

# Green Bond Impact Report February 2022





# Our sustainability strategy



# Our sustainability strategy

Verizon is 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 operational emissions 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 nation's 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 goals, 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.

**Verizon has set ambitious goals around climate protection, including achieving net-zero operational emissions by 2035.**

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 goals.

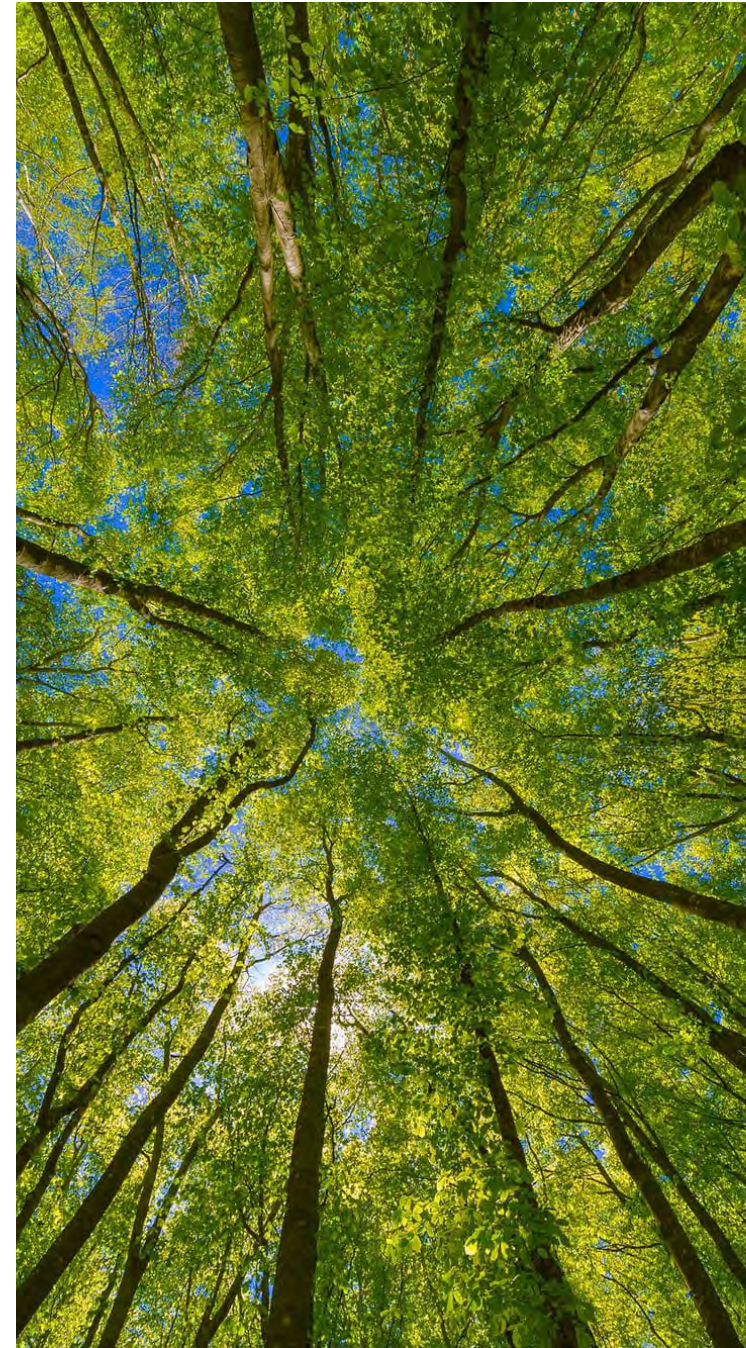


Verizon is one of the leading corporate buyers of renewable energy in the U.S. Since December 2019, we have entered into 20 VPPAs for a total of nearly 2.6 gigawatts (GW) of anticipated renewable energy capacity. As of December 31, 2021, projects with 0.3 GW of renewable energy capacity have commenced commercial operation, and the remaining projects are expected to commence commercial operation over the next three years.

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We believe that the VPPAs we've signed position us to achieve our renewable energy goal. Our VPPAs and the associated projects are expected to:

- enable the avoidance of over 4.8 million metric tons of greenhouse gas emissions annually, equivalent to 1 million passenger vehicles driven annually (based on latest EPA eGRID United States Electricity Grid average); and
- help 8 renewable energy developers build new wind and solar energy facilities in 11 states, bringing new jobs to the local communities and supporting the growth of the clean energy industry in the U.S.





