

Solar UAV Sizing Report

Solar Resource

Location: Praça Marechal Eduardo Gomes, 50 - Vila das Acacias, São José dos Campos

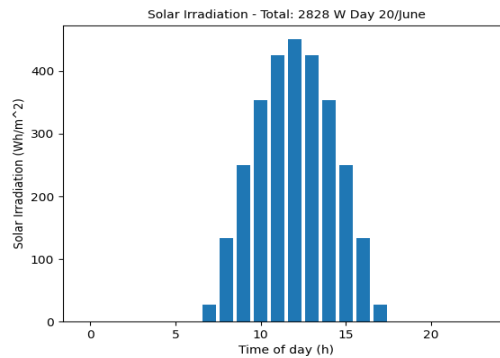
Available Solar Energy: 2828.38 W

Day of the year with less incidence os sunlight: 20/June

Hours Without Sunlight: 13.41 h

Solar Energy Distribution

hour (h)	power (W)
07	27.01
08	133.86
09	249.52
10	353.26
11	425.13
12	450.82
13	425.13
14	353.26
15	249.52
16	133.86
17	27.01



Mission Profile

Take off altitude: 700 (m)

Cruise altitude: 800 (m)

Flight Speed: 9.00 (m/s)

Flight Endurance: 2.00 (h)

Payload Power: 0.15 (W)

Payload Weight: 0.15 (N)

Airfoil Model: xf-a18-il

Battery Model: Panasonic NCR 18650

Solar Cell Model: SunPower C60

UAV Solution 1

----- Wing Settings -----

Wing Area: 1.25 (m)
Wingspan: 3.20 (m)
Aspect Ratio: 8.19
Standard Mean Chord: 0.39 (m)
Solar Panel Area: 0.88 (m)

----- Power Settings -----

Total Energy Collected: 436.56 (W)
Total Energy Consumed: 115.44 (W)
Propulsion Power: 53.62 (W)
Power for Takeoff: 71.64 (W)
Climb Power: 319.41 (W)
Total Climb Power: 8.19 (W)

----- Weight Settings -----

Total Weight: 33.13 (N)
Airframe Weight: 15.93 (N)
Solar Panel Weight: 5.92 (N)
Battery Weight: 5.60 (N)
Propulsion Group Weight: 4.21 (N)

----- Aerodynamic Settings -----

Lift Force: 62.29 (N)
Drag Force: 4.20 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.17 (m)
Landing Distance: 0.20 (m)
Total Time for Climb: 75.47 (s)
Time for Takeoff: 0.02 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.03 (s)

UAV Solution 2

----- Wing Settings -----

Wing Area: 1.25 (m)
Wingspan: 3.40 (m)
Aspect Ratio: 9.25
Standard Mean Chord: 0.37 (m)
Solar Panel Area: 0.88 (m)

----- Power Settings -----

Total Energy Collected: 436.56 (W)
Total Energy Consumed: 107.18 (W)
Propulsion Power: 49.61 (W)
Power for Takeoff: 66.27 (W)
Climb Power: 314.03 (W)
Total Climb Power: 7.97 (W)

----- Weight Settings -----

Total Weight: 35.07 (N)
Airframe Weight: 18.59 (N)
Solar Panel Weight: 5.92 (N)
Battery Weight: 5.20 (N)
Propulsion Group Weight: 3.89 (N)

----- Aerodynamic Settings -----

Lift Force: 62.29 (N)
Drag Force: 3.88 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.23 (m)
Landing Distance: 0.27 (m)
Total Time for Climb: 75.49 (s)
Time for Takeoff: 0.03 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.04 (s)

UAV Solution 3

----- Wing Settings -----

Wing Area: 1.15 (m)
Wingspan: 3.20 (m)
Aspect Ratio: 8.90
Standard Mean Chord: 0.36 (m)
Solar Panel Area: 0.80 (m)

----- Power Settings -----

Total Energy Collected: 401.64 (W)
Total Energy Consumed: 100.91 (W)
Propulsion Power: 46.76 (W)
Power for Takeoff: 62.45 (W)
Climb Power: 290.39 (W)
Total Climb Power: 7.39 (W)

----- Weight Settings -----

Total Weight: 31.05 (N)
Airframe Weight: 15.57 (N)
Solar Panel Weight: 5.45 (N)
Battery Weight: 4.89 (N)
Propulsion Group Weight: 3.67 (N)

----- Aerodynamic Settings -----

Lift Force: 57.31 (N)
Drag Force: 3.66 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.25 (m)
Landing Distance: 0.29 (m)
Total Time for Climb: 75.50 (s)
Time for Takeoff: 0.03 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.04 (s)

UAV Solution 4

----- Wing Settings -----

Wing Area: 1.25 (m)
Wingspan: 3.60 (m)
Aspect Ratio: 10.37
Standard Mean Chord: 0.35 (m)
Solar Panel Area: 0.88 (m)

----- Power Settings -----

Total Energy Collected: 436.56 (W)
Total Energy Consumed: 100.27 (W)
Propulsion Power: 46.24 (W)
Power for Takeoff: 61.76 (W)
Climb Power: 309.53 (W)
Total Climb Power: 7.78 (W)

----- Weight Settings -----

Total Weight: 37.37 (N)
Airframe Weight: 21.49 (N)
Solar Panel Weight: 5.92 (N)
Battery Weight: 4.86 (N)
Propulsion Group Weight: 3.63 (N)

----- Aerodynamic Settings -----

Lift Force: 62.29 (N)
Drag Force: 3.62 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.31 (m)
Landing Distance: 0.36 (m)
Total Time for Climb: 75.51 (s)
Time for Takeoff: 0.04 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.05 (s)

UAV Solution 5

----- Wing Settings -----

Wing Area: 1.25 (m)
Wingspan: 3.80 (m)
Aspect Ratio: 11.55
Standard Mean Chord: 0.33 (m)
Solar Panel Area: 0.88 (m)

----- Power Settings -----

Total Energy Collected: 436.56 (W)
Total Energy Consumed: 94.41 (W)
Propulsion Power: 43.40 (W)
Power for Takeoff: 57.95 (W)
Climb Power: 305.71 (W)
Total Climb Power: 7.62 (W)

----- Weight Settings -----

Total Weight: 40.03 (N)
Airframe Weight: 24.65 (N)
Solar Panel Weight: 5.92 (N)
Battery Weight: 4.57 (N)
Propulsion Group Weight: 3.41 (N)

----- Aerodynamic Settings -----

Lift Force: 62.29 (N)
Drag Force: 3.39 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.40 (m)
Landing Distance: 0.47 (m)
Total Time for Climb: 75.54 (s)
Time for Takeoff: 0.06 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.07 (s)

UAV Solution 6

----- Wing Settings -----

Wing Area: 1.05 (m)
Wingspan: 3.00 (m)
Aspect Ratio: 8.57
Standard Mean Chord: 0.35 (m)
Solar Panel Area: 0.73 (m)

----- Power Settings -----

Total Energy Collected: 366.71 (W)
Total Energy Consumed: 94.33 (W)
Propulsion Power: 43.76 (W)
Power for Takeoff: 58.43 (W)
Climb Power: 266.56 (W)
Total Climb Power: 6.81 (W)

----- Weight Settings -----

Total Weight: 27.33 (N)
Airframe Weight: 12.88 (N)
Solar Panel Weight: 4.97 (N)
Battery Weight: 4.57 (N)
Propulsion Group Weight: 3.43 (N)

----- Aerodynamic Settings -----

Lift Force: 52.32 (N)
Drag Force: 3.42 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.27 (m)
Landing Distance: 0.32 (m)
Total Time for Climb: 75.50 (s)
Time for Takeoff: 0.04 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.04 (s)

UAV Solution 7

----- Wing Settings -----

Wing Area: 1.15 (m)
Wingspan: 3.40 (m)
Aspect Ratio: 10.05
Standard Mean Chord: 0.34 (m)
Solar Panel Area: 0.80 (m)

----- Power Settings -----

Total Energy Collected: 401.64 (W)
Total Energy Consumed: 93.92 (W)
Propulsion Power: 43.36 (W)
Power for Takeoff: 57.89 (W)
Climb Power: 285.84 (W)
Total Climb Power: 7.20 (W)

----- Weight Settings -----

Total Weight: 33.03 (N)
Airframe Weight: 18.16 (N)
Solar Panel Weight: 5.45 (N)
Battery Weight: 4.55 (N)
Propulsion Group Weight: 3.40 (N)

