

WHAT IS CLAIMED IS:

1. A method of wireless communication performed by a user equipment (UE), comprising:
 - receiving a transmit power control (TPC) command in a grant associated with transmitting an uplink communication,
 - wherein a scheduling delay between the grant and the uplink communication is a flexible scheduling delay;
 - sampling a TPC state in association with determining a transmit power for transmitting the uplink communication; and
 - determining the transmit power based at least in part on the TPC state and the TPC command.
2. The method of claim 1, wherein timing associated with sampling the TPC state is relative to the grant.
3. The method of claim 1, wherein timing associated with sampling the TPC state is relative to a resource associated with transmitting the uplink communication.
4. The method of claim 1, wherein, when timing of the TPC state being sampled coincides with timing of at least one TPC command that is to be accumulated into the TPC state, the TPC state is sampled after the at least one TPC command is accumulated into the TPC state.
5. The method of claim 1, wherein, when timing of the TPC state being sampled coincides with timing of at least one TPC command that is to be accumulated into the TPC state, the TPC state is sampled before the at least one TPC command is accumulated into the TPC state.
6. The method of claim 5, wherein, when the at least one TPC command is the TPC command, the TPC command is added to a result of sampling the TPC state.
7. The method of claim 1, wherein timing of the TPC state being sampled is based at least in part on at least one of:

the scheduling delay between the grant and the uplink communication,
a grant type associated with the grant, or
a capability of the UE.

8. The method of claim 1, wherein timing of the TPC state being sampled is semistatically configured.
9. The method of claim 1, wherein timing of the TPC state being sampled is dynamically determined.
10. The method of claim 1, wherein information associated with timing of the TPC state being sampled is at least one of:
 - signaled in downlink control information (DCI),
 - a preconfigured constant, or
 - a function of a DCI parameter.
11. The method of claim 1, wherein the uplink communication is one of:
 - a physical uplink shared channel (PUSCH) communication,
 - a physical uplink control channel (PUCCH) communication,
 - a sounding reference signal (SRS), or
 - a physical random access channel (PRACH) sequence.
12. The method of claim 1, wherein the TPC command is accumulated the TPC state.
13. The method of claim 12, wherein timing associated with accumulating the TPC command into the TPC state is relative to the grant.
14. The method of claim 12, wherein timing associated with accumulating the TPC command into the TPC state is relative to a resource associated with transmitting the uplink communication.
15. The method of claim 12, wherein the TPC command is accumulated into the TPC state before the TPC state is sampled.

16. The method of claim 12, wherein the TPC state is sampled before the TPC command is accumulated.
17. The method of claim 12, wherein the TPC command is accumulated into the TPC state concurrently with the TPC state being sampled.
18. The method of claim 12, wherein timing of the TPC command being accumulated into the TPC state is based at least in part on at least one of:
the scheduling delay between the grant and the uplink communication,
a grant type associated with the grant, or
a capability of the UE.
19. The method of claim 12, wherein timing of the TPC command being accumulated into the TPC state is semistatically configured.
20. The method of claim 12, wherein timing of the TPC command being accumulated into the TPC state is dynamically determined.
21. The method of claim 12, wherein information associated with timing of the TPC command being accumulated into the TPC state is at least one of:
signaled in downlink control information (DCI),
a preconfigured constant, or
a function of a DCI parameter.
22. A user equipment (UE) for wireless communication, comprising:
a memory; and
one or more processors operatively coupled to the memory, the memory and the one or more processors configured to:
receive a transmit power control (TPC) command in a grant associated with transmitting an uplink communication,
wherein a scheduling delay between the grant and the uplink communication is a flexible scheduling delay;

sample a TPC state in association with determining a transmit power for transmitting the uplink communication; and
determine the transmit power based at least in part on the TPC state and the TPC command.

23. The UE of claim 22, wherein timing associated with sampling the TPC state is relative to the grant or is relative to a resource associated with transmitting the uplink communication.

24. The UE of claim 22, wherein, when timing of the TPC state being sampled coincides with timing of at least one TPC command that is to be accumulated into the TPC state, the TPC state is sampled after the at least one TPC command is accumulated into the TPC state.