**Social impact:  
diversity, equity & inclusion**

# Social impact: diversity, equity & inclusion

2020 began the Decade of Action to achieve the United Nations Sustainable Development Goals (SDGs). We believe that businesses can play a critical role in supporting the achievement of the SDGs by leveraging corporate investments and finance activities as catalysts for sustainable growth and social impact.

In 2020, we adopted a Green Financing Framework, which articulates how our sustainable finance strategy aligns with the UN SDGs and supports our progress on our environmental commitments.

In 2021, we deepened our commitment to foster diversity, inclusion and equal economic opportunity in the capital markets by amending our Green Financing Framework to include a pledge for our green bond transactions to only engage underwriters that have established clear and impactful commitments in support of the SDGs, and/or are a diverse-owned firm or have a core mission of promoting diversity, equity and inclusion (DEI). Our actions to promote the growth of DEI firms, including

Black-, Hispanic-, women- and veteran-owned firms, include a commitment to allocate at least 10% of eligible unsecured debt capital markets fees to these firms annually and to elevate their roles and responsibilities on our transactions.

Working with DEI firms has long been embedded in Verizon's approach to selecting underwriters on debt capital market transactions. We engaged DEI firms to lead the last two green bond issuances, sharing equally in responsibilities and economics with leading global investment banks. In 2021, Verizon paid approximately \$20 million in underwriting fees to minority- and women-owned firms, including \$4.5 million in connection with the third green bond offering.

As we continue to demonstrate our leadership in promoting diversity, equity and inclusion in the debt capital markets, we strive to improve the share of fees paid to DEI firms and to elevate their roles and responsibilities on our transactions, providing more

meaningful economics and distribution opportunities for these firms. This enables them to support more and larger capital markets transactions, hire and promote people from underrepresented groups, expand the pool of qualified candidates from such groups through programs such as internships, and invest in their communities, including through partnerships with non-profit organizations.

**As we continue to demonstrate our leadership in promoting diversity, equity and inclusion in the debt capital markets, we strive to improve the share of fees paid to DEI firms and to elevate their roles and responsibilities on our transactions, providing more meaningful economics and distribution opportunities for these firms.**





# Our green bond program



# Our green bond program

Verizon is one of the largest corporate green bond issuers in the U.S. Our green bond program is instrumental to our efforts to meet our net-zero and renewable energy goals. Since 2019, Verizon has issued three green bonds totaling approximately \$3 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 its first green bond allocation report.

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

**September:** Verizon publishes its Green Financing Framework.

Verizon issues its second green bond, raising nearly \$1 billion in net proceeds.

## 2021

**January:** Verizon announces that its portfolio of VPPAs covers approximately 1.7 GW of renewable energy capacity.

**July:** Verizon fully allocates the net proceeds of the second green bond entirely to VPPAs for new renewable energy projects.

**August:** Verizon amends Green Financing Framework to align with the 2021 ICMA Green Bond Principles and include diversity-focused underwriter selection criteria.

**September:** Verizon issues its third green bond, raising nearly \$1 billion in net proceeds.

## 2022

**January:** Verizon announces that its portfolio of VPPAs covers approximately 2.6 GW of renewable energy capacity.

**February:** Verizon fully allocates the net proceeds of the third green bond entirely to VPPAs for new renewable energy projects.

**You can find more information about the cumulative allocations and impacts of our green bond program in the [Appendix](#).**





**100% of our third  
green bond allocated  
to renewable energy**

# 100% of our third green bond allocated to renewable energy

As of February 2022, Verizon has allocated over \$991 million of net proceeds of our third green bond entirely to VPPAs for renewable energy projects. The VPPAs, which were executed between June 2021 and December 2021, are expected to be financially settled and support renewable energy projects under development in 7 states – Arizona, Illinois, Indiana, Iowa, Ohio, Pennsylvania and Texas.

These VPPAs are for approximately 0.9 GW of new renewable energy generating capacity, of which about 51% is wind energy generating capacity and about 49% is solar energy generating capacity. Over 17% of the capacity is in the CAISO regional market, about 22% is in the ERCOT regional market, about 41% is in the PJM regional market, and 20% 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.

