**3GPP TSG-RAN WG4 Meeting #112 R4-2413511**

**Maastricht, Netherlands, 19th – 23rd August, 2024**

**Title: [Draft] LS to RAN1 on power boosting for LPWUS**

**Response to: -**

**Release: Rel-19**

**Work Item: NR\_LPWUS**

**Source: RAN4**

**To: RAN1**

**Cc:**

**Contact person: Xiang GAO**

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# 1 Overall description

RAN4 is currently developing BS RF requirements for LP-WUS power boosting. This legacy requirement was defined for different modulation orders including 64QAM and also related to physical channels. It is identified that the dynamic range requirement for RE power control, i.e. power boosting would be impacted by the PAPR of the supported waveform and modulation orders.

Given that LP-WUS/SS is a new physical channel using On-Off Keying (OOK) modulation, RAN4 would like to check with RAN1 on potential factors which could have impact on signal PAPR for the ongoing RAN1 LP-WUS/SS sequence design to facilitate RAN4 evaluation for the dynamic range requirement.

In addition, RAN4 would like to check with RAN1 whether LP-WUS power boosting as an optional feature is needed to improve LP-WUS coverage from RAN1 perspective.

# 2 Actions

**To RAN1**

**ACTION:** RAN4 respectfully asks RAN1 to provide feedback to the above questions.

# 3 Dates of next TSG RAN WG 4 meetings

3GPP RAN4#112bis 14 – 18 October 2024 Hefei, China

3GPP RAN4#113 18 – 22 November 2024 Orlando, US