

August 2021

Green Bond Impact Report

verizon^v



Our sustainability strategy

Verizon seeks to be known as a responsible, purpose-driven, trusted brand on the cutting edge of innovation to benefit our four key stakeholders: customers, shareholders, employees and society.

We believe that we have a responsibility to leverage our technology, operations and employees to help move the world forward into a more connected, secure and sustainable future. Key to this is our commitment to protect our planet for future generations. Verizon has set ambitious goals around climate protection, including achieving net zero emissions in our operations by 2035.

As a first step on our net zero journey, we have committed to source or generate renewable energy equivalent to 50% of our annual electricity consumption by 2025. Because most of Verizon's emissions come from the electricity that we use to power our networks, our support of renewable energy and the transition to a greener grid is a key enabler to achieving this goal.

Our network operations are located across the country and require a constant supply of electricity to operate. It is not feasible to power our network operations directly from solar or wind generation facilities during every hour of every day, so we are dependent on sourcing power from our local electrical grids. Today, much of that power is “brown” power, produced from conventional fossil fuels such as coal and oil. To achieve our renewable energy goal, we are focusing our resources on accelerating the transition to greener electrical grids across the U.S.

We are working to bring additional renewable energy to the grids by entering into long-term power purchase agreements for solar and wind power under development. The agreements, called virtual power purchase agreements, or VPPAs, are financially settled and can reduce Verizon's long-term exposure to energy price volatility.

By providing the developers of renewable energy facilities with long-term revenue certainty, these agreements enable them to obtain the capital they need to construct the new solar and wind energy facilities. We generally do not expect to take physical delivery of the power from a facility under these agreements. Rather the facility operator sells the power into the wholesale market and we receive the renewable energy credits (RECs) associated with the power sold. We intend to retire these RECs against our actual energy consumption to track our progress in meeting our renewable energy goal.

In less than two years, Verizon has become one of the leading corporate buyers of renewable energy in the U.S., entering into fourteen VPPAs totaling nearly 1.9 gigawatts (GW) of renewable energy capacity. The projects covered by these agreements are scheduled to commence commercial operations over the next three years. With these agreements, we are making significant progress toward our renewable energy goal.

Our green bond program

Our green bonds are key to financing our efforts to meet our net zero and renewable energy goals. Since 2019, Verizon has issued two green bonds totaling \$2 billion, the net proceeds of which have been allocated primarily to finance, in whole or in part, VPPAs for new renewable energy projects.

2019

February: Verizon becomes the first U.S. Telecom to issue a green bond raising nearly \$1 billion in net proceeds

2020

February: Verizon releases first green bond allocation report

July: Verizon fully allocates net proceeds of the first green bond

September:

- Verizon issues second green bond, raising nearly \$1 billion in net proceeds
- Verizon selects diversity, equity and inclusion (DEI) firms as lead underwriters for its second green bond
- Verizon issues Green Financing Framework aligned with the 2018 ICMA Green Bond Principles

December: Verizon finalizes VPPAs for nearly 1.7 GW of renewable energy capacity

2021

July: Verizon fully allocates the second green bond entirely to VPPAs for new renewable energy projects

100% of our second green bond allocated to renewable energy

As of July 2021, Verizon has fully allocated the \$994 million of net proceeds of our second green bond entirely to VPPAs for renewable energy projects. The VPPAs were executed between July 2020 and July 2021, are expected to be financially settled and support renewable energy projects under development in 7 states- Illinois, Indiana, Iowa, Maryland, North Carolina, Ohio and Pennsylvania. These VPPAs are for approximately 1 GW of new renewable energy generating capacity, of which about 83% is solar energy generating capacity and about 17% is wind energy generating capacity. Approximately 58% of the capacity is in the PJM regional market and about 42% of the capacity is in the MISO regional market. We have significant energy usage in these markets.

These renewable energy projects further our strategy to minimize our environmental impact by adding renewable energy generation capacity to the grids that power our networks and avoiding greenhouse gas emissions associated with fossil fuel energy generation.

