of optimum minimal energy, with transformation between this geometry and that with θ 60° requiring an energy change of 10 kJ mol^{-1}. It is not surprising, therefore, that variable temperature $^{13}C-\{^1H\}$ NMR studies [1d] reveal that **10** adopts the symmetrical structure even at −80°C.

9 Selected spectroscopic data: Compound **12**, ν_{max}(CO) 1762 and 1634 cm^{-1} (thf). NMR: ^1H, δ −21.60 (d of d, 2 H, μ-H, J(RhC) 28 and 20 Hz), 1.73 (s, 30 H, C_5Me_5), and 1.83 (s, 15 H, C_5Me_5); $^{13}C-\{^1H\}$, δ 245.2 (d of t, μ_3-CO, J(RhC) 39 and 26 Hz), 237.5 (t, μ-CO, J(RhC) 41 Hz), 101.7 (C_5Me_5), 98.5 (d, C_5Me_5, J(RhC) 6 Hz), 11.1 (C_5Me_5), and 9.6 ppm (C_5Me_5). Compound **13a**, NMR: ^1H, δ −25.54 (d, 2 H, J(RhH) 32 Hz), 1.69 (s, 30 H, C_5Me_5), and 1.80 (s, 15 H, C_5Me_5). Compound **13b**, NMR: ^1H, δ −26.33 (d, 1 H, μ-HCoRh, J(RhH) 20.8 Hz), −22.90 (d of d, 1 H, μ-HRh_2, J(RhH) 31 and 21 Hz), 1.60 (s, 15 H, C_5Me_5), 1.71 (s, 15 H, C_5Me_5), and 1.80 (s, 15 H, C_5Me_5). Compound **14a**, NMR: ^1H, δ −21.67 (d, 2 H, μ-HIrRh, J(RhH) 27 Hz), 1.88 (br, 15 H, C_5Me_5), and 1.76 (s, 30 H, C_5Me_5); Compound **14b**, NMR: ^1H, δ −22.4 (d, 1 H, μ-HIrRh, J(RhH) 21 Hz), −21.21 (d of d, 1 H, μ-HRh_2, J(RhH) 32 and 21 Hz), 1.88 (br, 15 H, C_5Me_5), 1.78 (s, 15 H, C_5Me_5), and 1.77 (s, 15 H, C_5Me_5).

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