----- Aerodynamic Settings -----

Lift Force: 57.31 (N)
Drag Force: 3.39 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.34 (m)
Landing Distance: 0.39 (m)
Total Time for Climb: 75.52 (s)
Time for Takeoff: 0.05 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.05 (s)

UAV Solution 8

----- Wing Settings -----

Wing Area: 1.25 (m)
Wingspan: 4.00 (m)
Aspect Ratio: 12.80
Standard Mean Chord: 0.31 (m)
Solar Panel Area: 0.88 (m)

----- Power Settings -----

Total Energy Collected: 436.56 (W)
Total Energy Consumed: 89.42 (W)
Propulsion Power: 40.97 (W)
Power for Takeoff: 54.69 (W)
Climb Power: 302.46 (W)
Total Climb Power: 7.48 (W)

----- Weight Settings -----

Total Weight: 43.02 (N)
Airframe Weight: 28.08 (N)
Solar Panel Weight: 5.92 (N)
Battery Weight: 4.33 (N)
Propulsion Group Weight: 3.22 (N)

----- Aerodynamic Settings -----

Lift Force: 62.29 (N)
Drag Force: 3.20 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.52 (m)
Landing Distance: 0.61 (m)
Total Time for Climb: 75.58 (s)
Time for Takeoff: 0.07 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.08 (s)

UAV Solution 9

----- Wing Settings -----

Wing Area: 1.15 (m)
Wingspan: 3.60 (m)
Aspect Ratio: 11.27
Standard Mean Chord: 0.32 (m)
Solar Panel Area: 0.80 (m)

----- Power Settings -----

Total Energy Collected: 401.64 (W)
Total Energy Consumed: 88.07 (W)
Propulsion Power: 40.51 (W)
Power for Takeoff: 54.08 (W)
Climb Power: 282.03 (W)
Total Climb Power: 7.04 (W)

----- Weight Settings -----

Total Weight: 35.36 (N)
Airframe Weight: 20.99 (N)
Solar Panel Weight: 5.45 (N)
Battery Weight: 4.27 (N)
Propulsion Group Weight: 3.18 (N)

----- Aerodynamic Settings -----

Lift Force: 57.31 (N)
Drag Force: 3.17 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.45 (m)
Landing Distance: 0.52 (m)
Total Time for Climb: 75.56 (s)
Time for Takeoff: 0.06 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.07 (s)

UAV Solution 10

----- Wing Settings -----

Wing Area: 0.95 (m)
Wingspan: 2.80 (m)
Aspect Ratio: 8.25
Standard Mean Chord: 0.34 (m)
Solar Panel Area: 0.66 (m)

----- Power Settings -----

Total Energy Collected: 331.79 (W)
Total Energy Consumed: 87.40 (W)
Propulsion Power: 40.59 (W)
Power for Takeoff: 54.19 (W)
Climb Power: 242.49 (W)
Total Climb Power: 6.22 (W)

----- Weight Settings -----

Total Weight: 23.91 (N)
Airframe Weight: 10.51 (N)
Solar Panel Weight: 4.50 (N)
Battery Weight: 4.24 (N)
Propulsion Group Weight: 3.19 (N)

----- Aerodynamic Settings -----

Lift Force: 47.34 (N)
Drag Force: 3.17 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.31 (m)
Landing Distance: 0.36 (m)
Total Time for Climb: 75.51 (s)
Time for Takeoff: 0.04 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.05 (s)

UAV Solution 11

----- Wing Settings -----

Wing Area: 1.05 (m)
Wingspan: 3.20 (m)
Aspect Ratio: 9.75
Standard Mean Chord: 0.33 (m)
Solar Panel Area: 0.73 (m)

----- Power Settings -----

Total Energy Collected: 366.71 (W)
Total Energy Consumed: 87.30 (W)
Propulsion Power: 40.34 (W)
Power for Takeoff: 53.85 (W)
Climb Power: 261.98 (W)
Total Climb Power: 6.62 (W)

----- Weight Settings -----

Total Weight: 29.02 (N)
Airframe Weight: 15.17 (N)
Solar Panel Weight: 4.97 (N)
Battery Weight: 4.23 (N)
Propulsion Group Weight: 3.17 (N)

----- Aerodynamic Settings -----

Lift Force: 52.32 (N)
Drag Force: 3.15 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.37 (m)
Landing Distance: 0.44 (m)
Total Time for Climb: 75.53 (s)
Time for Takeoff: 0.05 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.06 (s)

UAV Solution 12

----- Wing Settings -----

Wing Area: 1.15 (m)
Wingspan: 3.80 (m)
Aspect Ratio: 12.56
Standard Mean Chord: 0.30 (m)
Solar Panel Area: 0.80 (m)

----- Power Settings -----

Total Energy Collected: 401.64 (W)
Total Energy Consumed: 83.11 (W)
Propulsion Power: 38.10 (W)
Power for Takeoff: 50.85 (W)
Climb Power: 278.80 (W)
Total Climb Power: 6.91 (W)

----- Weight Settings -----

Total Weight: 38.02 (N)
Airframe Weight: 24.08 (N)
Solar Panel Weight: 5.45 (N)
Battery Weight: 4.03 (N)
Propulsion Group Weight: 2.99 (N)

----- Aerodynamic Settings -----

Lift Force: 57.31 (N)
Drag Force: 2.98 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.59 (m)
Landing Distance: 0.68 (m)
Total Time for Climb: 75.60 (s)
Time for Takeoff: 0.08 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.10 (s)

UAV Solution 13

----- Wing Settings -----

Wing Area: 1.05 (m)
Wingspan: 3.40 (m)
Aspect Ratio: 11.01
Standard Mean Chord: 0.31 (m)
Solar Panel Area: 0.73 (m)

----- Power Settings -----

Total Energy Collected: 366.71 (W)
Total Energy Consumed: 81.48 (W)
Propulsion Power: 37.51 (W)
Power for Takeoff: 50.06 (W)
Climb Power: 258.18 (W)
Total Climb Power: 6.46 (W)

----- Weight Settings -----

Total Weight: 31.04 (N)
Airframe Weight: 17.70 (N)
Solar Panel Weight: 4.97 (N)
Battery Weight: 3.95 (N)
Propulsion Group Weight: 2.94 (N)

----- Aerodynamic Settings -----

Lift Force: 52.32 (N)
Drag Force: 2.93 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.51 (m)
Landing Distance: 0.59 (m)
Total Time for Climb: 75.57 (s)
Time for Takeoff: 0.07 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.08 (s)

UAV Solution 14

----- Wing Settings -----

Wing Area: 0.95 (m)
Wingspan: 3.00 (m)
Aspect Ratio: 9.47
Standard Mean Chord: 0.32 (m)
Solar Panel Area: 0.66 (m)

----- Power Settings -----

Total Energy Collected: 331.79 (W)
Total Energy Consumed: 80.37 (W)
Propulsion Power: 37.17 (W)
Power for Takeoff: 49.61 (W)
Climb Power: 237.91 (W)
Total Climb Power: 6.02 (W)

----- Weight Settings -----

Total Weight: 25.31 (N)
Airframe Weight: 12.52 (N)
Solar Panel Weight: 4.50 (N)
Battery Weight: 3.90 (N)
Propulsion Group Weight: 2.92 (N)

----- Aerodynamic Settings -----

Lift Force: 47.34 (N)
Drag Force: 2.91 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.43 (m)
Landing Distance: 0.50 (m)
Total Time for Climb: 75.55 (s)
Time for Takeoff: 0.06 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.07 (s)

UAV Solution 15

----- Wing Settings -----

Wing Area: 1.15 (m)
Wingspan: 4.00 (m)
Aspect Ratio: 13.91
Standard Mean Chord: 0.29 (m)
Solar Panel Area: 0.80 (m)

----- Power Settings -----

Total Energy Collected: 401.64 (W)
Total Energy Consumed: 78.88 (W)
Propulsion Power: 36.05 (W)
Power for Takeoff: 48.10 (W)
Climb Power: 276.04 (W)
Total Climb Power: 6.79 (W)

----- Weight Settings -----

Total Weight: 41.00 (N)
Airframe Weight: 27.44 (N)
Solar Panel Weight: 5.45 (N)
Battery Weight: 3.82 (N)
Propulsion Group Weight: 2.83 (N)

----- Aerodynamic Settings -----

Lift Force: 57.31 (N)
Drag Force: 2.82 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.76 (m)
Landing Distance: 0.89 (m)
Total Time for Climb: 75.65 (s)
Time for Takeoff: 0.11 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.12 (s)

UAV Solution 16

----- Wing Settings -----

Wing Area: 1.05 (m)
Wingspan: 3.60 (m)
Aspect Ratio: 12.34
Standard Mean Chord: 0.29 (m)
Solar Panel Area: 0.73 (m)

