~~NEW~~ CLAIMS

1. A method, for use in a user equipment (700),for reporting power headroom reports to a radio base station (600), for power management in a telecommunications system, the method comprising:
- deciding (141) on application of a power backoff;
- indicating (142) in a power headroom report of the application of the power backoff;
- sending (143), to the radio base station (600), the power headroom report indicating that the power backoff has been applied by the user equipment (700),wherein sending (143) comprises sending the power headroom report in an extended power headroom medium access control element or in a power headroom medium access control element, and providing said indication of application of power backoff in the extended power headroom medium access control element or in the power headroom medium access control element or in a medium access control subheader used by the extended power headroom medium access control element.

2. The method according to claim 1 wherein indicating (142) comprises indicating in the power headroom report application of power backoff due to power management, in addition to indicating in the same power headroom report a maximum transmit power used by the user equipment (700).

3. The method according to any of claims 1-2 wherein indicating (142) comprises indicating the power backoff being an additional power backoff applied by the user equipment (700) in a transmission time interval.

4. The method according to anyone of claims 1-3 wherein indicating (142) comprises setting a reserved bit in the power headroom report to a predefined value when the user equipment (700) decides to apply power backoff.

5. The method according to anyone of claims 1- 4 further comprises indicating (142) in the power headroom report that the power backoff has exceeded a certain defined

power backoff threshold, by setting a further bit in the power headroom report to a predefined value.

6. The method according to anyone of the preceding claims wherein indicating (142) comprises indicating of the application of the power backoff each time a maximum transmit power used by the user equipment (700) is indicated in the power headroom report.

7. The method according to anyone of claims 1-5 wherein indicating (142) comprises indicating of the application of the power backoff due to power management when said power backoff impacts the actual transmission power utilized by the user equipment (700).

8. The method according to anyone of claims 1-5 wherein indication (142) comprises indicating of the application of the power backoff due to power management in addition to any power backoff applied for maximum power reduction, MPR, and additional MPR, A-MPR.

9. A method, for use in a radio base station (600) in a telecommunications system, the method comprising:

- receiving (151) a power headroom report from a user equipment (700) in an extended power headroom medium access control element or in a power headroom medium access control element;

- determining (152) from the received power headroom report whether a power backoff has been applied by the user equipment (700), and if power backoff has been applied by the user equipment receiving (151) such indication of the application of the power backoff in the extended power headroom medium access control element or in the power headroom medium access control element or in a medium access control subheader used by the extended power headroom medium access control element.

10. The method according to claim 9 wherein determining (151) further comprises determining from the received power headroom report whether a power backoff has

been applied by the user equipment due to power management and further determining from the power headroom report a maximum transmit power used by the user equipment (700).

11. The method according to claim 9 or claim 10 wherein determining (152) further comprises determining whether a reserved bit in the power headroom report is set to a predefined value.

12. The method according to claim 11 wherein determining (152) further comprises determining whether a further reserved bit in the power headroom report is set to a predefined value indicating that the power backoff has exceeded a certain defined power backoff threshold.

13. The method according to any of claims 9-12 wherein determining (152) further comprises determining whether the power backoff is an additional power backoff applied by the user equipment (700) in a transmission time interval.

14. The method according to anyone of claims 9-13 wherein determining (152) comprises determining whether the power backoff has been applied by the user equipment (700) due to power management when said power backoff impacts the actual transmission power utilized by the user equipment (700).

15. The method according to anyone of claims 9-13 wherein determining (152) comprises determining whether the power backoff has been applied by the user equipment (700) due to power management in addition to any power backoff applied by the user equipment for maximum power reduction, MPR, and additional MPR, A-MPR.

