

# Independent Assurance Statement to Verizon

ERM Certification and Verification Services, Inc. (“ERM CVS”) was engaged by Verizon Communications Inc. (“Verizon”) to provide limited assurance in relation to the product comparison claims set out below and presented in Verizon’s 2020 TCFD Report (“the TCFD Report”).

Engagement summary	
Scope of our assurance engagement	Whether the underlying methodology and calculations support the following product comparison claims related to: <ul style="list-style-type: none"><li>Our fiber-delivered broadband services are at least 100 times more efficient on a kilowatt hour (kWh) per gigabyte basis than copper-delivered broadband services.</li></ul>
Reporting criteria	Verizon’s Internal Methodology Document, including the boundaries and assumptions detailed in the footnote below.
Assurance standard	ERM CVS’ assurance methodology, based on the International Standard on Assurance Engagements ISAE 3000 (Revised).
Assurance level	Limited assurance.
Respective responsibilities	Verizon is responsible for preparing the TCFD Report and for the collection and presentation of the claims within it. ERM CVS’ responsibility is to provide conclusions on the agreed scope based on the assurance activities performed and exercising our professional judgement.

## Our conclusion

Based on our activities, as described below, nothing has come to our attention to indicate that the product comparison claims listed below are not fairly presented, in all material respects, with the reporting criteria.

**“Our fiber-delivered broadband services are at least 100 times more efficient on a kilowatt hour (kWh) per gigabyte basis than copper-delivered broadband services.”<sup>2</sup>**

<sup>2</sup> Energy consumption and capacity are based on vendor equipment specifications, reflect 50% traffic load utilization to make a comparison across technologies, and are based on a kWh per gigabyte intensity. This analysis only considers copper-based networks, such as analog DSL, and fiber-based networks, such as Verizon Fios, where Verizon has operational control (i.e. pays utility bills, excluding content delivery networks and consumer premise equipment). Network equipment and associated configuration included in the analysis is based on the averages for the most commonly used equipment for copper-based and fiber-based networks. The analysis does not include ingress traffic, cooling or electrical/data transmission line losses.”

## Our assurance activities

We planned and performed our work to obtain all the claims and explanations that we believe are necessary to provide a basis for our assurance conclusion. A team of sustainability and assurance specialists performed the following key activities:

- Conducted interviews with relevant staff to understand and evaluate the methodology, assumptions, calculation workbooks, and processes used for collecting and reporting the selected product comparison claims;
- Identified and tested data points, assumptions, and conversion factors used to substantiate the product comparison claims;
- Performed testing on the control procedures in place to assess if the controls used for claims in scope were operating effectively; and
- Reviewed the presentation of the product comparison claims relevant to the scope of our work in the TCFD Report to evaluate consistency with our findings.

## The limitations of our engagement

The reliability of the assured data is subject to inherent uncertainties, given the available methods for determining, calculating or estimating the underlying claims. It is important to understand our assurance conclusions in this context.



Gareth Manning  
Partner  
September 20, 2021

ERM Certification and Verification Services, Inc.  
[www.ermcvs.com](http://www.ermcvs.com) | [post@ermcvs.com](mailto:post@ermcvs.com)

**ERM CVS**  
Informed Assured

ERM CVS is a member of the ERM Group. The work that ERM CVS conducts for clients is solely related to independent assurance activities and auditor training. Our processes are designed and implemented to ensure that the work we undertake with clients is free from bias and conflict of interest. ERM CVS and the ERM staff that have undertaken this engagement work have provided no consultancy related services to the client in any respect.