

JPMORGAN CHASE & CO.

# Green Bond Annual Report

2021



# Table of Contents

<b>Introduction</b>	<b>3</b>
<b>Green Bond Program</b>	<b>4</b>
Sustainable Bond Framework	4
External Review	5
<b>Inaugural Green Bond Issuance</b>	<b>6</b>
Issuance Details	6
Use of Proceeds and Impact Metrics	7
Geographic Breakdown of Selected Green Projects	8
Green Project Highlights	8
<b>Management Assertion</b>	<b>9</b>
<b>Third Party Attestation</b>	<b>10</b>

# Introduction

As a global financial institution working with clients in nearly every sector of the economy, JPMorgan Chase & Co. (together with its subsidiaries, “JPMorgan Chase” or “we”) has an important role to play in tackling sustainability challenges, including climate change. Our global reach and expertise position us well to help accelerate solutions that support the transition to a low-carbon and more inclusive economy. We are doing this by helping our clients raise the capital they need to build sustainable infrastructure, develop and scale new technologies, and implement business strategies for transition.

One component of our firmwide sustainability strategy is supporting the issuance of sustainable bonds, which include:

- Green bonds, for which issuance proceeds are allocated to projects that contribute to environmental sustainability;
- Social bonds, for which issuance proceeds are allocated to projects that contribute to positive social impact; and
- Sustainability bonds, for which issuance proceeds are allocated to a combination of projects that contribute to environmental sustainability and/or positive social impact.

Sustainable bonds have an important role to play in addressing today's social and environmental challenges, and JPMorgan Chase plays an influential role in the sustainable bond market. Representatives of JPMorgan Chase were among the co-authors of the original Green Bond Principles introduced in 2014, and, as of the date of this report, a JPMorgan Chase employee continues to serve on the Executive Committee that oversees the Green Bond Principles, the Social Bond Principles and the Sustainability Bond Guidelines, as administered by the International Capital Markets Association (“ICMA”). In addition, in 2020 JPMorgan Chase was the largest underwriter of green bonds, and the firm's broker-dealer subsidiaries underwrote \$23.7 billion in green, social and sustainability bonds.

We issued our own \$1 billion inaugural green bonds in 2020 and have allocated an amount equal to the net proceeds of that offering to fund Eligible Green Projects, as described below. This report provides an overview of our Sustainable Bond Framework and summarizes the use of proceeds and impact metrics of our inaugural green bond issuance.

## Our Sustainability Approach

Sustainable bonds are among a suite of products, commitments and initiatives that comprise our overall approach to sustainability. We strive to pursue sustainability objectives both in how we do business and in how we put our business to work for our stakeholders. For example, we promote sustainable development in the following ways:

- **Sustainable Development Target:** We aim to finance and facilitate more than \$2.5 trillion over the next 10 years to advance long-term solutions that address climate change and contribute to sustainable development, including \$1 trillion for green initiatives. Our [Approach](#) document outlines our areas of focus and eligibility criteria for our target.
- **Paris-Aligned Financing Commitment:** We've committed to align key sectors of our financing portfolio with the goals of the Paris Agreement. We've set our initial 2030 targets and developed [Carbon Compass<sup>SM</sup>](#), which is our methodology for measuring the greenhouse gas (“GHG”) emissions of our clients in key sectors and setting Paris-aligned targets to reduce the carbon intensity of our sector portfolios over time.
- **Operational Sustainability:** In 2020, we achieved carbon neutrality across our operations and met our goal to source renewable energy for 100% of our global power needs annually. In addition, we've developed a number of targets to drive continued progress on our operational sustainability objectives.

To learn more, please visit our sustainability [website](#) and read our [2020 ESG Report](#).





# Green Bond Program

## Sustainable Bond Framework

JPMorgan Chase's [Sustainable Bond Framework](#) (July 2020) (the "Framework") governs our issuances of green, social and sustainability bonds. We intend for our Framework and any issuance by us of green, social or sustainability bonds to be aligned with the Green Bond Principles (June 2018), the Social Bond Principles (June 2020) or the Sustainability Bond Guidelines (June 2018), as applicable. Each of these principles and guidelines (collectively, the "Principles") are voluntary guidelines that were developed by an industry working group administered by ICMA and are intended to promote integrity in the sustainable bond market through recommendations relating to transparency, disclosure and reporting. The Principles encourage issuers to structure and administer their issuances of green, social and sustainability bonds in alignment with the Green Bond Principles, the Social Bond Principles and the Sustainability Bond Guidelines, respectively.

