WHAT IS CLAIMED IS:

1. A system, comprising:

at least one unmanned aerial vehicle (UAV) (108A,B);

at least one solar array;

at least one battery pack (114) comprising at least one battery (120) and at least one power tracker (130), wherein the power tracker (130) is configured to:

receive energy from the at least one solar array; and

regulate and supply the received energy to the at least one battery based on a time of day; and

at least one motor (112) of the at least one UAV, wherein the at least one battery is configured to transfer energy to the at least one motor;

wherein power from the at least one motor is configured to ascend (124) the at least one UAV to a second altitude (142) when the at least one battery is at or near full capacity, and wherein the second altitude is higher than the first altitude; and wherein power from the at least one motor is configured to descend (128) the at least one UAV to the first altitude after the Sun has set to conserve energy stored in the at least one battery.

2. The system of claim 1, further comprising:

at least one solar array (110) covering at least a portion of a surface of a wing of each UAV.

~~3. The system of claim 2, wherein the at least one battery pack further comprises at least one power tracker (130).~~

~~4. The system of claim 3, wherein the power tracker is configured to receive energy from the solar array, and wherein the at least one battery is configured to receive energy from the power tracker to charge the at least one battery.~~

~~5~~3. The system of claim 1, wherein an energy required to ascend from the first altitude to the second altitude is greater than an energy required to descend from the second altitude to the first altitude.

~~6~~4. The system of claim 1, wherein power from the at least one motor is configured to loiter the at least one UAV at the first altitude after the descent of the at least one UAV until the Sun rises to conserve energy stored in the at least one battery.

~~7~~5. The system of claim ~~6~~4, wherein loitering comprises at least one of: stopping the at least one motor of the UAV and slowing the at least one motor of the UAV.

~~8~~6. The system of claim 1, wherein the second altitude is between 10,000 feet and 15,000 feet higher than the first altitude, and wherein the first altitude is between 60,000 feet and 70,000 feet.

~~9~~7. The system of claim ~~8~~6, wherein the second altitude is based on wind speeds at altitudes above the first altitude.

~~10~~8. The system of claim 1, wherein a rate of ascent (144) of the at least one UAV is greater than a rate of descent (146) of the at least one UAV.

~~11~~9. A method, comprising:

transferring energy stored in at least one battery (120) to at least one motor (112) of at least one unmanned aerial vehicle (UAV) (108A,B), wherein the at least one battery is at or near full capacity, wherein the at least one battery receives power from a solar array (110) of the UAV, and wherein the at least one UAV is at a first altitude (140);

ascending, by using the transferred energy of the at least one battery of the at least one UAV, to a second altitude (142), wherein the second altitude is higher than the first altitude; and

descending, by the at least one UAV, from the second altitude to the first altitude after the Sun has set to conserve energy stored in the at least one battery.

~~12~~10. The method of claim ~~11~~9, further comprising:

loitering, by the at least one UAV, at the ~~second~~ first altitude until the Sun rises to conserve energy stored in the at least one battery.

~~13~~11. The method of claim ~~12~~10, wherein loitering at the ~~second~~ first altitude comprises:

stopping the at least one motor of the at least one UAV.

~~14~~12. The method of claim ~~12~~10, wherein loitering at the ~~second~~ first altitude comprises:

slowing the at least one motor of the at least one UAV.

~~15~~13. The method of claim ~~11~~9, wherein the solar array covers at least a portion of a surface of a wing of the at least one UAV.

~~16~~14. The method of claim ~~11~~9, wherein a battery pack comprises the at least one battery and at least one power tracker (130), wherein the power tracker receives energy from the solar array, and wherein the at least one battery receives energy from the power tracker to charge the at least one battery.

~~17~~15. The method of claim ~~1~~9, wherein an energy required to ascend from the first altitude to the second altitude is greater than an energy required to descend from the second altitude to the first altitude.

~~18~~16. The method of claim ~~1~~9, wherein the second altitude is between 10,000 feet and 15,000 feet higher than the first altitude, and wherein the first altitude is between 60,000 feet and 70,000 feet.

~~19~~17. The method of claim ~~18~~16, wherein the second altitude is based on wind speeds at altitudes above the first altitude.

~~20~~18. The method of claim ~~11~~9, wherein a rate of ascent (144) of the at least one UAV is greater than a rate of descent (146) of the at least one UAV.