CLAIMS

What is claimed is:

1. A power control method, applied to a terminal and comprising:

performing a first power control operation or a second power control operation, wherein

the first power control operation comprises: reporting power allocation information corresponding to at least one first identification of the terminal; and

the second power control operation comprises at least one of the following: selecting at least one first target identification from at least one second identification of the terminal for uplink signal transmission based on power priorities of uplink transmissions; or determining a transmit power corresponding to the at least one second identification based on a maximum power reduction corresponding to the at least one second identification, wherein the power priorities comprise: priority of the at least one second identification, and/or priority of radio access technologies supported by the terminal,

wherein the power allocation information comprises at least one of the following:

a maximum transmit power available for the at least one first identification;

power reduction information corresponding to the at least one first identification; and

a power headroom available for the at least one first identification.

wherein the power allocation information further comprises at least one of the following:

identification information of the at least one first identification; and

a radio access technology of at least one working cell corresponding to the at least one first identification.

2. The method according to claim 1, wherein in performing the first power control operation, before the reporting power allocation information corresponding to at least one first identification, the method further comprises:

determining power allocation information corresponding to at least one third identification, wherein the at least one first identification is part or all identification of the at least one third identification.

3. The method according to claim 1, wherein the reporting power allocation information corresponding to at least one first identification comprises:

in a case that the terminal is allowed to report power allocation information corresponding to different identifications, reporting target power allocation information by using a second target identification, wherein

when the second target identification belongs to the at least one first identification, the target power allocation information comprises at least one of the following: power allocation information corresponding to the second target identification, or power allocation information corresponding to at least one first identification other than the second target identification in all of the at least one first identification; and

when the second target identification is an identification of the terminal other than the at least one first identification, the target power allocation information comprises power allocation information corresponding to at least one of the at least one first identification.

4. The method according to claim 3, wherein after the reporting target power allocation information by using a second target identification, the method further comprises:

prohibiting reporting of the target power allocation information within a preset time period.

5. The method according to claim 1, wherein a sum of reported maximum transmit powers available for the at least one first identification is less than or equal to a maximum transmit power allowed by the terminal.

6. The method according to claim 1, wherein the maximum transmit power corresponding to the at least one first identification is a sum of maximum transmit powers corresponding to at least one working cell corresponding to the at least one first identification; or

the maximum transmit power corresponding to the at least one first identification is maximum transmit powers corresponding to at least one working cell corresponding to the at least one first identification.

7. The method according to claim 1, wherein the power reduction information corresponding to the at least one first identification is a sum of power reduction information corresponding to at least one working cell corresponding to the at least one first identification; or

the power reduction information corresponding to the at least one first identification is power reduction information corresponding to at least one working cell corresponding to the at least one first identification.

8. The method according to claim 1, wherein the power headroom available for the at least one first identification is a sum of power headrooms available for at least one working cell corresponding to the at least one first identification; or

the power headroom available for the at least one first identification is power headrooms available for at least one working cell corresponding to the at least one first identification.

9. The method according to claim 1, wherein in performing the second power control operation, the at least one second identification is at least one identification corresponding to uplink signal transmissions at a same transmit occasion, and a sum of preset transmit powers corresponding to the at least one second identification is greater than or equal to a maximum transmit power allowed by the terminal.

10. The method according to claim 9, wherein when the second power control operation comprises selecting at least one first target identification from at least one second identification for uplink signal transmission based on power priorities of uplink transmissions, performing no uplink signal transmission for a third target identification, wherein the third target identification is an identification other than

the at least one first target identification is part or all of the at least one second identification.

11. The method according to claim 9, wherein the at least one first target identification are the first n identifications of the at least one second identification that are arranged according to a rule for prioritizing uplink signal transmissions, and n is a positive integer.

12. The method according to claim 11, wherein the rule for prioritizing uplink signal transmissions comprises at least one of the following:

in order of priority of the at least one second identification;

in order of priority of radio access technologies supported by the terminal;

a first type of uplink transmission taking priority over a second type of uplink transmission, wherein the first type of uplink transmission is uplink transmissions for initiating establishment of an uplink connection, and the second type of uplink transmission is uplink transmissions other than the first type of uplink transmission in all uplink transmissions;

in order of uplink transmission priority of a primary cell and secondary cell(s);

an uplink control channel transmission taking priority over an uplink data channel transmission; and

in order of priority of data.

13. The method according to claim 12, wherein the rule for prioritizing uplink signal transmissions is defined by a protocol or configured by a network-side device.

14. The method according to claim 9, wherein when the second power control operation comprises determining a transmit power corresponding to the at least one second identification based on a maximum power reduction corresponding to the at least one second identification, an uplink transmit power reduction scheme is prescribed by a protocol or configured by a network-side device.

15. The method according to claim 14, wherein the uplink transmit power reduction configuration comprises at least one of the following:

a maximum power reduction corresponding to a radio access technology; and

a maximum power reduction corresponding to the at least one second identification.

16. The method according to claim 1, wherein identification information of identifications of the terminal comprises at least one of the following: a SIM number, an international mobile subscription identity IMSI, a temporary mobile subscription identity TMSI, and a system architecture evolution temporary mobile subscription identity S-TMSI, a 5G-S-TMSI, and a radio access network temporary identifier RNTI.

17. A terminal, comprising:

a power control module, configured to perform a first power control operation or a second power control operation, wherein

the first power control operation comprises: reporting power allocation information corresponding to at least one first identification of the terminal; and

the second power control operation comprises at least one of the following: selecting at least one first target identification from at least one second identification of the terminal for uplink signal transmission based on power priorities of uplink transmissions; or determining a transmit power corresponding to the at least one second identification based on a maximum power reduction corresponding to the at least one second identification, wherein the power priorities comprise: priority of the at least one second identification, and/or priority of radio access technologies supported by the terminal,

wherein the power allocation information comprises at least one of the following:

a maximum transmit power available for the at least one first identification;

power reduction information corresponding to the at least one first identification; and

a power headroom available for the at least one first identification.

wherein the power allocation information further comprises at least one of the following:

identification information of the at least one first identification; and

a radio access technology of at least one working cell corresponding to the at least one first identification.

18. A network-side device, comprising:

a receiving module, configured to receive power allocation information corresponding to at least one first identification that is reported by a terminal, wherein the at least one first identification is an identification of the terminal;

wherein the power allocation information comprises at least one of the following:

a maximum transmit power available for the at least one first identification;

power reduction information corresponding to the at least one first identification; and

a power headroom available for the at least one first identification.

wherein the power allocation information further comprises at least one of the following:

identification information of the at least one first identification; and

a radio access technology of at least one working cell corresponding to the at least one first identification.