----- Power Settings -----

Total Energy Collected: 366.71 (W)
Total Energy Consumed: 76.60 (W)
Propulsion Power: 35.14 (W)
Power for Takeoff: 46.88 (W)
Climb Power: 255.00 (W)
Total Climb Power: 6.32 (W)

----- Weight Settings -----

Total Weight: 33.38 (N)
Airframe Weight: 20.47 (N)
Solar Panel Weight: 4.97 (N)
Battery Weight: 3.71 (N)
Propulsion Group Weight: 2.76 (N)

----- Aerodynamic Settings -----

Lift Force: 52.32 (N)
Drag Force: 2.75 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.67 (m)
Landing Distance: 0.79 (m)
Total Time for Climb: 75.62 (s)
Time for Takeoff: 0.09 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.11 (s)

UAV Solution 17

----- Wing Settings -----

Wing Area: 0.95 (m)
Wingspan: 3.20 (m)
Aspect Ratio: 10.78
Standard Mean Chord: 0.30 (m)
Solar Panel Area: 0.66 (m)

----- Power Settings -----

Total Energy Collected: 331.79 (W)
Total Energy Consumed: 74.62 (W)
Propulsion Power: 34.38 (W)
Power for Takeoff: 45.86 (W)
Climb Power: 234.16 (W)
Total Climb Power: 5.87 (W)

----- Weight Settings -----

Total Weight: 27.04 (N)
Airframe Weight: 14.75 (N)
Solar Panel Weight: 4.50 (N)
Battery Weight: 3.62 (N)
Propulsion Group Weight: 2.70 (N)

----- Aerodynamic Settings -----

Lift Force: 47.34 (N)
Drag Force: 2.69 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.59 (m)
Landing Distance: 0.68 (m)
Total Time for Climb: 75.60 (s)
Time for Takeoff: 0.08 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.10 (s)

UAV Solution 18

----- Wing Settings -----

Wing Area: 0.85 (m)
Wingspan: 2.80 (m)
Aspect Ratio: 9.22
Standard Mean Chord: 0.30 (m)
Solar Panel Area: 0.59 (m)

----- Power Settings -----

Total Energy Collected: 296.86 (W)
Total Energy Consumed: 73.10 (W)
Propulsion Power: 33.84 (W)
Power for Takeoff: 45.14 (W)
Climb Power: 213.62 (W)
Total Climb Power: 5.42 (W)

----- Weight Settings -----

Total Weight: 21.89 (N)
Airframe Weight: 10.19 (N)
Solar Panel Weight: 4.03 (N)
Battery Weight: 3.54 (N)
Propulsion Group Weight: 2.66 (N)

----- Aerodynamic Settings -----

Lift Force: 42.36 (N)
Drag Force: 2.64 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.50 (m)
Landing Distance: 0.58 (m)
Total Time for Climb: 75.57 (s)
Time for Takeoff: 0.07 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.08 (s)

UAV Solution 19

----- Wing Settings -----

Wing Area: 1.05 (m)
Wingspan: 3.80 (m)
Aspect Ratio: 13.75
Standard Mean Chord: 0.28 (m)
Solar Panel Area: 0.73 (m)

----- Power Settings -----

Total Energy Collected: 366.71 (W)
Total Energy Consumed: 72.47 (W)
Propulsion Power: 33.13 (W)
Power for Takeoff: 44.19 (W)
Climb Power: 252.31 (W)
Total Climb Power: 6.21 (W)

----- Weight Settings -----

Total Weight: 36.03 (N)
Airframe Weight: 23.48 (N)
Solar Panel Weight: 4.97 (N)
Battery Weight: 3.51 (N)
Propulsion Group Weight: 2.60 (N)

----- Aerodynamic Settings -----

Lift Force: 52.32 (N)
Drag Force: 2.59 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.89 (m)
Landing Distance: 1.03 (m)
Total Time for Climb: 75.69 (s)
Time for Takeoff: 0.12 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.14 (s)

UAV Solution 20

----- Wing Settings -----

Wing Area: 0.95 (m)
Wingspan: 3.40 (m)
Aspect Ratio: 12.17
Standard Mean Chord: 0.28 (m)
Solar Panel Area: 0.66 (m)

----- Power Settings -----

Total Energy Collected: 331.79 (W)
Total Energy Consumed: 69.85 (W)
Propulsion Power: 32.06 (W)
Power for Takeoff: 42.75 (W)
Climb Power: 231.06 (W)
Total Climb Power: 5.74 (W)

----- Weight Settings -----

Total Weight: 29.08 (N)
Airframe Weight: 17.21 (N)
Solar Panel Weight: 4.50 (N)
Battery Weight: 3.38 (N)
Propulsion Group Weight: 2.52 (N)

----- Aerodynamic Settings -----

Lift Force: 47.34 (N)
Drag Force: 2.50 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.80 (m)
Landing Distance: 0.93 (m)
Total Time for Climb: 75.66 (s)
Time for Takeoff: 0.11 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.13 (s)

UAV Solution 21

----- Wing Settings -----

Wing Area: 1.05 (m)
Wingspan: 4.00 (m)
Aspect Ratio: 15.24
Standard Mean Chord: 0.26 (m)
Solar Panel Area: 0.73 (m)

----- Power Settings -----

Total Energy Collected: 366.71 (W)
Total Energy Consumed: 68.94 (W)
Propulsion Power: 31.41 (W)
Power for Takeoff: 41.89 (W)
Climb Power: 250.01 (W)
Total Climb Power: 6.12 (W)

----- Weight Settings -----

Total Weight: 38.99 (N)
Airframe Weight: 26.75 (N)
Solar Panel Weight: 4.97 (N)
Battery Weight: 3.34 (N)
Propulsion Group Weight: 2.47 (N)

----- Aerodynamic Settings -----

Lift Force: 52.32 (N)
Drag Force: 2.45 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 1.16 (m)
Landing Distance: 1.34 (m)
Total Time for Climb: 75.77 (s)
Time for Takeoff: 0.16 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.19 (s)

UAV Solution 22

----- Wing Settings -----

Wing Area: 0.85 (m)
Wingspan: 3.00 (m)
Aspect Ratio: 10.59
Standard Mean Chord: 0.28 (m)
Solar Panel Area: 0.59 (m)

----- Power Settings -----

Total Energy Collected: 296.86 (W)
Total Energy Consumed: 67.47 (W)
Propulsion Power: 31.10 (W)
Power for Takeoff: 41.47 (W)
Climb Power: 209.95 (W)
Total Climb Power: 5.27 (W)

----- Weight Settings -----

Total Weight: 23.35 (N)
Airframe Weight: 12.14 (N)
Solar Panel Weight: 4.03 (N)
Battery Weight: 3.27 (N)
Propulsion Group Weight: 2.44 (N)

----- Aerodynamic Settings -----

Lift Force: 42.36 (N)
Drag Force: 2.43 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.70 (m)
Landing Distance: 0.82 (m)
Total Time for Climb: 75.63 (s)
Time for Takeoff: 0.10 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.11 (s)

UAV Solution 23

----- Wing Settings -----

Wing Area: 0.95 (m)
Wingspan: 3.60 (m)
Aspect Ratio: 13.64
Standard Mean Chord: 0.26 (m)
Solar Panel Area: 0.66 (m)

----- Power Settings -----

Total Energy Collected: 331.79 (W)
Total Energy Consumed: 65.86 (W)
Propulsion Power: 30.12 (W)
Power for Takeoff: 40.15 (W)
Climb Power: 228.45 (W)
Total Climb Power: 5.63 (W)

----- Weight Settings -----

Total Weight: 31.43 (N)
Airframe Weight: 19.90 (N)
Solar Panel Weight: 4.50 (N)
Battery Weight: 3.19 (N)
Propulsion Group Weight: 2.36 (N)

----- Aerodynamic Settings -----

Lift Force: 47.34 (N)
Drag Force: 2.35 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 1.07 (m)
Landing Distance: 1.24 (m)
Total Time for Climb: 75.74 (s)
Time for Takeoff: 0.15 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.17 (s)

UAV Solution 24

----- Wing Settings -----

Wing Area: 0.75 (m)
Wingspan: 2.60 (m)
Aspect Ratio: 9.01
Standard Mean Chord: 0.29 (m)
Solar Panel Area: 0.52 (m)

----- Power Settings -----

Total Energy Collected: 261.94 (W)
Total Energy Consumed: 65.43 (W)
Propulsion Power: 30.31 (W)
Power for Takeoff: 40.41 (W)
Climb Power: 189.07 (W)
Total Climb Power: 4.81 (W)

