What is claimed:

1. An hybrid polyol based on natural oil polyol useful in flexible polyurethane foam manufacturing produced by reacting at least one natural oil polyol with at least one polyfunctional carboxylic acid and at least one polyhydric alcohol, wherein said natural oil polyol is derived by subjecting an ethylenically unsaturated natural oil to a free radical mediated grafting reaction involving an ethylenically unsaturated monomer.

2. The hybrid polyol based on natural oil polyol useful in flexible polyurethane foam manufacturing as in claim 1, wherein said hybrid polyol has functionality in the range of 0.2 to 4.0.

3. The hybrid polyol based on natural oil polyol useful in flexible polyurethane foam manufacturing as in claim 1, wherein said hybrid polyol has hydroxyl number in the range of 30 to 250.

4. The hybrid polyol based on natural oil polyol useful in flexible polyurethane foam manufacturing as in claim 1, wherein said natural oil polyol is one or more triglycerides containing 12 to 22 carbon atoms, or a mixtures thereof.

5. The hybrid polyol based on natural oil polyol useful in flexible polyurethane foam manufacturing as in claim 1, wherein natural oil used in the preparation of said natural oil polyol is selected from a group consisting of castor oil, coconut oil, cochin oil, corn oil, cottonseed oil, linseed oil, olive oil, palm oil, palm kernel oil, peanut oil, soybean oil, sunflower oil, tall oils, tallow, lesquerella oil, tung oil, whale oil, tea seed oil, sesame seed oil, safflower oil, rapeseed oil, fish oils, any derivatives thereof, and any combinations thereof.

6. The hybrid polyol based on natural oil polyol useful in flexible polyurethane foam manufacturing as in claim 1, wherein said polyfunctional carboxylic acid is selected from a group consisting of succinic acid, oxalic acid, malonic acid, maleic acid, fumaric acid, glutaric acid, adipic acid, pimelic acid, suberic acid, azelaic acid, citraconic acid, sebacic acid, fumaric acid, malic acid, itaconic acid, muconic acid, citric acid, phthalic acid, isophthalic acid, aconitic acid, propane-1,2,3-tricarboxylic acid, trimesic acid, 2-butynedioic acid, 1,4-cyclohexane dicarboxylic acid, hexahydrophthalic acid, hexachloroendomethylenetetrahydrophthalic acid, dichlorophthalic acid, isophthalic acid, terephthalic acid, trimellitic acid, any derivatives thereof and any mixtures thereof.

7. The hybrid polyol based on natural oil polyol useful in flexible polyurethane foam manufacturing as in claim 1, wherein said polyhydric alcohol is selected from a group

consisting of ethylene glycol, propylene glycol, benzyl alcohol, neopentylglycol, butanediol, pentanediol, hexanediol, cyclopentanediol, cyclohexanediol, dimethylol cyclohexane, diethylene glycol, glycerol, trimethylolpropane, butanetriol, pentaerytritol, dipentaerythritol, cyclohexanetriol, 1,3-propanediol, 1,4-butanediol, any mixture thereof, any derivatives thereof and any combinations thereof.

8. The hybrid polyol based on natural oil polyol useful in flexible polyurethane foam manufacturing as in claim 1, wherein said polyfunctional carboxylic acid is succinic acid and said polyhydric alcohol is diethylene glycol.

9. The hybrid polyol based on natural oil polyol useful in flexible polyurethane foam manufacturing as in claim 1, wherein said polyfunctional carboxylic acid is succinic acid and said polyhydric alcohol is 1,3-propanediol.

10. The hybrid polyol based on natural oil polyol useful in flexible polyurethane foam manufacturing as in claim 1, wherein said polyfunctional carboxylic acid is biobased succinic acid and said polyhydric alcohol is biobased 1,3-propanediol.

11. A hybrid polyol based on natural oil polyol useful in flexible polyurethane foam manufacturing as in claim 1, wherein said hybrid polyol has at least 10 percent biorenewable content.

12. A polyol mixture comprising the hybrid polyol as in claim 1 and one or more petroleum-based polyol wherein said hybrid polyol as in claim 1 is at least 10 percent of the polyol mixture.

13. A polyol mixture as in claim 12, wherein said petroleum-based polyol is a polyester polyol.

14. A polyol mixture as in claim 12, wherein said petroleum-based polyol is a polyether polyol.

15. A polyol mixture comprising the hybrid polyol as in claim 1 and one or more isosorbide based polyol, wherein said isosorbide-based polyol is at least 10% of the polyol mixture.

16. A polyol mixture as in claim 15, wherein said isosorbide based polyol was prepared using biobased isosorbide.

17. A polyurethane product obtained by reacting the hybrid polyol as in claim 1 with isocyanate.

18. A polyurethane product with at least 10 percent biorenewable content wherein said polyurethane product is obtained by reacting the hybrid polyol as in claim 11 with isocyanate.

19. A process for manufacturing a hybrid polyol useful in flexible polyurethane foam manufacturing wherein said process comprising steps of:
    (a) selecting a natural oil polyol, wherein said natural oil polyol is derived by subjecting an ethylenically unsaturated natural oil to a free radical mediated grafting reaction involving an ethylenically unsaturated monomer;
    (b) selecting at least one polyfunctional carboxylic acid with at least two carboxylic acid groups;
    (c) selecting at least one polyhydric alcohol with at least two hydroxyl groups; and
    (d) reacting components in steps (a), (b), and (c) in the presence of an esterification catalyst to yield said hybrid polyol.

20. A process for manufacturing a hybrid polyol useful in flexible polyurethane foam manufacturing as in claim 19, wherein natural oil used in the preparation of said natural oil polyol is selected from a group consisting of castor oil, coconut oil, cochin oil, corn oil, cottonseed oil, linseed oil, olive oil, palm oil, palm kernel oil, peanut oil, soybean oil, sunflower oil, tall oils, tallow, lesquerella oil, tung oil, whale oil, tea seed oil, sesame seed oil, safflower oil, rapeseed oil, fish oils, any derivatives thereof, and any combinations thereof.

21. A process for manufacturing a hybrid polyol useful in flexible polyurethane foam manufacturing as in claim 19, wherein said polyfunctional carboxylic acid is selected from succinic acid, oxalic acid, malonic acid, maleic acid, fumaric acid, glutaric acid, adipic acid, pimelic acid, suberic acid, azelaic acid, citraconic acid, sebacic acid, fumaric acid, malic acid, itaconic acid, muconic acid, citric acid, phthalic acid, isophthalic acid, aconitic acid, propane-1,2,3-tricarboxylic acid, trimesic acid, 2-butynedioic acid, 1,4-cyclohexane dicarboxylic acid, hexahydrophthalic acid, hexachloroendomethylene tetrahydrophthalic acid, dichlorophthalic acid, isophthalic acid, terephthalic acid, trimellitic acid, any derivatives thereof and any mixtures thereof.

22. A process for manufacturing a hybrid polyol useful in flexible polyurethane foam manufacturing as in claim 19, wherein said polyhydric alcohol is selected from a group consisting of ethylene glycol, propylene glycol, benzyl alcohol, neopentylglycol, butanediol, pentanediol, hexanediol, cyclopentanediol, cyclohexanediol, dimethylol cyclohexane, diethylene glycol, glycerol, trimethylolpropane, butanetriol, pentaerytritol, dipentaerythritol, cyclohexanetriol, 1,3-propanediol, 1,4-butanediol, any mixture thereof, any derivatives thereof and any combinations thereof.