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Electrical Engineering and the New SI Definitions

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Abstract: In 2019, the new definitions of the SI system were announced and adopted. These new definitions marked a substantial change from the previous ones and will have a considerable impact on the realisation of the various units and in particular the kilogram. Seven of these units directly relate to the units of measure used in Electrical Engineering. This paper will examine the new definitions, how the fundamental units of electrical engineering are realised from the definitions, the impact of these changes on the uncertainty of measurement of electrical units and the role of the new Volt, Ohm and Ampere in the realisation of the new kilogram.

Keywords: Electrical Engineering, electrical units, SI Definitions