----- Weight Settings -----

Total Weight: 18.73 (N)
Airframe Weight: 8.15 (N)
Solar Panel Weight: 3.55 (N)
Battery Weight: 3.17 (N)
Propulsion Group Weight: 2.38 (N)

----- Aerodynamic Settings -----

Lift Force: 37.37 (N)
Drag Force: 2.37 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.61 (m)
Landing Distance: 0.71 (m)
Total Time for Climb: 75.60 (s)
Time for Takeoff: 0.08 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.10 (s)

UAV Solution 25

----- Wing Settings -----

Wing Area: 0.85 (m)
Wingspan: 3.20 (m)
Aspect Ratio: 12.05
Standard Mean Chord: 0.27 (m)
Solar Panel Area: 0.59 (m)

----- Power Settings -----

Total Energy Collected: 296.86 (W)
Total Energy Consumed: 62.87 (W)
Propulsion Power: 28.86 (W)
Power for Takeoff: 38.47 (W)
Climb Power: 206.95 (W)
Total Climb Power: 5.14 (W)

----- Weight Settings -----

Total Weight: 25.11 (N)
Airframe Weight: 14.30 (N)
Solar Panel Weight: 4.03 (N)
Battery Weight: 3.05 (N)
Propulsion Group Weight: 2.27 (N)

----- Aerodynamic Settings -----

Lift Force: 42.36 (N)
Drag Force: 2.25 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.97 (m)
Landing Distance: 1.13 (m)
Total Time for Climb: 75.71 (s)
Time for Takeoff: 0.14 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.16 (s)

UAV Solution 26

----- Wing Settings -----

Wing Area: 0.95 (m)
Wingspan: 3.80 (m)
Aspect Ratio: 15.20
Standard Mean Chord: 0.25 (m)
Solar Panel Area: 0.66 (m)

----- Power Settings -----

Total Energy Collected: 331.79 (W)
Total Energy Consumed: 62.48 (W)
Propulsion Power: 28.47 (W)
Power for Takeoff: 37.95 (W)
Climb Power: 226.25 (W)
Total Climb Power: 5.53 (W)

----- Weight Settings -----

Total Weight: 34.06 (N)
Airframe Weight: 22.83 (N)
Solar Panel Weight: 4.50 (N)
Battery Weight: 3.02 (N)
Propulsion Group Weight: 2.23 (N)

----- Aerodynamic Settings -----

Lift Force: 47.34 (N)
Drag Force: 2.22 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 1.41 (m)
Landing Distance: 1.63 (m)
Total Time for Climb: 75.84 (s)
Time for Takeoff: 0.20 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.23 (s)

UAV Solution 27

----- Wing Settings -----

Wing Area: 0.75 (m)
Wingspan: 2.80 (m)
Aspect Ratio: 10.45
Standard Mean Chord: 0.27 (m)
Solar Panel Area: 0.52 (m)

----- Power Settings -----

Total Energy Collected: 261.94 (W)
Total Energy Consumed: 60.00 (W)
Propulsion Power: 27.67 (W)
Power for Takeoff: 36.87 (W)
Climb Power: 185.53 (W)
Total Climb Power: 4.66 (W)

----- Weight Settings -----

Total Weight: 19.94 (N)
Airframe Weight: 9.84 (N)
Solar Panel Weight: 3.55 (N)
Battery Weight: 2.91 (N)
Propulsion Group Weight: 2.17 (N)

----- Aerodynamic Settings -----

Lift Force: 37.37 (N)
Drag Force: 2.16 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.87 (m)
Landing Distance: 1.02 (m)
Total Time for Climb: 75.68 (s)
Time for Takeoff: 0.12 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.14 (s)

UAV Solution 28

----- Wing Settings -----

Wing Area: 0.95 (m)
Wingspan: 4.00 (m)
Aspect Ratio: 16.84
Standard Mean Chord: 0.24 (m)
Solar Panel Area: 0.66 (m)

----- Power Settings -----

Total Energy Collected: 331.79 (W)
Total Energy Consumed: 59.59 (W)
Propulsion Power: 27.07 (W)
Power for Takeoff: 36.07 (W)
Climb Power: 224.37 (W)
Total Climb Power: 5.46 (W)

----- Weight Settings -----

Total Weight: 36.99 (N)
Airframe Weight: 26.01 (N)
Solar Panel Weight: 4.50 (N)
Battery Weight: 2.88 (N)
Propulsion Group Weight: 2.12 (N)

----- Aerodynamic Settings -----

Lift Force: 47.34 (N)
Drag Force: 2.11 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 1.84 (m)
Landing Distance: 2.12 (m)
Total Time for Climb: 75.97 (s)
Time for Takeoff: 0.26 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.30 (s)

UAV Solution 29

----- Wing Settings -----

Wing Area: 0.85 (m)
Wingspan: 3.40 (m)
Aspect Ratio: 13.60
Standard Mean Chord: 0.25 (m)
Solar Panel Area: 0.59 (m)

----- Power Settings -----

Total Energy Collected: 296.86 (W)
Total Energy Consumed: 59.05 (W)
Propulsion Power: 27.01 (W)
Power for Takeoff: 35.98 (W)
Climb Power: 204.47 (W)
Total Climb Power: 5.04 (W)

----- Weight Settings -----

Total Weight: 27.16 (N)
Airframe Weight: 16.68 (N)
Solar Panel Weight: 4.03 (N)
Battery Weight: 2.86 (N)
Propulsion Group Weight: 2.12 (N)

----- Aerodynamic Settings -----

Lift Force: 42.36 (N)
Drag Force: 2.11 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 1.32 (m)
Landing Distance: 1.53 (m)
Total Time for Climb: 75.82 (s)
Time for Takeoff: 0.18 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.21 (s)

UAV Solution 30

----- Wing Settings -----

Wing Area: 0.65 (m)
Wingspan: 2.40 (m)
Aspect Ratio: 8.86
Standard Mean Chord: 0.27 (m)
Solar Panel Area: 0.45 (m)

----- Power Settings -----

Total Energy Collected: 227.01 (W)
Total Energy Consumed: 57.33 (W)
Propulsion Power: 26.57 (W)
Power for Takeoff: 35.40 (W)
Climb Power: 164.24 (W)
Total Climb Power: 4.18 (W)

----- Weight Settings -----

Total Weight: 15.81 (N)
Airframe Weight: 6.39 (N)
Solar Panel Weight: 3.08 (N)
Battery Weight: 2.78 (N)
Propulsion Group Weight: 2.09 (N)

----- Aerodynamic Settings -----

Lift Force: 32.39 (N)
Drag Force: 2.07 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 0.78 (m)
Landing Distance: 0.91 (m)
Total Time for Climb: 75.66 (s)
Time for Takeoff: 0.11 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.13 (s)

UAV Solution 31

----- Wing Settings -----

Wing Area: 0.85 (m)
Wingspan: 3.60 (m)
Aspect Ratio: 15.25
Standard Mean Chord: 0.24 (m)
Solar Panel Area: 0.59 (m)

----- Power Settings -----

Total Energy Collected: 296.86 (W)
Total Energy Consumed: 55.85 (W)
Propulsion Power: 25.45 (W)
Power for Takeoff: 33.90 (W)
Climb Power: 202.38 (W)
Total Climb Power: 4.95 (W)

----- Weight Settings -----

Total Weight: 29.49 (N)
Airframe Weight: 19.29 (N)
Solar Panel Weight: 4.03 (N)
Battery Weight: 2.70 (N)
Propulsion Group Weight: 2.00 (N)

----- Aerodynamic Settings -----

Lift Force: 42.36 (N)
Drag Force: 1.99 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 1.78 (m)
Landing Distance: 2.05 (m)
Total Time for Climb: 75.95 (s)
Time for Takeoff: 0.25 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.29 (s)

UAV Solution 32

----- Wing Settings -----

Wing Area: 0.75 (m)
Wingspan: 3.00 (m)
Aspect Ratio: 12.00
Standard Mean Chord: 0.25 (m)
Solar Panel Area: 0.52 (m)

----- Power Settings -----

Total Energy Collected: 261.94 (W)
Total Energy Consumed: 55.62 (W)
Propulsion Power: 25.54 (W)
Power for Takeoff: 34.02 (W)
Climb Power: 182.68 (W)
Total Climb Power: 4.54 (W)

----- Weight Settings -----

Total Weight: 21.45 (N)
Airframe Weight: 11.72 (N)
Solar Panel Weight: 3.55 (N)
Battery Weight: 2.69 (N)
Propulsion Group Weight: 2.00 (N)