**Renewable energy projects are under development in 7 states - Arizona, Illinois, Indiana, Iowa, Ohio, Pennsylvania and Texas.**



# VPPA project details

Location	Contracted capacity (MW)	Type	Regional market	Term (years)	Scheduled commercial operation
Arizona	160	Solar	CAISO	15	2024
Illinois	80	Wind	PJM	15	2023
Indiana	200	Wind	PJM	15	2023
Iowa	180	Wind	MISO	15	2022
Ohio	50	Solar	PJM	15	2023
Pennsylvania	40	Solar	PJM	15	2023
Texas	200	Solar	ERCOT	15	2023



# Community impact: Ledyard Windpower



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In 2021, Verizon signed a VPPA with Duke Energy Sustainable Solutions for the wind energy generated by the Ledyard Windpower project in Kossuth County, Iowa. The VPPA has a 15-year term and covers 180 megawatts (MW) of anticipated renewable energy capacity. Along with indirect economic benefits that accompany wind project development, such as increased local spending in the service and construction industries, the facility, which is slated to be completed by the end of 2022, will create approximately 200 jobs during peak construction.

Additionally, the facility, which sits on 12,000 acres of agricultural land that will remain available for farming, is anticipated to have a positive economic impact on the local community by providing significant local tax revenues during assessment years of commercial operation to the county and local school districts, as well as meaningful payments to participating landowners.



Source: <https://sustainablesolutions.duke-energy.com/resources/verizon-ledyard-windpower-iowa/>





# **Third green bond impact reporting**

# Third 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 third green bond were allocated. The amount reported is estimated based on currently available data.

Category	Renewable energy
<b>Metric</b>	Anticipated greenhouse gas (GHG) emissions avoided per year
<b>Calculation</b>	Estimated annual renewable energy <sup>1</sup> multiplied by GHG emissions factor <sup>2</sup>
<b>Anticipated annual impact</b>	1,534,216 MT CO <sub>2</sub> e avoided annually <sup>3</sup>

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<sup>1</sup> 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.

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

<sup>3</sup> Because the green bond proceeds allocated to the VPPAs for the Arizona 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 equivalents



**333,661**

passenger vehicles driven in one year



**278,679**

homes' electricity use for one year

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



An aerial photograph of a dense forest. The trees are mostly dark green, but there are several clusters of trees with yellow and orange foliage, suggesting autumn. The perspective is from directly above, looking down on the canopy.

# Report of Independent Accountants



# Report of Independent Accountants



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To the Management of Verizon Communications Inc.:

We have examined management's assertion, included in Exhibit A, that an amount equal to the net proceeds from the issuance of 2.850% notes due 2041 (the "Allocated Amount") issued by Verizon Communications Inc. ("Verizon") was fully allocated, during the period from September 3, 2021 to December 31, 2021 (the "Reporting Period"), to qualifying Eligible Green Investments (as defined in the "Use of Proceeds" section of the Prospectus Supplement, dated September 1, 2021, to the Prospectus dated September 4, 2019, filed by Verizon with the Securities and Exchange Commission pursuant to Securities Act Rule 424(b)(2) on September 2, 2021), 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, having a reasonable

basis for its 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.

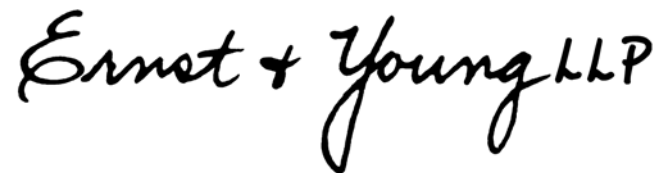
Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether management's assertion is fairly stated, in all material 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) whether funds in excess of the net proceeds were allocated to Eligible Green Investments during the Reporting Period, (ii) that any payments made pursuant to any 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 2021, published by the International Capital Market Association or (v) any information included in Verizon's Green Bond Impact Report relating to the 2.850% notes due 2041 or on Verizon's website, 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. The determination of the amount to be allocated to the

virtual power purchase agreements involves estimates. Actual results could differ from those estimates and those differences may be material.

In our opinion, management's assertion, included in Exhibit A, that an amount equal to the net proceeds from the issuance of the 2.850% notes due 2041 was 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.

The logo for Ernst & Young LLP is written in a black, cursive script. The letters are fluid and connected, with a prominent 'E' and 'Y'.

