CLAIMS

1. A method for operating user equipment (UE), comprising:

transmitting, to a base station (BS), a capability message for the UE, the capability message including a first indication of one or more first transmit precoding matrix indicators (TPMIs) for full power transmission using a first number of ports and a second indication of one or more second TPMIs for full power transmission using a second number of ports, the second number of ports being different from the first number of ports, wherein the capability message implicitly indicates support for full power transmission using a third number of ports that is fewer than the first number of ports and the second number of ports;

receiving, from the BS, a message indicating a full power uplink transmission configuration for the UE; and

transmitting, to the BS, one or more uplink signals using at least one of the first number of ports, the second number of ports, or the third number of ports according to the full power uplink transmission configuration.

2. The method of claim 1, wherein at least one of the first indication or the second indication comprises an indication of a TPMI group.

3. The method of claim 1, wherein the message configures the UE for full power uplink transmission based on the second indication.

4. The method of claim 1, wherein the message includes an indication of a sounding reference signal (SRS) resource associated with the first number of ports.

5. The method of claim 1, wherein the second indication for the second number of ports that is different from the first number of ports comprises an indication that the UE supports full power uplink transmission using the second number of ports.

6. The method of claim 1, wherein the second indication for the second number of ports that is different from the first number of ports comprises an indication that the UE supports full power uplink transmission for multiple transmit precoding matrix indicators (TPMIs) of a particular rank or for a particular TPMI of the particular rank.

7. A baseband processor, comprising:

one or more processors; and

memory storing instructions that, when executed by the one or more processors, cause the one or more processors to perform the method of any one of claims 1-6.

8. A non-transitory computer-readable medium storing instructions that, when executed by one or more processors, cause the one or more processors to perform the method of any one of claims 1-6.

9. A method for a base station (BS), comprising:

receiving, from a user equipment (UE), a capability message for the UE, the capability message including a first indication of one or more first transmit precoding matrix indicators (TPMIs) for full power transmission using a first number of ports and a second indication of one or more second TPMIs for full power transmission using a second number of ports, the second number of ports being different from the first number of ports, wherein the capability message implicitly indicates support for full power transmission using a third number of ports that is fewer than the first number of ports and the second number of ports;

transmitting, to the UE, a message indicating a full power uplink transmission configuration for the UE; and

receiving, from the UE, one or more uplink signals transmitted over at least one of the first number of ports, the second number of ports, or the third number of ports according to the full power uplink transmission configuration.

10. The method of claim 9, wherein at least one of the first indication or the second indication comprises an indication of a TPMI group.

11. The method of claim 9, wherein the message configures the UE for full power uplink transmission based on the second indication.

12. The method of claim 9, wherein the message includes an indication of a sounding reference signal (SRS) resource associated with the first number of ports.

13. The method of claim 9, comprising:

determining that the UE supports full power uplink transmission using the second number of ports based on receipt of the second indication for the second number of ports that is different from the first number of ports.

14. The method of claim 13, wherein determining that the UE supports full power uplink transmission using the second number of ports includes determining that the UE supports full power uplink transmission for multiple transmit precoding matrix indicators (TPMIs) of a particular rank or for a particular TPMI of the particular rank.

15. A base station (BS), comprising:

one or more processors; and

memory storing instructions that, when executed by the one or more processors, cause the one or more processors to perform the method of any one of claims 9-14.

16. A non-transitory computer-readable medium storing instructions that, when executed by one or more processors, cause the one or more processors to perform the method of any one of claims 9-14.

17. The method of claim 1, wherein the message indicating the full power uplink transmission configuration for the UE comprises a radio resource control (RRC) message or a downlink control information (DCI) message.

18. The method of claim 1, wherein at least one of the one or more uplink signals comprises a physical uplink shared channel (PUSCH) signal.