----- Aerodynamic Settings -----

Lift Force: 37.37 (N)
Drag Force: 1.99 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 1.24 (m)
Landing Distance: 1.43 (m)
Total Time for Climb: 75.79 (s)
Time for Takeoff: 0.17 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.20 (s)

UAV Solution 33

----- Wing Settings -----

Wing Area: 0.85 (m)
Wingspan: 3.80 (m)
Aspect Ratio: 16.99
Standard Mean Chord: 0.22 (m)
Solar Panel Area: 0.59 (m)

----- Power Settings -----

Total Energy Collected: 296.86 (W)
Total Energy Consumed: 53.14 (W)
Propulsion Power: 24.13 (W)
Power for Takeoff: 32.14 (W)
Climb Power: 200.62 (W)
Total Climb Power: 4.88 (W)

----- Weight Settings -----

Total Weight: 32.09 (N)
Airframe Weight: 22.13 (N)
Solar Panel Weight: 4.03 (N)
Battery Weight: 2.57 (N)
Propulsion Group Weight: 1.89 (N)

----- Aerodynamic Settings -----

Lift Force: 42.36 (N)
Drag Force: 1.88 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 2.35 (m)
Landing Distance: 2.70 (m)
Total Time for Climb: 76.13 (s)
Time for Takeoff: 0.33 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.38 (s)

UAV Solution 34

----- Wing Settings -----

Wing Area: 0.65 (m)
Wingspan: 2.60 (m)
Aspect Ratio: 10.40
Standard Mean Chord: 0.25 (m)
Solar Panel Area: 0.45 (m)

----- Power Settings -----

Total Energy Collected: 227.01 (W)
Total Energy Consumed: 52.19 (W)
Propulsion Power: 24.07 (W)
Power for Takeoff: 32.06 (W)
Climb Power: 160.89 (W)
Total Climb Power: 4.04 (W)

----- Weight Settings -----

Total Weight: 16.80 (N)
Airframe Weight: 7.83 (N)
Solar Panel Weight: 3.08 (N)
Battery Weight: 2.53 (N)
Propulsion Group Weight: 1.89 (N)

----- Aerodynamic Settings -----

Lift Force: 32.39 (N)
Drag Force: 1.88 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 1.15 (m)
Landing Distance: 1.33 (m)
Total Time for Climb: 75.77 (s)
Time for Takeoff: 0.16 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.19 (s)

UAV Solution 35

----- Wing Settings -----

Wing Area: 0.75 (m)
Wingspan: 3.20 (m)
Aspect Ratio: 13.65
Standard Mean Chord: 0.23 (m)
Solar Panel Area: 0.52 (m)

----- Power Settings -----

Total Energy Collected: 261.94 (W)
Total Energy Consumed: 52.04 (W)
Propulsion Power: 23.80 (W)
Power for Takeoff: 31.68 (W)
Climb Power: 180.34 (W)
Total Climb Power: 4.44 (W)

----- Weight Settings -----

Total Weight: 23.22 (N)
Airframe Weight: 13.81 (N)
Solar Panel Weight: 3.55 (N)
Battery Weight: 2.52 (N)
Propulsion Group Weight: 1.87 (N)

----- Aerodynamic Settings -----

Lift Force: 37.37 (N)
Drag Force: 1.86 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 1.72 (m)
Landing Distance: 1.98 (m)
Total Time for Climb: 75.94 (s)
Time for Takeoff: 0.24 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.28 (s)

UAV Solution 36

----- Wing Settings -----

Wing Area: 0.85 (m)
Wingspan: 4.00 (m)
Aspect Ratio: 18.82
Standard Mean Chord: 0.21 (m)
Solar Panel Area: 0.59 (m)

----- Power Settings -----

Total Energy Collected: 296.86 (W)
Total Energy Consumed: 50.83 (W)
Propulsion Power: 23.01 (W)
Power for Takeoff: 30.63 (W)
Climb Power: 199.11 (W)
Total Climb Power: 4.81 (W)

----- Weight Settings -----

Total Weight: 34.97 (N)
Airframe Weight: 25.21 (N)
Solar Panel Weight: 4.03 (N)
Battery Weight: 2.46 (N)
Propulsion Group Weight: 1.81 (N)

----- Aerodynamic Settings -----

Lift Force: 42.36 (N)
Drag Force: 1.79 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 3.08 (m)
Landing Distance: 3.51 (m)
Total Time for Climb: 76.34 (s)
Time for Takeoff: 0.43 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.49 (s)

UAV Solution 37

----- Wing Settings -----

Wing Area: 0.75 (m)
Wingspan: 3.40 (m)
Aspect Ratio: 15.41
Standard Mean Chord: 0.22 (m)
Solar Panel Area: 0.52 (m)

----- Power Settings -----

Total Energy Collected: 261.94 (W)
Total Energy Consumed: 49.06 (W)
Propulsion Power: 22.35 (W)
Power for Takeoff: 29.75 (W)
Climb Power: 178.41 (W)
Total Climb Power: 4.36 (W)

----- Weight Settings -----

Total Weight: 25.26 (N)
Airframe Weight: 16.11 (N)
Solar Panel Weight: 3.55 (N)
Battery Weight: 2.38 (N)
Propulsion Group Weight: 1.75 (N)

----- Aerodynamic Settings -----

Lift Force: 37.37 (N)
Drag Force: 1.74 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 2.35 (m)
Landing Distance: 2.70 (m)
Total Time for Climb: 76.12 (s)
Time for Takeoff: 0.33 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.38 (s)

UAV Solution 38

----- Wing Settings -----

Wing Area: 0.55 (m)
Wingspan: 2.20 (m)
Aspect Ratio: 8.80
Standard Mean Chord: 0.25 (m)
Solar Panel Area: 0.38 (m)

----- Power Settings -----

Total Energy Collected: 192.09 (W)
Total Energy Consumed: 48.76 (W)
Propulsion Power: 22.61 (W)
Power for Takeoff: 30.09 (W)
Climb Power: 139.11 (W)
Total Climb Power: 3.54 (W)

----- Weight Settings -----

Total Weight: 13.10 (N)
Airframe Weight: 4.89 (N)
Solar Panel Weight: 2.61 (N)
Battery Weight: 2.36 (N)
Propulsion Group Weight: 1.77 (N)

----- Aerodynamic Settings -----

Lift Force: 27.41 (N)
Drag Force: 1.76 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 1.07 (m)
Landing Distance: 1.24 (m)
Total Time for Climb: 75.74 (s)
Time for Takeoff: 0.15 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.17 (s)

UAV Solution 39

----- Wing Settings -----

Wing Area: 0.65 (m)
Wingspan: 2.80 (m)
Aspect Ratio: 12.06
Standard Mean Chord: 0.23 (m)
Solar Panel Area: 0.45 (m)

----- Power Settings -----

Total Energy Collected: 227.01 (W)
Total Energy Consumed: 48.11 (W)
Propulsion Power: 22.09 (W)
Power for Takeoff: 29.40 (W)
Climb Power: 158.24 (W)
Total Climb Power: 3.93 (W)

----- Weight Settings -----

Total Weight: 18.07 (N)
Airframe Weight: 9.45 (N)
Solar Panel Weight: 3.08 (N)
Battery Weight: 2.33 (N)
Propulsion Group Weight: 1.73 (N)

----- Aerodynamic Settings -----

Lift Force: 32.39 (N)
Drag Force: 1.72 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 1.67 (m)
Landing Distance: 1.93 (m)
Total Time for Climb: 75.92 (s)
Time for Takeoff: 0.23 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.27 (s)

UAV Solution 40

----- Wing Settings -----

Wing Area: 0.75 (m)
Wingspan: 3.60 (m)
Aspect Ratio: 17.28
Standard Mean Chord: 0.21 (m)
Solar Panel Area: 0.52 (m)

----- Power Settings -----

Total Energy Collected: 261.94 (W)
Total Energy Consumed: 46.57 (W)
Propulsion Power: 21.14 (W)
Power for Takeoff: 28.12 (W)
Climb Power: 176.79 (W)
Total Climb Power: 4.29 (W)

----- Weight Settings -----

Total Weight: 27.56 (N)
Airframe Weight: 18.63 (N)
Solar Panel Weight: 3.55 (N)
Battery Weight: 2.25 (N)
Propulsion Group Weight: 1.66 (N)

----- Aerodynamic Settings -----

Lift Force: 37.37 (N)
Drag Force: 1.65 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 3.17 (m)
Landing Distance: 3.61 (m)
Total Time for Climb: 76.37 (s)
Time for Takeoff: 0.44 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.50 (s)