Below is a summary of the components of our Framework related to our "Green Bonds," which are issuances of debt securities of JPMorgan Chase for which we undertake to allocate an amount equal to the net proceeds of the issuance to Eligible Green Projects.



SUSTAINABLE BOND FRAMEWORK – GREEN BOND COMPONENTS	
<b>Use of Proceeds</b>	<p>JPMorgan Chase will allocate an amount equal to the net proceeds of any Green Bond issuance to "Eligible Green Projects." This may include either the financing or refinancing of projects that meet the following eligibility criteria or lending to clients that require financing for projects if the activity meets the following eligibility criteria:</p> <p> <b>Green buildings:</b> Including the development, construction, installation, operation, acquisition, maintenance, upgrades and associated costs of new or existing commercial or residential buildings, including buildings that meet regional, national or internationally-recognized standards or certifications (e.g., LEED Gold or Platinum); and</p> <p> <b>Renewable energy:</b> Including the development, transmission, construction, installation, operation, acquisition, maintenance, upgrades and associated costs relating to the following:</p> <ul style="list-style-type: none"> <li>Onshore wind energy;</li> <li>Solar energy;</li> <li>Small scale hydropower generation (e.g., plants with a capacity of fewer than 20 megawatts or dams with a height less than ten meters); and</li> <li>Geothermal energy (e.g., facilities with direct emissions of less than 100 grams of carbon dioxide per kilowatt-hour).</li> </ul>
<b>Process for Project Evaluation and Selection</b>	<p>Eligible Green Projects to which we allocate proceeds of any issuance of Green Bonds may include transactions that we financed, in which we invested or for which we disbursed funds up to 24 months prior to issuance. We refer to this as the "lookback period." Projects will be evaluated and selected by groups within JPMorgan Chase that are responsible for our sustainability initiatives as well as risk management of environmental and social concerns, including our Sustainability and Global Environmental and Social Risk Management teams. The projects will be evaluated and selected in accordance with the eligibility criteria summarized above and final selection will be documented with a framework for attestation, controls and governance managed by JPMorgan Chase's Risk Controller organization.</p>
<b>Management of Proceeds</b>	<p>An amount equal to the net proceeds of any issuance of Green Bonds will be allocated to applicable Eligible Green Projects, or pending allocation, invested temporarily in cash, cash equivalents and/or other high quality liquid assets. If a transaction selected as an Eligible Green Project is in default, has terminated, is otherwise no longer outstanding or no longer meets our eligibility criteria, the portion of the proceeds of any issuance of Green Bonds allocated to that transaction will be reallocated to one or more other Eligible Green Projects in accordance with our internal policies and procedures.</p>
<b>Reporting</b>	<p>After any issuance of Green Bonds, JPMorgan Chase will prepare a public report on or about the first anniversary of our issuance that describes our allocation of the net proceeds of that issuance. We intend to publish such a report annually until the aggregate net proceeds of the relevant Green Bond issuance have been fully allocated to fund Eligible Green Projects, and thereafter, we may publish an update of any such report in our discretion. We may also publish information, where feasible, concerning measures of the expected environmental impact of the Eligible Green Projects.</p>

The above description of Eligible Green Projects is for illustrative purposes only and no assurance can be provided that the proceeds of any issuance of Green Bonds by us will be allocated to fund transactions with these specific characteristics.

### ***Exclusionary Criteria***

JPMorgan Chase will not knowingly allocate proceeds from any issuance of Green Bonds to the following:

- Activities related to the exploration, production or transportation of fossil fuels (e.g., coal, oil and gas);
- Consumption of fossil fuels for the purpose of power generation;
- Large hydroelectric power generation (e.g., plants with a capacity greater than 20 megawatts or dams with a height greater than ten meters);
- Nuclear energy;
- Activities involving exploitation of human rights, modern slavery (e.g., forced labor or human trafficking) or child labor; or
- Any other activity that we determine is ineligible for allocation of proceeds at the time of allocation.

---

## External Review

JPMorgan Chase engaged Sustainalytics\* to provide a second party opinion concerning the alignment of our Framework with the Green Bond Principles, the Social Bond Principles and the Sustainability Bond Guidelines. The opinion provided by Sustainalytics is publicly available on their [website](#).