16. A user equipment (700) for reporting power headroom reports to a radio base station, (600) for power management in a telecommunications system, the user equipment (700) comprising:

- a processing unit (710) configured to decide on application of a power backoff;
- the processing unit (710) is further configured to indicate in a power headroom report of the application of the power backoff;
- a transceiver (705) configured to send to the radio base station (600), the power headroom report indicating that the power backoff has been applied by the user equipment (700); the transceiver (705) is configured to send the power headroom report in an extended power headroom medium access control element or in a power headroom medium access control element, and to provide said indication of application of power backoff in the extended power headroom medium access control element or in the power headroom medium access control element or in a medium access control subheader used by the extended power headroom medium access control element

17. The user equipment (700) according to claim 16 wherein the processing unit (710) is configured to indicate in the power headroom report application of power backoff due to power management, and is further configured to indicate in the same power headroom report a maximum transmit power used by the user equipment (700).

18. The user equipment (700) according to any of claims 16-17 wherein the processing unit (710) is configured to indicate the power backoff as an additional power backoff applied by the user equipment (700) in a transmission time interval.

19. The user equipment (700) according to any of claims 16-18 wherein the processing unit (710) is configured to set a reserved bit in the power headroom report to a predefined value when the processing unit (710) decides to apply power backoff.

20. The user equipment (700) according to any of claims 16-19 wherein the processing unit (710) is further configured to indicate in the power headroom report that the power backoff has exceeded a certain defined power backoff threshold, by setting a further bit in the power headroom report to a predefined value.

21. The user equipment (700) according to any of claims 16-20 wherein the processing unit (710) is further configured to apply the power backoff each time a maximum transmit power used by the user equipment (700) is indicated in the power headroom report.

22. The user equipment (700) according to any of claims 16-20 wherein the processing unit (710) is further configured to apply the power backoff due to power management when said power backoff impacts the actual transmission power utilized by the user equipment (700).

23. The user equipment (700) according to any of claims 16-20 wherein the processing unit (710) is further configured to apply the power backoff due to power management in addition to any power backoff applied by the user equipment for maximum power reduction, MPR, and additional MPR, A-MPR.

24. A radio base station (600) in a telecommunications system, the radio base station (600) comprising:

- a transceiver (620) configured to receive a power headroom report from a user equipment (700); wherein the transceiver (620) is configured to receive the power headroom report in an extended power headroom medium access control element or in a power headroom medium access control element.
- a processing unit (632) configured to determine from the received power headroom report whether a power backoff has been applied by the user equipment (700); and if power backoff has been applied by the user equipment (700), the transceiver (620) is configured to receive such indication of the application of the power backoff in the extended power headroom medium access control element or in the power headroom medium access control element or in a medium access control subheader used by the extended power headroom medium access control element.

25. The radio base station (600) according to claim 24 wherein the processing unit (632) is further configured to determine from the received power headroom whether a maximum transmit power has been applied by the user equipment (700) due to power

management and further determining from the power headroom report a maximum transmit power used by the user equipment (700) .

26. The radio base station (600) according to claim 24 or claim 25 wherein the processing unit (632) is further configured to determine whether a reserved bit in the power headroom report is set to 1.

27. The radio base station (600) according to claim 26 wherein the processing unit (632) is further configured to determine whether a further reserved bit in the power headroom report is set to a predefined value indicating that the power backoff has exceeded a certain defined power backoff threshold.

28. The radio base station (600) according to any of claims 24-27 wherein the processing unit (632) is further configured to determine whether the power backoff is an additional power backoff applied by the user equipment in a transmission time interval.

29. The radio base station (600) according to any of claims 24-28 wherein the processing unit (632) is further configured to determine whether the power backoff has been applied by the user equipment (700) due to power management when said power backoff impacts the actual transmission power utilized by the user equipment (700).

30. The radio base station (600) according to any of claims 24-28 wherein the processing unit (632) is further configured to determine whether the power backoff has been applied by the user equipment (700) due to power management in addition to any power backoff applied by the user equipment (700) for maximum power reduction, MPR, and additional MPR, A-MPR.