UAV Solution 41

----- Wing Settings -----

Wing Area: 0.65 (m)
Wingspan: 3.00 (m)
Aspect Ratio: 13.85
Standard Mean Chord: 0.22 (m)
Solar Panel Area: 0.45 (m)

----- Power Settings -----

Total Energy Collected: 227.01 (W)
Total Energy Consumed: 44.82 (W)
Propulsion Power: 20.49 (W)
Power for Takeoff: 27.25 (W)
Climb Power: 156.09 (W)
Total Climb Power: 3.84 (W)

----- Weight Settings -----

Total Weight: 19.59 (N)
Airframe Weight: 11.26 (N)
Solar Panel Weight: 3.08 (N)
Battery Weight: 2.17 (N)
Propulsion Group Weight: 1.61 (N)

----- Aerodynamic Settings -----

Lift Force: 32.39 (N)
Drag Force: 1.60 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 2.38 (m)
Landing Distance: 2.73 (m)
Total Time for Climb: 76.13 (s)
Time for Takeoff: 0.33 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.38 (s)

UAV Solution 42

----- Wing Settings -----

Wing Area: 0.75 (m)
Wingspan: 3.80 (m)
Aspect Ratio: 19.25
Standard Mean Chord: 0.20 (m)
Solar Panel Area: 0.52 (m)

----- Power Settings -----

Total Energy Collected: 261.94 (W)
Total Energy Consumed: 44.47 (W)
Propulsion Power: 20.12 (W)
Power for Takeoff: 26.75 (W)
Climb Power: 175.41 (W)
Total Climb Power: 4.24 (W)

----- Weight Settings -----

Total Weight: 30.12 (N)
Airframe Weight: 21.37 (N)
Solar Panel Weight: 3.55 (N)
Battery Weight: 2.15 (N)
Propulsion Group Weight: 1.58 (N)

----- Aerodynamic Settings -----

Lift Force: 37.37 (N)
Drag Force: 1.57 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 4.21 (m)
Landing Distance: 4.76 (m)
Total Time for Climb: 76.67 (s)
Time for Takeoff: 0.59 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.66 (s)

UAV Solution 43

----- Wing Settings -----

Wing Area: 0.55 (m)
Wingspan: 2.40 (m)
Aspect Ratio: 10.47
Standard Mean Chord: 0.23 (m)
Solar Panel Area: 0.38 (m)

----- Power Settings -----

Total Energy Collected: 192.09 (W)
Total Energy Consumed: 44.03 (W)
Propulsion Power: 20.31 (W)
Power for Takeoff: 27.01 (W)
Climb Power: 136.03 (W)
Total Climb Power: 3.42 (W)

----- Weight Settings -----

Total Weight: 13.90 (N)
Airframe Weight: 6.10 (N)
Solar Panel Weight: 2.61 (N)
Battery Weight: 2.13 (N)
Propulsion Group Weight: 1.59 (N)

----- Aerodynamic Settings -----

Lift Force: 27.41 (N)
Drag Force: 1.58 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 1.64 (m)
Landing Distance: 1.89 (m)
Total Time for Climb: 75.91 (s)
Time for Takeoff: 0.23 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.26 (s)

UAV Solution 44

----- Wing Settings -----

Wing Area: 0.65 (m)
Wingspan: 3.20 (m)
Aspect Ratio: 15.75
Standard Mean Chord: 0.20 (m)
Solar Panel Area: 0.45 (m)

----- Power Settings -----

Total Energy Collected: 227.01 (W)
Total Energy Consumed: 42.13 (W)
Propulsion Power: 19.18 (W)
Power for Takeoff: 25.50 (W)
Climb Power: 154.34 (W)
Total Climb Power: 3.77 (W)

----- Weight Settings -----

Total Weight: 21.36 (N)
Airframe Weight: 13.27 (N)
Solar Panel Weight: 3.08 (N)
Battery Weight: 2.04 (N)
Propulsion Group Weight: 1.51 (N)

----- Aerodynamic Settings -----

Lift Force: 32.39 (N)
Drag Force: 1.49 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 3.33 (m)
Landing Distance: 3.79 (m)
Total Time for Climb: 76.41 (s)
Time for Takeoff: 0.46 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.53 (s)

UAV Solution 45

----- Wing Settings -----

Wing Area: 0.55 (m)
Wingspan: 2.60 (m)
Aspect Ratio: 12.29
Standard Mean Chord: 0.21 (m)
Solar Panel Area: 0.38 (m)

----- Power Settings -----

Total Energy Collected: 192.09 (W)
Total Energy Consumed: 40.35 (W)
Propulsion Power: 18.52 (W)
Power for Takeoff: 24.61 (W)
Climb Power: 133.63 (W)
Total Climb Power: 3.32 (W)

----- Weight Settings -----

Total Weight: 14.96 (N)
Airframe Weight: 7.47 (N)
Solar Panel Weight: 2.61 (N)
Battery Weight: 1.95 (N)
Propulsion Group Weight: 1.45 (N)

----- Aerodynamic Settings -----

Lift Force: 27.41 (N)
Drag Force: 1.44 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 2.46 (m)
Landing Distance: 2.81 (m)
Total Time for Climb: 76.16 (s)
Time for Takeoff: 0.34 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.39 (s)

UAV Solution 46

----- Wing Settings -----

Wing Area: 0.65 (m)
Wingspan: 3.40 (m)
Aspect Ratio: 17.78
Standard Mean Chord: 0.19 (m)
Solar Panel Area: 0.45 (m)

----- Power Settings -----

Total Energy Collected: 227.01 (W)
Total Energy Consumed: 39.90 (W)
Propulsion Power: 18.10 (W)
Power for Takeoff: 24.05 (W)
Climb Power: 152.88 (W)
Total Climb Power: 3.71 (W)

----- Weight Settings -----

Total Weight: 23.38 (N)
Airframe Weight: 15.48 (N)
Solar Panel Weight: 3.08 (N)
Battery Weight: 1.93 (N)
Propulsion Group Weight: 1.42 (N)

----- Aerodynamic Settings -----

Lift Force: 32.39 (N)
Drag Force: 1.41 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 4.57 (m)
Landing Distance: 5.15 (m)
Total Time for Climb: 76.78 (s)
Time for Takeoff: 0.64 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.72 (s)

UAV Solution 47

----- Wing Settings -----

Wing Area: 0.45 (m)
Wingspan: 2.00 (m)
Aspect Ratio: 8.89
Standard Mean Chord: 0.23 (m)
Solar Panel Area: 0.31 (m)

----- Power Settings -----

Total Energy Collected: 157.16 (W)
Total Energy Consumed: 39.71 (W)
Propulsion Power: 18.41 (W)
Power for Takeoff: 24.46 (W)
Climb Power: 113.66 (W)
Total Climb Power: 2.89 (W)

----- Weight Settings -----

Total Weight: 10.60 (N)
Airframe Weight: 3.63 (N)
Solar Panel Weight: 2.13 (N)
Battery Weight: 1.93 (N)
Propulsion Group Weight: 1.44 (N)

----- Aerodynamic Settings -----

Lift Force: 22.42 (N)
Drag Force: 1.43 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 1.65 (m)
Landing Distance: 1.89 (m)
Total Time for Climb: 75.91 (s)
Time for Takeoff: 0.23 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.26 (s)

UAV Solution 48

----- Wing Settings -----

Wing Area: 0.65 (m)
Wingspan: 3.60 (m)
Aspect Ratio: 19.94
Standard Mean Chord: 0.18 (m)
Solar Panel Area: 0.45 (m)

----- Power Settings -----

Total Energy Collected: 227.01 (W)
Total Energy Consumed: 38.03 (W)
Propulsion Power: 17.19 (W)
Power for Takeoff: 22.83 (W)
Climb Power: 151.67 (W)
Total Climb Power: 3.66 (W)

----- Weight Settings -----

Total Weight: 25.63 (N)
Airframe Weight: 17.89 (N)
Solar Panel Weight: 3.08 (N)
Battery Weight: 1.84 (N)
Propulsion Group Weight: 1.35 (N)

----- Aerodynamic Settings -----

Lift Force: 32.39 (N)
Drag Force: 1.34 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 6.17 (m)
Landing Distance: 6.88 (m)
Total Time for Climb: 77.24 (s)
Time for Takeoff: 0.86 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.96 (s)

UAV Solution 49

----- Wing Settings -----

Wing Area: 0.55 (m)
Wingspan: 2.80 (m)
Aspect Ratio: 14.25
Standard Mean Chord: 0.20 (m)
Solar Panel Area: 0.38 (m)

