CLAIMS

1. A user equipment, UE, for a Power Headroom Report, PHR, for a serving cell, comprising:

at least one processor; and

at least one memory including computer program code;

the at least one memory and the computer program code configured to, with the at least one processor, cause the UE at least to perform:

triggering the PHR to a network node to report Power Headroom, PH, of the serving cell, wherein the PHR is triggered upon the following event:

activation of the serving cell if a first Bandwidth Part, BWP, of the serving cell is not a dormant BWP and if the serving cell is a Secondary Cell, SCell, of a medium access control, MAC, entity, wherein the MAC entity is with configured uplink; and

continuing downlink Reference Signal measurements without reporting to a network node until the PHR is triggered after the active BWP switches from a dormant to a non-dormant BWP or the active BWP on the serving cell switches from a non-dormant BWP to a dormant BWP.

2. The UE of claim 1, wherein the reported PH is indicated by one of the following:

- Type 1 PH;
- Type 3 PH;
- a designated field indicating whether the PH is Type 1 or Type 3; or
- a designated field indicating whether the serving cell is on a dormant BWP or non-dormant BWP.

3. The UE of claim 1, wherein the reported PH for the serving cell is Type 1 PH with a virtual field indicating a PUSCH reference format is used, or wherein the reported PH for the serving cell is Type 3 PH depending on whether there is a Sounding Reference Signal, SRS, transmission on the dormant BWP when the PHR is reported.

4. The UE of claim 1, wherein the PHR triggering is upon switching the active BWP from a dormant BWP to a non-dormant BWP if no PHR is reported for the serving cell when the active BWP is a dormant BWP.

5. The UE of claim 1, wherein the PHR triggering is upon activation of the serving cell when the active BWP of the serving cell is not a dormant BWP.

6. The UE of claim 1, wherein the triggering of the PHR is configured by the network node.

7. The UE of claim 1, wherein the triggering of the PHR is made on a per serving cell when the active BWP is a dormant BWP.

8. A method for power headroom reporting to a network node associated with a plurality of serving cells, comprising:

triggering, by a user equipment, UE, a power headroom report, PHR, to the network node to report Power Headroom, PH, of a serving cell, wherein the PHR is triggered upon the following event:

activating of the serving cell if a first Bandwidth Part, BWP, of the serving cell is not a dormant BWP and if the serving cell is a Secondary Cell, SCell, of a medium access control, MAC, entity, wherein the MAC entity is with configured uplink; and

continuing downlink Reference Signals measurements without reporting to the network node, until the PHR is triggered after the active BWP switches from a dormant BWP to a non-dormant BWP.

9. The method of claim 8, wherein the reported PH for the serving cell is indicated by one of the following:

- Type 1 PH;
- Type 3 PH;

- a designated field indicating whether the PH is Type 1 or Type 3; or

- a designated field indicating whether the serving cell is on a dormant BWP or non-dormant BWP.

10. The method of claim 8, wherein the reported PH for the serving cell is Type 1 PH with a virtual field indicating a PUSCH reference format is used, or wherein the reported PH for the serving cell is Type 3 PH depending on whether there is a Sounding Reference Signal, SRS, transmission on the dormant BWP when the PHR is reported.

11. The method of claim 8, wherein the PHR triggering is upon switching the active BWP from a dormant BWP to a non-dormant BWP if no PHR is reported for the serving cell when the active BWP is a dormant BWP.

12. A system for a Power Headroom Report, PHR, for a serving cell, comprising a user equipment, UE, and at least a network node,

wherein an active Bandwidth Part, BWP, of the serving cell is a dormant BWP;

wherein the UE comprises:

at least one first processor; and

at least one first memory including first computer program code;

the at least one first memory and the first computer program code configured to, with the at least one first processor, cause the UE at least to perform:

triggering the PHR to the network node to report Power Headroom, PH, of the serving cell, wherein the PHR is triggered upon the following event:

activation of the serving cell if a first Bandwidth Part, BWP, of the serving cell is not a dormant BWP and if the serving cell is a Secondary Cell, SCell, of a medium access control, MAC, entity, wherein the MAC entity is with configured uplink; and

continuing downlink Reference Signal measurements without reporting to the network node, until the PHR is triggered after the active BWP switches from a dormant to a non-dormant BWP or the active BWP on the serving cell switches from a non-dormant BWP to a dormant BWP-;

wherein the network node comprises:

at least one second processor; and

at least one second memory including second computer program code;

the at least one second memory and the second computer program code configured to, with the at least one second processor, cause the network node at least to perform:

receiving the PHR from the UE to report PH of the serving cell; and

obtaining a PH value for the serving cell from the PHR.