VPPA project details

Location	Contracted capacity (MW)	Type	Regional market	Term (years)	Scheduled commercial operation
Illinois	250	Solar	MISO	15	2023
Indiana	152.5	Solar	PJM	15	2022
Iowa	180	Wind	MISO	15	2022
Maryland	50	Solar	PJM	15	2022
North Carolina	100	Solar	PJM	15	2023
Ohio	225	Solar	PJM	15	2023
Pennsylvania	75	Solar	PJM	15	2023

Second green bond impact reporting

We are reporting the anticipated annual amount of avoided emissions for the renewable energy projects to which all of the net proceeds of the second green bond were allocated. The amount reported is estimated based on currently available data.

Category	Metric	Calculation	Anticipated annual impact
Renewable energy	Anticipated greenhouse gas (GHG) emissions avoided per year	Estimated annual renewable energy ¹ multiplied by GHG emissions factor ²	1,562,810 MT CO ₂ e avoided annually ³

¹ The estimated annual amount of renewable energy generated by the projects covered by the VPPAs was determined based on the full amount of our contracted capacity with respect to those projects.

² Emissions calculated using the EPA eGRID United States Electricity Grid 2019 average (U.S. annual CO₂ equivalent total output emission rate (lb/MWh)). See <https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references/>.

³ Because the green bond proceeds allocated to the VPPAs for the North Carolina and Iowa projects cover only a portion of the estimated total cost of the VPPAs, we have included only an equivalent proportion of the estimated total annual amount of avoided emissions for each project.

Anticipated annual GHG emissions avoided equivalents¹



**339,880 passenger vehicles driven
in one year**



**283,873 homes' electricity use for
one year**

¹Based on EPA GHG Calculator (<https://www.epa.gov/energy>).

Report of independent accountants



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working world**

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To the Management of Verizon Communications Inc.

We have examined management's assertion, included in Exhibit A, that the net proceeds from the issuance of 1.500% notes due 2030 (the "Allocated Amount") were fully allocated, during the period from September 18, 2020 through July 1, 2021 (the "Reporting Period"), to qualifying Eligible Green Investments (as defined in the "Use of Proceeds" section of the Prospectus Supplement, dated September 16, 2020, to the Prospectus dated September 4, 2019, filed by Verizon Communications Inc. ("Verizon") on September 17, 2020 with the Securities and Exchange Commission pursuant to Securities Act Rule 424(b)(2)), consisting of amounts committed through the execution of virtual power purchase agreements that meet the Eligible Green Investments criteria set forth in Table 1 of Exhibit A (the "Criteria"). Management of Verizon is responsible for the assertion, selection of the Criteria

and the allocation, during the Reporting Period, of amounts to projects that meet the Criteria. Our responsibility is to express an opinion on the assertion based on our examination.

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether management's assertion is fairly stated, in all material respects. An examination involves performing procedures to obtain evidence about management's assertion. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of management's assertion, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Our examination was not conducted for the purpose of evaluating (i) the completeness of the amount allocated to Eligible Green Investments during the Reporting Period, (ii) that any payments made pursuant to virtual power purchase agreements to which amounts were allocated during the Reporting Period were in accordance with such agreements, (iii) the environmental benefits of the Eligible Green Investments, (iv) conformance of any Eligible Green Investments with any third-party published principles, standards or frameworks, such as the Green Bond Principles, dated June 2018, published by the International Capital Market Association, or (v) any information included in Verizon's Green Bond Report, other than management's assertion. Accordingly, we do not express an opinion or any other form of assurance other than on management's assertion included in Exhibit A.

In our opinion, management's assertion, included in Exhibit A, that the net proceeds from the issuance of 1.500% notes due 2030 were fully allocated during the Reporting Period to qualifying Eligible Green Investments that met the Criteria, consisting of amounts committed through the execution of virtual power purchase agreements, is fairly stated, in all material respects.

Ernst + Young LLP

August 6, 2021



**Verizon Communications Inc.
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**Exhibit A
Verizon Communications Inc.
Management's Assertion**

We assert that the net proceeds (the "Allocated Amount") from the issuance of our 1.500% notes due 2030 were fully allocated, during the period from September 18, 2020 through July 1, 2021 (the "Reporting Period"), to qualifying Eligible Green Investments (as defined in the "use of Proceeds" section of the Prospectus Supplement, dated September 16, 2020, to the Prospectus dated September 4, 2019, filed by Verizon Communications Inc. ("Verizon") with Securities and Exchange Commission pursuant to Securities Act Rule 424(b)(2) on September 17, 2020), consisting of amounts committed through the execution of

virtual power purchase agreements, that meet the Eligible Green Investments criteria set forth in the table below (the "Criteria"). Management of Verizon is responsible for this assertion, selection of the Criteria and the allocation, during the Reporting Period, of amounts to projects that meet the Criteria.