----- Power Settings -----

Total Energy Collected: 192.09 (W)
Total Energy Consumed: 37.43 (W)
Propulsion Power: 17.10 (W)
Power for Takeoff: 22.71 (W)
Climb Power: 131.73 (W)
Total Climb Power: 3.24 (W)

----- Weight Settings -----

Total Weight: 16.25 (N)
Airframe Weight: 9.02 (N)
Solar Panel Weight: 2.61 (N)
Battery Weight: 1.81 (N)
Propulsion Group Weight: 1.34 (N)

----- Aerodynamic Settings -----

Lift Force: 27.41 (N)
Drag Force: 1.33 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 3.60 (m)
Landing Distance: 4.08 (m)
Total Time for Climb: 76.49 (s)
Time for Takeoff: 0.50 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.57 (s)

UAV Solution 50

----- Wing Settings -----

Wing Area: 0.45 (m)
Wingspan: 2.20 (m)
Aspect Ratio: 10.76
Standard Mean Chord: 0.20 (m)
Solar Panel Area: 0.31 (m)

----- Power Settings -----

Total Energy Collected: 157.16 (W)
Total Energy Consumed: 35.55 (W)
Propulsion Power: 16.38 (W)
Power for Takeoff: 21.75 (W)
Climb Power: 110.95 (W)
Total Climb Power: 2.78 (W)

----- Weight Settings -----

Total Weight: 11.23 (N)
Airframe Weight: 4.62 (N)
Solar Panel Weight: 2.13 (N)
Battery Weight: 1.72 (N)
Propulsion Group Weight: 1.29 (N)

----- Aerodynamic Settings -----

Lift Force: 22.42 (N)
Drag Force: 1.27 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 2.64 (m)
Landing Distance: 3.00 (m)
Total Time for Climb: 76.21 (s)
Time for Takeoff: 0.37 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.42 (s)

UAV Solution 51

----- Wing Settings -----

Wing Area: 0.55 (m)
Wingspan: 3.00 (m)
Aspect Ratio: 16.36
Standard Mean Chord: 0.18 (m)
Solar Panel Area: 0.38 (m)

----- Power Settings -----

Total Energy Collected: 192.09 (W)
Total Energy Consumed: 35.08 (W)
Propulsion Power: 15.95 (W)
Power for Takeoff: 21.17 (W)
Climb Power: 130.19 (W)
Total Climb Power: 3.17 (W)

----- Weight Settings -----

Total Weight: 17.77 (N)
Airframe Weight: 10.75 (N)
Solar Panel Weight: 2.61 (N)
Battery Weight: 1.70 (N)
Propulsion Group Weight: 1.25 (N)

----- Aerodynamic Settings -----

Lift Force: 27.41 (N)
Drag Force: 1.24 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 5.17 (m)
Landing Distance: 5.78 (m)
Total Time for Climb: 76.95 (s)
Time for Takeoff: 0.72 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.81 (s)

UAV Solution 52

----- Wing Settings -----

Wing Area: 0.55 (m)
Wingspan: 3.20 (m)
Aspect Ratio: 18.62
Standard Mean Chord: 0.17 (m)
Solar Panel Area: 0.38 (m)

----- Power Settings -----

Total Energy Collected: 192.09 (W)
Total Energy Consumed: 33.15 (W)
Propulsion Power: 15.02 (W)
Power for Takeoff: 19.92 (W)
Climb Power: 128.94 (W)
Total Climb Power: 3.12 (W)

----- Weight Settings -----

Total Weight: 19.52 (N)
Airframe Weight: 12.66 (N)
Solar Panel Weight: 2.61 (N)
Battery Weight: 1.60 (N)
Propulsion Group Weight: 1.18 (N)

----- Aerodynamic Settings -----

Lift Force: 27.41 (N)
Drag Force: 1.17 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 7.26 (m)
Landing Distance: 8.01 (m)
Total Time for Climb: 77.55 (s)
Time for Takeoff: 1.01 (s)
Time to climb: 37.71 (s)
Time to Landing: 1.12 (s)

UAV Solution 53

----- Wing Settings -----

Wing Area: 0.45 (m)
Wingspan: 2.40 (m)
Aspect Ratio: 12.80
Standard Mean Chord: 0.19 (m)
Solar Panel Area: 0.31 (m)

----- Power Settings -----

Total Energy Collected: 157.16 (W)
Total Energy Consumed: 32.38 (W)
Propulsion Power: 14.84 (W)
Power for Takeoff: 19.69 (W)
Climb Power: 108.88 (W)
Total Climb Power: 2.69 (W)

----- Weight Settings -----

Total Weight: 12.10 (N)
Airframe Weight: 5.76 (N)
Solar Panel Weight: 2.13 (N)
Battery Weight: 1.57 (N)
Propulsion Group Weight: 1.16 (N)

----- Aerodynamic Settings -----

Lift Force: 22.42 (N)
Drag Force: 1.15 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 4.11 (m)
Landing Distance: 4.62 (m)
Total Time for Climb: 76.64 (s)
Time for Takeoff: 0.57 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.64 (s)

UAV Solution 54

----- Wing Settings -----

Wing Area: 0.35 (m)
Wingspan: 1.80 (m)
Aspect Ratio: 9.26
Standard Mean Chord: 0.19 (m)
Solar Panel Area: 0.24 (m)

----- Power Settings -----

Total Energy Collected: 122.24 (W)
Total Energy Consumed: 30.21 (W)
Propulsion Power: 13.99 (W)
Power for Takeoff: 18.54 (W)
Climb Power: 87.92 (W)
Total Climb Power: 2.23 (W)

----- Weight Settings -----

Total Weight: 8.28 (N)
Airframe Weight: 2.59 (N)
Solar Panel Weight: 1.66 (N)
Battery Weight: 1.46 (N)
Propulsion Group Weight: 1.10 (N)

----- Aerodynamic Settings -----

Lift Force: 17.44 (N)
Drag Force: 1.09 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 3.04 (m)
Landing Distance: 3.43 (m)
Total Time for Climb: 76.32 (s)
Time for Takeoff: 0.42 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.48 (s)

UAV Solution 55

----- Wing Settings -----

Wing Area: 0.45 (m)
Wingspan: 2.60 (m)
Aspect Ratio: 15.02
Standard Mean Chord: 0.17 (m)
Solar Panel Area: 0.31 (m)

----- Power Settings -----

Total Energy Collected: 157.16 (W)
Total Energy Consumed: 29.92 (W)
Propulsion Power: 13.65 (W)
Power for Takeoff: 18.08 (W)
Climb Power: 107.28 (W)
Total Climb Power: 2.63 (W)

----- Weight Settings -----

Total Weight: 13.19 (N)
Airframe Weight: 7.06 (N)
Solar Panel Weight: 2.13 (N)
Battery Weight: 1.45 (N)
Propulsion Group Weight: 1.07 (N)

----- Aerodynamic Settings -----

Lift Force: 22.42 (N)
Drag Force: 1.06 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 6.23 (m)
Landing Distance: 6.90 (m)
Total Time for Climb: 77.25 (s)
Time for Takeoff: 0.87 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.96 (s)

UAV Solution 56

----- Wing Settings -----

Wing Area: 0.45 (m)
Wingspan: 2.80 (m)
Aspect Ratio: 17.42
Standard Mean Chord: 0.16 (m)
Solar Panel Area: 0.31 (m)

----- Power Settings -----

Total Energy Collected: 157.16 (W)
Total Energy Consumed: 27.96 (W)
Propulsion Power: 12.70 (W)
Power for Takeoff: 16.81 (W)
Climb Power: 106.01 (W)
Total Climb Power: 2.57 (W)

----- Weight Settings -----

Total Weight: 14.48 (N)
Airframe Weight: 8.53 (N)
Solar Panel Weight: 2.13 (N)
Battery Weight: 1.35 (N)
Propulsion Group Weight: 1.00 (N)

----- Aerodynamic Settings -----

Lift Force: 22.42 (N)
Drag Force: 0.98 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 9.22 (m)
Landing Distance: 9.98 (m)
Total Time for Climb: 78.10 (s)
Time for Takeoff: 1.29 (s)
Time to climb: 37.71 (s)
Time to Landing: 1.39 (s)

UAV Solution 57

----- Wing Settings -----

Wing Area: 0.35 (m)
Wingspan: 2.00 (m)
Aspect Ratio: 11.43
Standard Mean Chord: 0.18 (m)
Solar Panel Area: 0.24 (m)