25. The UE of claim 22, wherein, when timing of the TPC state being sampled coincides with timing of at least one TPC command that is to be accumulated into the TPC state, the TPC state is sampled before the at least one TPC command is accumulated into the TPC state.

26. The UE of claim 22, wherein timing of the TPC state being sampled is based at least in part on at least one of:

the scheduling delay between the grant and the uplink communication,
a grant type associated with the grant, or
a capability of the UE.

27. The UE of claim 22, wherein the TPC command is accumulated the TPC state, wherein timing associated with accumulating the TPC command into the TPC state is relative to the grant or is relative to a resource associated with transmitting the uplink communication.

28. The UE of claim 27, wherein timing of the TPC command being accumulated into the TPC state is based at least in part on at least one of:

the scheduling delay between the grant and the uplink communication,
a grant type associated with the grant, or

a capability of the UE.

29. A non-transitory computer-readable medium storing one or more instructions for wireless communication, the one or more instructions comprising:

one or more instructions that, when executed by one or more processors of a user equipment (UE), cause the one or more processors to:

receive a transmit power control (TPC) command in a grant associated with transmitting an uplink communication,

wherein a scheduling delay between the grant and the uplink communication is a flexible scheduling delay;

sample a TPC state in association with determining a transmit power for transmitting the uplink communication; and

determine the transmit power based at least in part on the TPC state and the TPC command.

30. An apparatus for wireless communication, comprising:

means for receiving a transmit power control (TPC) command in a grant associated with transmitting an uplink communication,

wherein a scheduling delay between the grant and the uplink communication is a flexible scheduling delay;

means for sampling a TPC state in association with determining a transmit power for transmitting the uplink communication; and

means for determining the transmit power based at least in part on the TPC state and the TPC command.

31. A method of wireless communication performed by a user equipment (UE), comprising:

detecting a power headroom report (PHR) trigger,

wherein the UE is configured to transmit uplink communications using a plurality of carriers;

identifying, based at least in part on detecting the PHR trigger, a set of carriers, of the plurality of carriers, that is to be ignored when calculating a power headroom associated with a carrier of the plurality of carriers; and

calculating the power headroom based at least in part on an uplink transmission, associated with the carrier, and based at least in part on ignoring the set of carriers that is to be ignored.

32. The method of claim 31, wherein the set of carriers is identified based at least in part on determining that a set of uplink grants was received by the UE after a particular time,

wherein each uplink grant, of the set of uplink grants, is associated with a respective carrier of the set of carriers.

33. The method of claim 32, wherein the particular time is a time at which a first grant was received after the PHR trigger was detected.

34. The method of claim 31, wherein the set of carriers is identified based at least in part on determining that the UE has no uplink grants associated with the set of carriers.

35. The method of claim 31, wherein the set of carriers is identified based at least in part on determining that a set of uplink grants was received by the UE after a threshold amount of time from a time at which an uplink grant, associated with the carrier, was received by the UE,

wherein each uplink grant, of the set of uplink grants, is associated with a respective carrier of the set of carriers.

36. The method of claim 31, wherein the power headroom is calculated further based at least in part on a particular uplink transmission of at least two uplink transmissions associated with another carrier of the plurality of carriers,

wherein the at least two uplink transmissions at least partially overlap the uplink transmission associated with the carrier.

37. The method of claim 36, wherein a subcarrier spacing, associated with the other carrier, is higher than a subcarrier spacing of the carrier.

38. The method of claim 36, wherein the particular uplink transmission is a first uplink transmission of the at least two uplink transmissions.
39. The method of claim 36, wherein the particular uplink transmission is a last uplink transmission of the at least two uplink transmissions.
40. The method of claim 36, wherein the particular uplink transmission is an uplink transmission, of the at least two uplink transmissions, with a smallest power headroom.
41. The method of claim 36, wherein the uplink transmission is a particular one of at least two uplink transmissions associated with the carrier.
42. A user equipment (UE) for wireless communication, comprising:
a memory; and
one or more processors operatively coupled to the memory, the memory and the one or more processors configured to:
detect a power headroom report (PHR) trigger,
wherein the UE is configured to transmit uplink communications using a plurality of carriers;
identify, based at least in part on detecting the PHR trigger, a set of carriers, of the plurality of carriers, that is to be ignored when calculating a power headroom associated with a carrier of the plurality of carriers; and
calculate the power headroom based at least in part on an uplink transmission, associated with the carrier, and based at least in part on ignoring the set of carriers that is to be ignored.
43. The UE of claim 42, wherein the set of carriers is identified based at least in part on determining that a set of uplink grants was received by the UE after a particular time,
wherein each uplink grant, of the set of uplink grants, is associated with a respective carrier of the set of carriers.
44. The UE of claim 43, wherein the particular time is a time at which a first grant was received after the PHR trigger was detected.

