

**WHAT IS CLAIMED IS:**

1. A downhole fracturing tool assembly, comprising:  
a fracturing port cover coupleable to an interior of a wellbore casing having one or more fracturing ports therein;  
a fracturing port cover actuator coupled to the fracturing port cover, the fracturing port cover actuator operable to move the fracturing port cover between a first position sealing the one or more fracturing ports from an interior of the wellbore casing and a second position exposing the one or more fracturing ports to the interior of the wellbore casing; and  
fracturing port cover electronics coupled to the fracturing port cover actuator proximate the fracturing port cover, the fracturing port cover electronics operable to activate the fracturing port cover actuator.
2. The downhole fracturing tool assembly as recited in Claim 1, wherein the fracturing port cover is a sleeve lining at least a portion of the interior of the wellbore casing.
3. The downhole fracturing tool assembly as recited in Claim 2, wherein the sleeve is a sliding sleeve operable to linearly slide along a length of the wellbore casing.
4. The downhole fracturing tool assembly as recited in Claim 2, wherein the sleeve is a rotating sleeve operable to rotate about the interior of the wellbore casing.
5. The downhole fracturing tool assembly as recited in Claim 2, wherein the sleeve has a fully closed region for sealing the one or more fracturing ports and a screen region for holding proppant within a formation proximate the one or more fracturing ports.
6. The downhole fracturing tool assembly as recited in Claim 5, wherein the fracturing port cover actuator is operable to move the fracturing port cover between the first position, the second position, and a third position with the screen region holding proppant within the formation proximate the one or more fracturing ports.

7. The downhole fracturing tool assembly as recited in Claim 1, wherein the fracturing port cover is a rotating ball valve movable between the first position and the second position.

8. The downhole fracturing tool assembly as recited in Claim 1, further including a power source coupled to the fracturing port cover electronics proximate the fracturing port cover, the power source operable to power the fracturing port cover electronics.

9. The downhole fracturing tool assembly as recited in Claim 8, wherein the power source is a downhole battery source.

10. The downhole fracturing tool assembly as recited in Claim 9, wherein the downhole battery source is a first power source, and further including a second fluid flow power source coupled to the fracturing port cover electronics.

11. The downhole fracturing tool assembly as recited in Claim 10, wherein the second fluid flow power source is a turbine generator.

12. The downhole fracturing tool assembly as recited in Claim 10, further including a fluid port for coupling fractures proximate the one or more fracturing ports and the fluid flow power source.

13. The downhole fracturing tool assembly as recited in Claim 12, wherein the fracturing port cover is operable to redirect fluid to the fluid flow power source via the fluid port.

14. The downhole fracturing tool assembly as recited in Claim 1, wherein the fracturing port cover electronics are programmed to activate the fracturing port cover actuator.

15. The downhole fracturing tool assembly as recited in Claim 14, wherein the fracturing port cover electronics are programmed to activate the fracturing port cover actuator based upon changes in at least one of time, temperature, pressure or flow.

16. The downhole fracturing tool assembly as recited in Claim 14, wherein the fracturing port cover electronics are programmed to activate the fracturing port cover actuator based upon a signal encoded on the wellbore casing or within fluid within the wellbore casing.

17. The downhole fracturing tool assembly as recited in Claim 14, wherein the fracturing port cover electronics are programmed to activate the fracturing port cover actuator based upon a signal received from a drop ball or drop plug traversing down the wellbore casing.

18. A well system, comprising:  
a wellbore extending through one or more subterranean formations;  
wellbore casing located within the wellbore, the wellbore casing having one or more fracturing ports located at a fracturing zone of interest; and  
a downhole fracturing tool assembly positioned proximate the fracturing zone of interest, the downhole fracturing tool assembly including;  
a fracturing port cover coupleable to an interior of the wellbore casing proximate the one or more fracturing ports;  
a fracturing port cover actuator coupled to the fracturing port cover, the fracturing port cover actuator operable to move the fracturing port cover between a first position sealing the one or more fracturing ports from an interior of the wellbore casing and a second position fully exposing the one or more fracturing ports to the interior of the wellbore casing; and  
fracturing port cover electronics coupled to the fracturing port cover actuator proximate the fracturing port cover, the fracturing port cover electronics operable to activate the fracturing port cover actuator.

