum trim/catalyst ratio over a time interval that is from 10% to 30% of the average steady-state reactor residence time, while concurrently increasing the relative minimum 1-hexene /ethylene ratio to a relative maximum 1-hexene /ethylene ratio; and

increasing the relative minimum trim/catalyst ratio to the average steady-state trim/catalyst ratio over a time interval that is from 5% to 15% of the average steady-state reactor residence time, while concurrently decreasing the relative maximum 1-hexene /ethylene ratio to the average steady-state1-hexene /ethylene ratio.

2. The method of claim 1, wherein the plurality of cycles of ratio adjustment includes 10 to 100 cycles of ratio adjustment.

3. The method of claim 1, wherein the bimodal catalyst system includes a low molecular weight component and a high molecular weight component, and the trim solution includes the low molecular weight component.

4. The method of claim 1, wherein the relative maximum trim/catalyst ratio is 105% to 300% of the average steady-state trim/catalyst ratio on a molar basis.

5. The method of claim 1, wherein the relative minimum trim/catalyst ratio is 20% to 95% of the average steady-state trim/catalyst ratio on a molar basis.

6. The method of claim 1, wherein the relative maximum 1-hexene /ethylene is 110% to 250% of the average steady-state 1-hexene /ethylene on a molar basis.

7. The method of claim 1, wherein the relative minimum 1-hexene /ethylene is 35% to 90% of the average steady-state 1-hexene /ethylene ratio on a molar basis.