----- Power Settings -----

Total Energy Collected: 122.24 (W)
Total Energy Consumed: 26.81 (W)
Propulsion Power: 12.33 (W)
Power for Takeoff: 16.33 (W)
Climb Power: 85.70 (W)
Total Climb Power: 2.14 (W)

----- Weight Settings -----

Total Weight: 8.78 (N)
Airframe Weight: 3.38 (N)
Solar Panel Weight: 1.66 (N)
Battery Weight: 1.30 (N)
Propulsion Group Weight: 0.97 (N)

----- Aerodynamic Settings -----

Lift Force: 17.44 (N)
Drag Force: 0.96 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 5.15 (m)
Landing Distance: 5.71 (m)
Total Time for Climb: 76.93 (s)
Time for Takeoff: 0.72 (s)
Time to climb: 37.71 (s)
Time to Landing: 0.80 (s)

UAV Solution 58

----- Wing Settings -----

Wing Area: 0.35 (m)
Wingspan: 2.20 (m)
Aspect Ratio: 13.83
Standard Mean Chord: 0.16 (m)
Solar Panel Area: 0.24 (m)

----- Power Settings -----

Total Energy Collected: 122.24 (W)
Total Energy Consumed: 24.29 (W)
Propulsion Power: 11.11 (W)
Power for Takeoff: 14.69 (W)
Climb Power: 84.06 (W)
Total Climb Power: 2.07 (W)

----- Weight Settings -----

Total Weight: 9.48 (N)
Airframe Weight: 4.31 (N)
Solar Panel Weight: 1.66 (N)
Battery Weight: 1.18 (N)
Propulsion Group Weight: 0.87 (N)

----- Aerodynamic Settings -----

Lift Force: 17.44 (N)
Drag Force: 0.86 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 8.45 (m)
Landing Distance: 9.13 (m)
Total Time for Climb: 77.87 (s)
Time for Takeoff: 1.18 (s)
Time to climb: 37.71 (s)
Time to Landing: 1.27 (s)

UAV Solution 59

----- Wing Settings -----

Wing Area: 0.35 (m)
Wingspan: 2.40 (m)
Aspect Ratio: 16.46
Standard Mean Chord: 0.15 (m)
Solar Panel Area: 0.24 (m)

----- Power Settings -----

Total Energy Collected: 122.24 (W)
Total Energy Consumed: 22.37 (W)
Propulsion Power: 10.18 (W)
Power for Takeoff: 13.44 (W)
Climb Power: 82.81 (W)
Total Climb Power: 2.02 (W)

----- Weight Settings -----

Total Weight: 10.38 (N)
Airframe Weight: 5.37 (N)
Solar Panel Weight: 1.66 (N)
Battery Weight: 1.08 (N)
Propulsion Group Weight: 0.80 (N)

----- Aerodynamic Settings -----

Lift Force: 17.44 (N)
Drag Force: 0.79 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 13.42 (m)
Landing Distance: 14.00 (m)
Total Time for Climb: 79.24 (s)
Time for Takeoff: 1.87 (s)
Time to climb: 37.71 (s)
Time to Landing: 1.95 (s)

UAV Solution 60

----- Wing Settings -----

Wing Area: 0.35 (m)
Wingspan: 2.60 (m)
Aspect Ratio: 19.31
Standard Mean Chord: 0.13 (m)
Solar Panel Area: 0.24 (m)

----- Power Settings -----

Total Energy Collected: 122.24 (W)
Total Energy Consumed: 20.88 (W)
Propulsion Power: 9.45 (W)
Power for Takeoff: 12.47 (W)
Climb Power: 81.84 (W)
Total Climb Power: 1.98 (W)

----- Weight Settings -----

Total Weight: 11.47 (N)
Airframe Weight: 6.58 (N)
Solar Panel Weight: 1.66 (N)
Battery Weight: 1.01 (N)
Propulsion Group Weight: 0.74 (N)

----- Aerodynamic Settings -----

Lift Force: 17.44 (N)
Drag Force: 0.73 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 20.70 (m)
Landing Distance: 20.59 (m)
Total Time for Climb: 81.18 (s)
Time for Takeoff: 2.89 (s)
Time to climb: 37.71 (s)
Time to Landing: 2.87 (s)

UAV Solution 61

----- Wing Settings -----

Wing Area: 0.25 (m)
Wingspan: 1.60 (m)
Aspect Ratio: 10.24
Standard Mean Chord: 0.16 (m)
Solar Panel Area: 0.17 (m)

----- Power Settings -----

Total Energy Collected: 87.31 (W)
Total Energy Consumed: 20.44 (W)
Propulsion Power: 9.44 (W)
Power for Takeoff: 12.44 (W)
Climb Power: 62.00 (W)
Total Climb Power: 1.56 (W)

----- Weight Settings -----

Total Weight: 6.13 (N)
Airframe Weight: 1.75 (N)
Solar Panel Weight: 1.18 (N)
Battery Weight: 0.99 (N)
Propulsion Group Weight: 0.74 (N)

----- Aerodynamic Settings -----

Lift Force: 12.46 (N)
Drag Force: 0.73 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 7.86 (m)
Landing Distance: 8.42 (m)
Total Time for Climb: 77.69 (s)
Time for Takeoff: 1.10 (s)
Time to climb: 37.71 (s)
Time to Landing: 1.17 (s)

UAV Solution 62

----- Wing Settings -----

Wing Area: 0.25 (m)
Wingspan: 1.80 (m)
Aspect Ratio: 12.96
Standard Mean Chord: 0.14 (m)
Solar Panel Area: 0.17 (m)

----- Power Settings -----

Total Energy Collected: 87.31 (W)
Total Energy Consumed: 18.01 (W)
Propulsion Power: 8.26 (W)
Power for Takeoff: 10.86 (W)
Climb Power: 60.42 (W)
Total Climb Power: 1.49 (W)

----- Weight Settings -----

Total Weight: 6.53 (N)
Airframe Weight: 2.35 (N)
Solar Panel Weight: 1.18 (N)
Battery Weight: 0.87 (N)
Propulsion Group Weight: 0.65 (N)

----- Aerodynamic Settings -----

Lift Force: 12.46 (N)
Drag Force: 0.64 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 14.55 (m)
Landing Distance: 14.80 (m)
Total Time for Climb: 79.51 (s)
Time for Takeoff: 2.03 (s)
Time to climb: 37.71 (s)
Time to Landing: 2.06 (s)

UAV Solution 63

----- Wing Settings -----

Wing Area: 0.25 (m)
Wingspan: 2.00 (m)
Aspect Ratio: 16.00
Standard Mean Chord: 0.13 (m)
Solar Panel Area: 0.17 (m)

----- Power Settings -----

Total Energy Collected: 87.31 (W)
Total Energy Consumed: 16.27 (W)
Propulsion Power: 7.41 (W)
Power for Takeoff: 9.73 (W)
Climb Power: 59.29 (W)
Total Climb Power: 1.45 (W)

----- Weight Settings -----

Total Weight: 7.10 (N)
Airframe Weight: 3.08 (N)
Solar Panel Weight: 1.18 (N)
Battery Weight: 0.79 (N)
Propulsion Group Weight: 0.58 (N)

----- Aerodynamic Settings -----

Lift Force: 12.46 (N)
Drag Force: 0.57 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 25.85 (m)
Landing Distance: 24.36 (m)
Total Time for Climb: 82.42 (s)
Time for Takeoff: 3.60 (s)
Time to climb: 37.71 (s)
Time to Landing: 3.40 (s)

UAV Solution 64

----- Wing Settings -----

Wing Area: 0.25 (m)
Wingspan: 2.20 (m)
Aspect Ratio: 19.36
Standard Mean Chord: 0.11 (m)
Solar Panel Area: 0.17 (m)

----- Power Settings -----

Total Energy Collected: 87.31 (W)
Total Energy Consumed: 14.99 (W)
Propulsion Power: 6.79 (W)
Power for Takeoff: 8.90 (W)
Climb Power: 58.45 (W)
Total Climb Power: 1.41 (W)

----- Weight Settings -----

Total Weight: 7.83 (N)
Airframe Weight: 3.92 (N)
Solar Panel Weight: 1.18 (N)
Battery Weight: 0.73 (N)
Propulsion Group Weight: 0.53 (N)

----- Aerodynamic Settings -----

Lift Force: 12.46 (N)
Drag Force: 0.52 (N)
Climbing Speed: 10.25 (m/s)
Takeoff Distance: 44.27 (m)
Landing Distance: 37.54 (m)
Total Time for Climb: 86.83 (s)
Time for Takeoff: 6.17 (s)
Time to climb: 37.71 (s)
Time to Landing: 5.23 (s)