February 14, 2022



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

We assert that an amount equal to the net proceeds from the issuance of our 2.850% notes due 2041 (the "Allocated Amount") was fully allocated, during the period from September 3, 2021 to December 31, 2021 (the "Reporting Period"), to qualifying Eligible Green Investments (as defined in the "Use of Proceeds" section of the Prospectus Supplement, dated September 1, 2021, to the Prospectus dated September 4, 2019, filed by Verizon Communications Inc. ("Verizon") with the Securities and Exchange Commission pursuant to Securities Act Rule 424(b)(2) on September 2, 2021), 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, having a reasonable basis for its 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

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**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 3, 2021, the date of issuance of our 2.850% notes due 2041, but after December 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.

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# **Appendix: Green bond program cumulative summary**

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Verizon has fully allocated the nearly \$3 billion of net proceeds from the green bonds issued under its green bond program as set forth below.

## Cumulative allocations

	Renewable energy	Green buildings	Energy efficiency	Biodiversity & conservation	Total net proceeds
<b>2021 green bond</b>	\$991.1 million	—	—	—	\$991.1 million
<b>2020 green bond</b>	\$994.1 million	—	—	—	\$994.1 million
<b>2019 green bond</b>	\$636.9 million	\$319.3 million	\$36.7 million	\$0.8 million	\$993.7 million
<b>Total</b>	\$2,622.1 million	\$319.3 million	\$36.7 million	\$0.8 million	\$2,978.9 million

# Cumulative anticipated environmental impact

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

Category	Renewable energy	Green buildings
<b>Metric</b>	Anticipated greenhouse gas (GHG) emissions avoided per year	Square footage contracted for LEED Gold or higher certification
<b>Calculation</b>	Estimated annual renewable energy <sup>1</sup> multiplied by GHG emissions factor <sup>2</sup>	Total building square footage
<b>Anticipated annual impact</b>	Over 4.0 million MT CO <sub>2</sub> e avoided annually <sup>3</sup>	446,000 sq. ft. contracted for LEED Platinum certification

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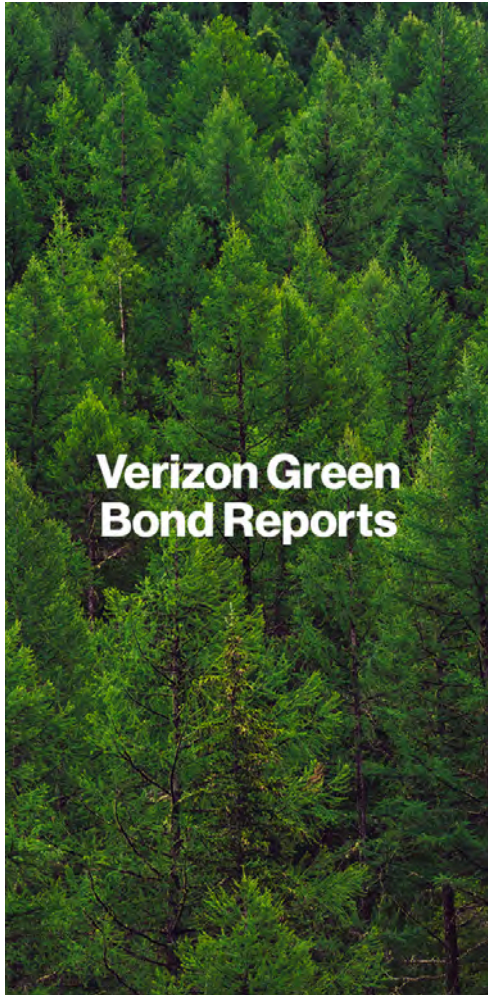
<sup>1</sup> The estimated annual amount of renewable energy generated by the projects covered by the VPPAs to which green bond proceeds have been allocated was determined based on the full amount of our contracted capacity with respect to those projects.

<sup>2</sup> Emissions calculated using the EPA eGRID United States Electricity Grid average for 2018 for the 2019 green bond and 2019 for the 2020 and 2021 green bonds (U.S. annual CO<sub>2</sub> equivalent total output emission rate (lb/MWh)). See <https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references>

<sup>3</sup> Includes the impact of the allocation of green bond proceeds to 18 VPPAs in full and to one additional VPPA in part.



# Additional links







# Green Bond Impact Report