Table 1: Eligible Green Investments

Renewable energy

a) the development, construction or operation of facilities, equipment or systems that generate or transmit renewable energy, such as:

i. solar energy; and

ii. wind energy

b) the purchase of renewable energy pursuant to long-term power purchase agreements or virtual power purchase agreements entered into prior to the commencement, or in the case of rehabilitated projects, the re-commencement, of commercial operation of the renewable project, that meet our "additionality" objective of bringing new renewable energy sources to the grids that power our networks such as:

i. solar energy; and

ii. wind energy

Note 1: The Allocated Amount may include amounts allocated during the Reporting Period to new investments made by us during the Reporting Period, as well as to existing investments made by us prior to September 18, 2020, the date of issuance of our 1.500% notes due 2030, but after July 1, 2020.

Note 2: The amounts allocated to projects have not yet been disbursed and represent future outlays.

Note 3: Proceeds are considered allocated when power purchase agreements or virtual power purchase agreements are executed. The allocated amount is calculated as the net present value of estimated cash flows based on megawatt capacity, estimated ratio of actual electricity generated to potential output, estimated hours online each year and fixed power price over the contract term.



Appendix

Green bond program cumulative summary

Verizon issued its first green bond in February 2019, followed by a second green bond in September 2020. As of July 2021, Verizon has fully allocated the nearly \$2 billion in net proceeds from the green bonds primarily to finance, in whole or in part, VPPAs for new renewable energy projects.

Cumulative allocations:

	Renewable energy	Green buildings	Energy efficiency	Biodiversity & conservation	Total net proceeds
2020 green bond	\$994.1 million	—	—	—	\$994.1 million
2019 green bond	\$636.9 million	\$319.3 million	\$36.7 million	\$0.8 million	\$993.7 million
Total	\$1,631 million	\$319.3 million	\$36.7 million	\$0.8 million	\$1,987.8 million

Cumulative anticipated environmental impact¹:

Category	Metric	Calculation	Anticipated annual impact
Renewable energy	Anticipated greenhouse gas (GHG) emissions avoided per year	Estimated annual renewable energy ² multiplied by GHG emissions factor ³	2,475,899 MT CO ₂ e avoided annually ⁴
Green buildings	Square footage contracted for LEED Gold or higher certification	Total building square footage	446,000 sq. ft. contracted for LEED Platinum certification

¹ This table highlights the cumulative environmental impacts of the key categories of eligible green investments to which we have allocated green bond proceeds.

² The estimated annual amount of renewable energy generated by the projects covered by the VPPAs was determined based on the full amount of our contracted capacity with respect to those projects.

³ Emissions calculated using the EPA eGRID United States Electricity Grid average for 2018 for the 2019 Green Bond and 2019 for the 2020 Green Bond (U.S. annual CO₂ equivalent total output emission rate (lb/MWh)). See <https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references>

⁴ Because the green bond proceeds allocated to the VPPAs for the North Carolina and Iowa projects cover only a portion of the estimated total cost of the VPPAs, we have included only an equivalent proportion of the estimated total annual amount of avoided emissions for the projects.

Featured project: Blooming Grove Wind Energy Center

In December 2020, the Blooming Grove Wind Energy Center commenced commercial operations. Verizon entered into a VPPA with Invenergy, the developer, for 52% of the output of the project. This project is located in McLean County, Illinois and was allocated to Verizon's first green bond. According to Invenergy, Blooming Grove generates enough electricity to power about 69,000 homes each year, supported about 500 jobs during the 12-month construction period and will invest nearly \$120M in the local community through property taxes, landowner payments, and wages and benefits.

[Read more](#)



Additional links

Verizon Green Bond Reports: <https://www.verizon.com/about/investors/green-bond-reports>

ESG Report: <https://www.verizon.com/about/sites/default/files/esg-report/2020/index.html>

Citizen Verizon: <https://www.verizon.com/about/responsibility>



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