

**AMENDMENT TO THE AMENDMENT IN THE
NATURE OF A SUBSTITUTE TO H.R. _____
OFFERED BY MS. MCCLELLAN OF VIRGINIA**

Add at the end of title IV the following:

1 **SEC. 4 ____ . CELESTIAL TIME STANDARDIZATION.**

2 (a) SENSE OF CONGRESS.—It is the sense of Con-
3 gress that—

4 (1) United States leadership of a sustained
5 presence on the Moon and in deep space exploration
6 is important for advancing science, exploration, com-
7 mercial growth, and international partnership;

8 (2) the Artemis and Moon to Mars program of
9 the National Aeronautics and Space Administration
10 (NASA) will involve governmental, commercial, aca-
11 demic, and international partners where there is a
12 need for interoperability between systems;

13 (3) the use of Coordinated Universal Time has
14 challenges when used beyond Earth at other celestial
15 bodies, due to relativistic effects;

16 (4) the United States should lead in developing
17 time standardization for the Moon and other celes-
18 tial bodies other than Earth to support interoper-
19 ability and safe and sustainable operations; and

1 (5) development of such standardization will ad-
2 vance United States leadership in standards setting
3 for global competitiveness, and will benefit other
4 spacefaring countries and entities.

5 (b) DEVELOPMENT OF CELESTIAL TIME STANDARD-
6 IZATION.—The Administrator of NASA, in consultation
7 with the Director of the Office of Science and Technology
8 Policy, shall carry out the following:

9 (1) Enable the development of celestial time
10 standardization, including by leading the study and
11 definition of a coordinated lunar time.

12 (2) Develop a strategy to implement a coordi-
13 nated lunar time that would support future oper-
14 ations and infrastructure on and around the Moon.

15 (3) In carrying out paragraphs (1) and (2)—

16 (A) coordinate with relevant Federal enti-
17 ties, including the Department of Commerce,
18 the Department of Defense, the Department of
19 State, and the Department of Transportation;
20 and

21 (B) consult with—

22 (i) relevant private sector entities;

23 (ii) relevant academic entities; and

24 (iii) relevant international standards
25 setting bodies.

1 (4) Incorporate the following features of a co-
2 ordinated lunar time, to the extent practicable, in
3 the development of the strategy developed pursuant
4 to paragraph (2):

5 (A) Traceability to Coordinated Universal
6 Time.

7 (B) Accuracy sufficient to support preci-
8 sion navigation and science.

9 (C) Resilience to loss of contact with
10 Earth.

11 (D) Scalability to space environments be-
12 yond the Earth-Moon system.

13 (c) REPORT.—Not later than two years after the date
14 of the enactment of this Act, the Administrator of NASA
15 shall submit to the Committee on Science, Space, and
16 Technology of the House of Representatives and the Com-
17 mittee on Commerce, Science, and Transportation of the
18 Senate a report describing the strategy developed pursu-
19 ant to subsection (b)(2), including relevant plans,
20 timelines, and resources required for the implementation
21 of a coordinated lunar time pursuant to such strategy.