45. The UE of claim 42, wherein the set of carriers is identified based at least in part on determining that the UE has no uplink grants associated with the set of carriers.

46. The UE of claim 42, wherein the set of carriers is identified based at least in part on determining that a set of uplink grants was received by the UE after a threshold amount of time from a time at which an uplink grant, associated with the carrier, was received by the UE,

wherein each uplink grant, of the set of uplink grants, is associated with a respective carrier of the set of carriers.

47. The UE of claim 42, wherein the power headroom is calculated further based at least in part on a particular uplink transmission of at least two uplink transmissions associated with another carrier of the plurality of carriers,

wherein the at least two uplink transmissions at least partially overlap the uplink transmission associated with the carrier.

48. The UE of claim 47, wherein a subcarrier spacing, associated with the other carrier, is higher than a subcarrier spacing of the carrier.

49. The UE of claim 47, wherein the particular uplink transmission is a first uplink transmission of the at least two uplink transmissions.

50. The UE of claim 47, wherein the particular uplink transmission is a last uplink transmission of the at least two uplink transmissions.

51. The UE of claim 47, wherein the particular uplink transmission is an uplink transmission, of the at least two uplink transmissions, with a smallest power headroom.

52. The UE of claim 47, wherein the uplink transmission is a particular one of at least two uplink transmissions associated with the carrier.

53. A non-transitory computer-readable medium storing one or more instructions for wireless communication, the one or more instructions comprising:

one or more instructions that, when executed by one or more processors of a user equipment, cause the one or more processors to:

detect a power headroom report (PHR) trigger,

wherein the UE is configured to transmit uplink communications using a plurality of carriers;

identify, based at least in part on detecting the PHR trigger, a set of carriers, of the plurality of carriers, that is to be ignored when calculating a power headroom associated with a carrier of the plurality of carriers; and

calculate the power headroom based at least in part on an uplink transmission, associated with the carrier, and based at least in part on ignoring the set of carriers that is to be ignored.

54. The non-transitory computer-readable medium of claim 53, wherein the set of carriers is identified based at least in part on determining that a set of uplink grants was received by the UE after a particular time,

wherein each uplink grant, of the set of uplink grants, is associated with a respective carrier of the set of carriers.

55. The non-transitory computer-readable medium of claim 54, wherein the particular time is a time at which a first grant was received after the PHR trigger was detected.

56. The non-transitory computer-readable medium of claim 53, wherein the set of carriers is identified based at least in part on determining that the UE has no uplink grants associated with the set of carriers.

57. The non-transitory computer-readable medium of claim 53, wherein the set of carriers is identified based at least in part on determining that a set of uplink grants was received by the UE after a threshold amount of time from a time at which an uplink grant, associated with the carrier, was received by the UE,

wherein each uplink grant, of the set of uplink grants, is associated with a respective carrier of the set of carriers.

58. The non-transitory computer-readable medium of claim 53, wherein the power headroom is calculated further based at least in part on a particular uplink transmission of at least two uplink transmissions associated with another carrier of the plurality of carriers,

wherein the at least two uplink transmissions at least partially overlap the uplink transmission associated with the carrier.

59. The non-transitory computer-readable medium of claim 58, wherein the uplink transmission is a particular one of at least two uplink transmissions associated with the carrier.

60. An apparatus for wireless communication, comprising:

means for detecting a power headroom report (PHR) trigger,

wherein the apparatus is configured to transmit uplink communications using a plurality of carriers;

means for identifying, based at least in part on detecting the PHR trigger, a set of carriers, of the plurality of carriers, that is to be ignored when calculating a power headroom associated with a carrier of the plurality of carriers; and

means for calculating the power headroom based at least in part on an uplink transmission, associated with the carrier, and based at least in part on ignoring the set of carriers that is to be ignored.