“Sustainalytics is of the opinion that the JPMorgan Chase & Co. Sustainable Bond Framework aligns with the Green Bond Principles (2018), the Social Bond Principles (2020) and the Sustainability Bond Guidelines (2018), as applicable.”

\* Sustainalytics states that it is a provider of environmental, social and governance (ESG) research and analysis, and that it evaluated JPMorgan Chase's Sustainable Bond Framework and the alignment thereof with relevant industry standards and provided views on the robustness and credibility of the Sustainable Bond Framework within the meaning of the Green Bond Principles (2018), the Social Bond Principles (2020) and the Sustainability Bond Guidelines (2018), which views are intended to inform investors in general, and not for a specific investor in particular.

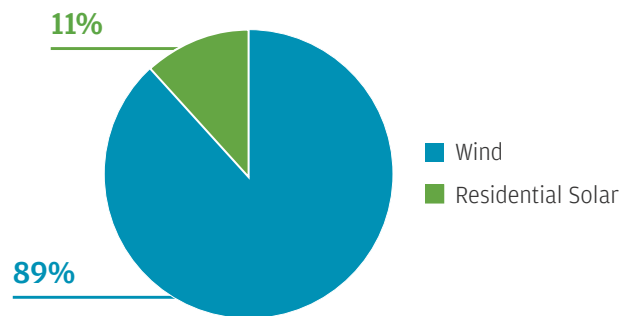
# Inaugural Green Bond Issuance

On September 16, 2020, JPMorgan Chase issued its inaugural green bond of \$1 billion aggregate principal amount of Fixed-to-Floating Rate Notes due 2024. Building on our engagement with diverse suppliers, the co-managers for the bond offering consisted solely of Minority and Women-Owned Business Enterprise and Service-Disabled Veteran-Owned Business firms.

## Issuance Details

KEY ISSUANCE METRICS	
ISSUER	JPMorgan Chase & Co
NOTES	Fixed-to-Floating Rate Notes due 2024
TRANCHE	Senior
PRINCIPAL AMOUNT	\$1,000,000,000
NET PROCEEDS	\$997,500,000
COUPON	Fixed annual rate of 0.653%, payable semiannually in arrears during the fixed rate period (from and including September 16, 2020 to but excluding September 16, 2023); Floating annual rate equal to a benchmark rate (expected to be Three-Month Term SOFR) plus a spread of 0.60% per annum, payable quarterly in arrears during the floating rate period (from and including September 16, 2023 to but excluding maturity of September 16, 2024)
TENOR	4 years
CUSIP	46647PBS4
ISIN	US46647PBS48

Asset Allocation by \$ Investment



### Second Green Bond Issuance

As a continued commitment to our sustainable objectives, on August 10, 2021, we issued a \$1.25 billion green bond. We intend to allocate an amount equal to the net proceeds of that offering to Eligible Green Projects as outlined in our Framework. We expect to report on our allocation of net proceeds, impact metrics and other details for this bond in 2022.

## Use of Proceeds and Impact Metrics

As of August 31, 2021, the net proceeds of JPMorgan Chase & Co.'s September 16, 2020 issuance of Fixed-to-Floating Rate Notes due 2024 (the "Notes") have been entirely allocated to renewable energy projects, in alignment with the criteria for Eligible Green Projects set forth in our Framework. The below table outlines the Eligible Green Projects to which those proceeds were allocated and the expected impact metrics relating to those projects. The impact metrics are presented in accordance with the recommendations set forth in the ICMA's Handbook - Harmonised Framework for Impact Reporting (June 2021). All impact metrics presented in the table below are based on available actual data or estimated data.

Project Type	Funded Amount Allocated to Notes (\$mm) <sup>1</sup>	JPMorgan Chase's Funded Share of Project's Total Valuation <sup>2</sup>	TOTAL IMPACT OF PROJECT			JPMORGAN CHASE'S SHARE OF IMPACT <sup>6</sup>		
			Capacity (MW) <sup>3</sup>	Annual Expected Generation / Output (GWh) <sup>4</sup>	Annual Estimated Tons of CO <sub>2</sub> e Avoided <sup>5</sup>	Capacity (MW)	Annual Expected Generation / Output (GWh)	Annual Estimated Tons of CO <sub>2</sub> e Avoided
Residential Solar	72	28%	56	78	61,011	16	22	17,240
Residential Solar	46	18%	55	67	52,910	10	12	9,422
Wind	270	52%	278	931	665,340	144	483	345,479
Wind	238	39%	477	2,016	1,689,232	188	792	663,868
Wind	180	38%	399	1,560	935,224	150	586	351,364
Wind	120	33%	299	1,187	994,450	98	389	325,996
Wind	95	60%	100	398	344,514	60	238	206,336
<b>Total</b>	<b>\$1,022</b>	<b>NM</b>	<b>1,665</b>	<b>6,236</b>	<b>4,742,680</b>	<b>666</b>	<b>2,523</b>	<b>1,919,705</b>

Note: Numbers may not sum due to rounding.