19. The well system as recited in Claim 18, wherein the fracturing port cover is a sleeve lining at least a portion of the interior of the wellbore casing.

20. The well system as recited in Claim 19, wherein the sleeve is a sliding sleeve operable to linearly slide along a length of the wellbore casing.

21. The well system as recited in Claim 19, wherein the sleeve is a rotating sleeve operable to rotate about the interior of the wellbore casing.

22. The well system as recited in Claim 19, wherein the sleeve has a fully closed region for sealing the one or more fracturing ports and a screen region for holding proppant within a formation proximate the one or more fracturing ports.

23. The well system as recited in Claim 22, wherein the fracturing port cover actuator is operable to move the fracturing port cover between the first position, the second position, and a third position with the screen region holding proppant within the formation proximate the one or more fracturing ports.

24. The well system as recited in Claim 18, wherein the downhole fracturing tool assembly further includes a battery power source coupled to the fracturing port cover electronics proximate the fracturing port cover, the battery power source operable to power the fracturing port cover electronics.

25. The well system as recited in Claim 24, wherein the downhole battery source is a first power source, and further including a second turbine power source coupled to the fracturing port cover electronics.

26. The well system as recited in Claim 25, wherein the downhole fracturing tool assembly further includes a fluid port for coupling fractures proximate the one or more fracturing ports and the turbine power source.

27. The well system as recited in Claim 18, wherein the downhole fracturing tool assembly is a first downhole fracturing tool assembly positioned proximate a first fracturing zone of interest, and further including a second downhole fracturing tool assembly positioned within the wellbore casing downhole of the first downhole fracturing tool assembly and proximate a second different fracturing zone of interest.

28. The well system as recited in Claim 18, further including a downhole zonal isolation assembly positioned downhole of the downhole fracturing tool assembly, the downhole zonal isolation assembly including a rotating fracturing valve positioned within the wellbore casing, the rotating fracturing valve operable to move from a first wellbore casing open position to a second wellbore casing closed position.

29. A method for fracturing a well system, comprising:

positioning a downhole fracturing tool assembly within a wellbore extending into one or more subterranean formations, the downhole fracturing tool assembly located in a wellbore casing and proximate one or more fracturing ports located at a fracturing zone of interest of the wellbore casing, the downhole fracturing tool assembly including;

a fracturing port cover coupled to an interior of the wellbore casing proximate the one or more fracturing ports;

a fracturing port cover actuator coupled to the fracturing port cover, the fracturing port cover actuator operable to move the fracturing port cover between a first position sealing the one or more fracturing ports from an interior of the wellbore casing and a second position fully exposing the one or more fracturing ports to the interior of the wellbore casing; and

fracturing port cover electronics coupled to the fracturing port cover actuator proximate the fracturing port cover, the fracturing port cover electronics operable to activate the fracturing port cover actuator;

moving the fracturing port cover between the first position sealing the one or more fracturing ports from the interior of the wellbore casing and the second position fully exposing the one or more fracturing ports to the interior of the wellbore casing using the fracturing port actuator; and

fracturing the fracturing zone of interest with the fracturing port cover in the second position.

30. The method as recited in Claim 29, wherein the fracturing port cover is a sleeve having a fully closed region for sealing the one or more fracturing ports and a screen region for holding proppant within a formation proximate the one or more fracturing ports, and further

including moving the fracturing port cover from the second position to a third position with the screen region holding proppant within the formation proximate the one or more fracturing ports after fracturing the fracturing zone of interest.