CLAIMS

1. A method in a User Equipment, UE, for reporting power headroom, the method comprises:

-determining (703) power headroom for transmission on at least a Physical Uplink Control Channel, PUCCH, and

-transmitting (704) to a base station at least one power headroom report indicating the power headroom for transmission on at least the PUCCH.

2. The method according to claim 1, wherein the power headroom is determined for transmission on the PUCCH and a Physical Uplink Shared Channel, PUSCH and the at least one power headroom report indicates the power headroom for transmission on the PUCCH and the PUSCH.

3. The method according to claim 2, wherein the at least one power headroom report indicating the power headroom for transmission on the PUCCH and the PUSCH is transmitted in combination with a power headroom report indicating the power headroom for transmission on PUSCH.

4. The method according to claim 2, wherein the at least one power headroom report indicating the power headroom for transmission on the PUCCH and the PUSCH is transmitted in combination with a power headroom report indicating the power headroom for transmission on PUCCH.

5. The method according to claim 1, wherein the power headroom is determined for transmission on the PUCCH and the at least one power headroom report indicates the power headroom for transmission on the PUCCH.

6. The method according to any of claims 1-5, wherein the at least one power headroom report is valid for a given component carrier c.

7. The method according to any of claims 1-5, wherein the at least one power headroom report is defined as a sum for all component carriers.

8. The method according to claim 4, wherein the at least one power headroom report indicating the power headroom for transmission on the PUCCH and the PUSCH is transmitted simultaneously with the power headroom report indicating the power headroom for transmission on PUSCH.

9. The method according to claim 4, wherein the at least one power headroom report indicating the power headroom for transmission on the PUCCH and the PUSCH is transmitted at a separate instance compared with the power headroom report indicating the power headroom for transmission on PUSCH.

10. The method according to any of claims 1-9, further comprising:
-receiving (701) a parameter indicating whether simultaneous transmission of PUSCH and PUCCH is possible, and
-configuring (702) the uplink transmission based on the received parameter.

11. A method in a base station for scheduling a UE, the method comprises:
-receiving (603) from the UE at least one power headroom report indicating power headroom for transmission on at least a Physical Uplink Control Channel, PUCCH, and
-scheduling (604) the UE based on information of the at least one received power headroom report.

12. The method according to claim 11, wherein the at least one power headroom report indicates the power headroom for transmission on the PUCCH and a Physical Uplink Shared Channel, PUSCH.

13. The method according to claim 12, wherein the at least one power headroom report indicating the power headroom for transmission on the PUCCH and the PUSCH is received in combination with a power headroom report indicating the power headroom for transmission on PUSCH.

14. The method according to claim 12, wherein the at least one power headroom report indicating the power headroom for transmission on the PUCCH and the PUSCH is received in combination with a power headroom report indicating the power headroom for transmission on PUCCH.

15. The method according to claim 11, wherein the at least one power headroom report indicates the power headroom for transmission on the PUCCH.

16. The method according to any of claims 11-15, further comprises:

-configuring (601) the UE whether or not simultaneous transmission of Physical Uplink Control Channel, PUCCH, and Physical Uplink Shared Channel, PUSCH is possible, and

-signalling (602) a parameter to the UE indicating whether simultaneous transmission of PUSCH and PUCCH is possible.

17. A User Equipment, UE, (806) for reporting power headroom, the UE (806) comprises a processor (804) configured to determine power headroom for transmission on at least a Physical Uplink Control Channel, PUCCH, and a transmitter (805) configured to transmit to a base station at least one power headroom report indicating the power headroom for transmission on at least the PUCCH.

18. A base station (800) for scheduling a UE, the base station comprises a receiver (807) configured to receive from the UE at least one power headroom report indicating the power headroom for transmission on at least a Physical Uplink Control Channel, PUCCH, and a processor (801) configured to schedule the UE based on information of the at least one received power headroom report.