<sup>1</sup> Represents the funded amounts of Eligible Green Projects to which proceeds from the issuance of the Notes were allocated. Only amounts funded within the lookback period have been included. The total funded amount allocated with respect to the Eligible Green Projects referenced in the table (\$1,022,000,000) reflects amounts actually disbursed by JPMorgan Chase, and such total funded amount exceeds the amount of net proceeds from the issuance of the Notes (\$997,500,000). The management assertion on page 9 of this report is given with respect to the amount of net proceeds from the issuance of the Notes.

<sup>2</sup> Represents JPMorgan Chase's share of the project, based on the funded amounts of the Eligible Green Project allocated as a percentage of the project's overall estimated valuation.

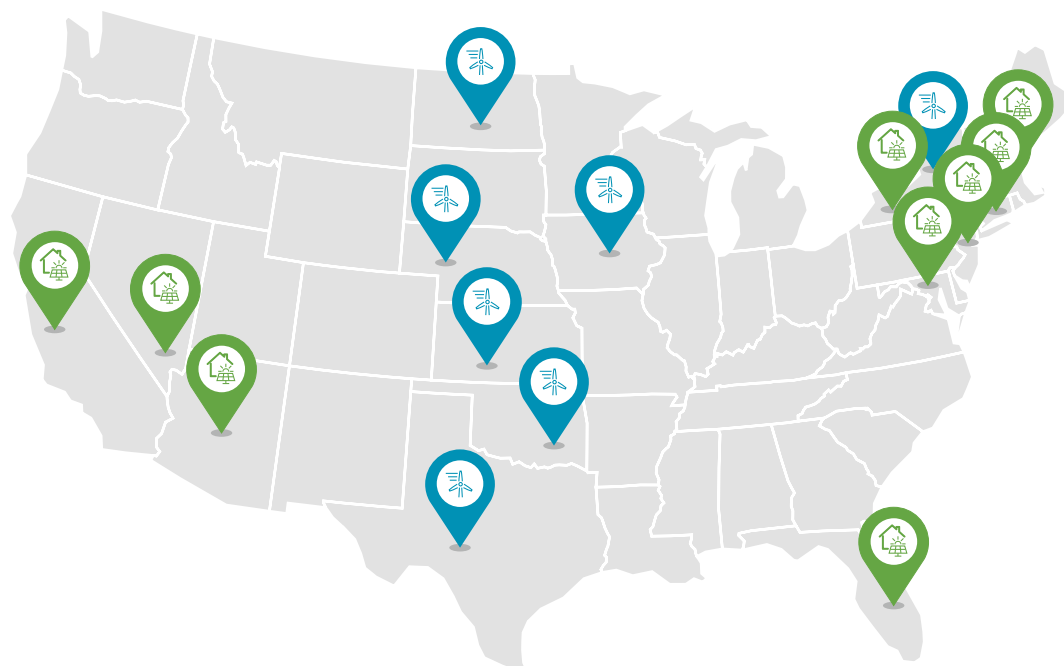
<sup>3</sup> Based on nameplate capacity in megawatts (MW) for each utility-scale wind project and capacity data provided by the program sponsor for residential solar systems.

<sup>4</sup> Annual expected generation in gigawatt hours (GWh) is based on project capacity and project specific capacity factors based on our internal estimates which take into account independent technical consultant assessments.

<sup>5</sup> Annual estimated tons of CO<sub>2</sub>e avoided is based on annual expected generation and U.S. Environmental Protection Agency (EPA) 2020 Avoided Emissions Factors for onshore wind and distributed solar by region; if a project spans multiple regions, a national average was used for the applicable generation type. Measured in short tons.

<sup>6</sup> Calculated based on JPMorgan Chase's funded share of project's total estimated valuation.

## Geographic Breakdown of Selected Green Projects



## Green Project Highlights

### Diamond Vista Wind Farm

JPMorgan Chase, as a co-lead tax equity investor, committed over \$120 million to help finance Enel Green Power's ("Enel") Diamond Vista Wind Farm. Located in Marion and Dickinson Counties, Kansas, the 300 MW Diamond Vista Wind Farm reached commercial operation in November 2018 and includes 95 Acciona turbines. As of August 2021, the project generates enough energy annually to meet the electricity needs of 105,646 households and avoids nearly one million tons of CO<sub>2</sub>e per year.



*Credit: Courtesy of Enel Green Power*

### Vivint Solar Portfolio

Across 2018 and 2019, JPMorgan Chase committed tax equity financing of nearly \$100 million\* in a Vivint Solar, Inc. ("Vivint") portfolio comprised of approximately 10,000 residential photovoltaic ("PV") rooftop solar systems. As of August 2021, these PV systems, installed between July 2018 and June 2020, span across 11 states, have a capacity of 55 MW and avoided approximately 53,000 tons of CO<sub>2</sub>e per year. Vivint was acquired by Sunrun in 2020.



*Credit: Courtesy of Vivint Solar, Inc.*

\* We have allocated from the net proceeds of the Notes approximately \$46 million of our total investment in this project; a portion of our investment was funded prior to the 24-month lookback period under our Sustainable Bond Framework.



# Management Assertion

Management of JPMorgan Chase & Co. (“JPMorgan Chase”) asserts that, as of August 31, 2021, the net proceeds of \$997,500,000 from the September 16, 2020 issuance of JPMorgan Chase’s Fixed-to-Floating Rate Notes due 2024 (the “Notes”) were allocated to refinance Eligible Green Projects. JPMorgan Chase is responsible for the completeness, accuracy and validity of this management assertion.

For purposes of this assertion, Eligible Green Projects relate to projects for which JPMorgan Chase disbursed funds up to 24 months prior to the issuance of the Notes related to the development, construction or installation of onshore wind or solar renewable energy projects. There were five onshore wind and two residential solar projects (as listed in the “Project Type” column on page 7 of this Green Bond Annual Report). The definition of Eligible Green Projects used in connection with the offering of the Notes, and contained in JPMorgan Chase’s Sustainable Bond Framework as summarized on page 4 of this Green Bond Annual Report, specifies additional types of eligible green projects to which the proceeds of a green bond offering by JPMorgan Chase may be allocated.

# Third Party Attestation



## Report of Independent Accountants

To the Management of JPMorgan Chase & Co.

We have examined the management assertion of JPMorgan Chase & Co. (JPMorgan Chase) on page 9 of this Green Bond Annual Report that, as of August 31, 2021, the net proceeds of \$997,500,000 from the September 16, 2020 issuance of JPMorgan Chase's Fixed-to-Floating Rate Notes due 2024 were allocated to refinance Eligible Green Projects as defined in management's assertion. JPMorgan Chase's management is responsible for its assertion. Our responsibility is to express an opinion on management's 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.

Only the information included in the "Project Type" column and funded amounts up to \$997,500,000 in the "Funded amount allocated to Notes" column of the table on page 7 of this Green Bond Annual Report is part of JPMorgan Chase's management assertion and our examination engagement. The other information in this Green Bond Annual Report has not been subjected to the procedures applied in our examination engagement, and accordingly, we make no comment as to its completeness and accuracy and do not express an opinion or provide any assurance on such information.

In our opinion, management's assertion that, as of August 31, 2021, the net proceeds of \$997,500,000 from the September 16, 2020 issuance of the Fixed-to-Floating Rate Notes due 2024 were allocated to refinance Eligible Green Projects as defined in management's assertion is fairly stated, in all material respects.

A handwritten signature in black ink that reads "PricewaterhouseCoopers LLP".

New York, New York  
September 9, 2021

PricewaterhouseCoopers LLP, 300 Madison Avenue, New York, NY 10017  
T: (646) 471 3000, F: (813) 286 6000, [www.pwc.com/us](http://www.pwc.com/us)

This report is not, does not contain and is not intended as an offer to sell or a solicitation of any offer to buy any securities issued by JPMorgan Chase. No representation is made as to the suitability of any issuance of green, social or sustainability bonds to fulfill environmental and sustainability criteria required by prospective investors. Eligible Green Projects may not satisfy an investor's expectations concerning environmental or sustainability benefits, and may result in adverse impacts. The information contained herein is provided as of the date of this report, and JPMorgan Chase does not undertake to update any of such information.