Second-Party Opinion

Plug Power Green Bond Framework

Evaluation Summary

Sustainalytics is of the opinion that the Plug Power Green Bond Framework is credible and impactful and aligns with the intent of the four core components of the Green Bond Principles 2018. This assessment is based on the following:



USE OF PROCEEDS Sustainalytics recognizes that Plug Power will use the proceeds of its green bond(s) for general corporate purposes, and to repurchase a portion of its previously issued and outstanding bonds, the proceeds of which were used for general corporate purposes. Sustainalytics considers that, as a "green pure-play", the entirety of its expenditures is supporting positive environmental impacts. Plug Power's business activity, Hydrogen Fuel Cell Systems, is aligned with those recognized by the Green Bond Principles 2018. Sustainalytics views the development and deployment of hydrogen fuel cells as generating environmental benefits and advancing the UN Sustainable Development Goals, specifically SDG Goals 7 and 9.



PROJECT EVALUATION / SELECTION Plug Power's Finance team is responsible for reviewing the proceeds and recommending capital expenditure and resource planning in line with the objectives of the Framework to the Company's Board of Directors. The two parties will convene annually to review financial reporting, projects, cash position and any significant spend items. The Company's CEO is responsible for approving any expenditures and/or resource investments up to USD 1 million; anything in excess of this amount requires Board approval. This is in line with market practice.



MANAGEMENT OF PROCEEDS Plug Power's Finance team will be responsible for managing the proceeds. The Company intends to allocate majority of the proceeds within the first two calendars years after issuance. Pending allocation, proceeds may be temporarily held in cash investment accounts, in cash or other short-term liquid instruments, or used to pay back a portion of the Company's outstanding indebtedness. This is in line with market practice.



REPORTING Plug Power intends to report on the allocation of proceeds on an annual basis. In addition, Plug Power will report on the quantity of fuel cells deployed, quantity of hydrogen stations deployed and hydrogen fuel consumed by its various fleet, where feasible. The Company has stated its intention to report on key sustainability metrics in the future. Given this commitment, Sustainalytics views the Company's reporting to be aligned with market practice.

Evaluation date	May 9, 2020
Issuer Location	New York, United States

Report Sections

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Introduction

Founded in 1997, Plug Power Inc ("Plug Power", or the "Company") is a designer and manufacturer of hydrogen fuel cell systems. Through its GenKey offering, Plug Power delivers fuel cell technology solutions that streamline the hydrogen and fuel cell adoption process for its users. The Company is headquartered in Latham, New York, United States and has 835 employees as of December 2019.

Plug Power has developed the Plug Power Green Bond Framework (the "Framework") under which it intends to issue green bonds and use the proceeds to repurchase a portion of its existing convertible notes as well as for working capital and other general corporate expenditures. The net proceeds from the previous notes were allocated to working capital, R&D and acquisitions in hydrogen solutions with the intention of accelerating the adoption of hydrogen fuel cells and fuelling stations in order to scale clean fuel to support the advancement of the green economy.

Plug Power engaged Sustainalytics to review the Plug Power Green Bond Framework, dated May 2020, and provide a Second-Party Opinion on the Framework's environmental credentials and its alignment with the Green Bond Principles 2018 (GBP).[1] This Framework will be published in a separate document.[2]

Scope of work and limitations of Sustainalytics Second-Party Opinion

Sustainalytics' Second-Party Opinion reflects Sustainalytics' independent[3] opinion on the alignment of the reviewed Framework with the current market standards and the extent to which the eligible categories are credible and impactful.

As part of the Second-Party Opinion, Sustainalytics assessed the following:

- The Framework's alignment with the ICMA Green Bond Principles 2018;
- The credibility and anticipated positive impacts of the use of proceeds;
- The alignment of the issuer's sustainability strategy and performance and sustainability risk management in relation to the use of proceeds.

For the use of proceeds assessment, Sustainalytics relied on its internal taxonomy, version 1.3, which is informed by market practice and Sustainalytics' expertise as an ESG research provider.

As part of this engagement, Sustainalytics held conversations with various members of Plug Power's management team to understand the sustainability impact of their business processes and planned use of proceeds, as well as management of proceeds and reporting aspects of the Framework. Plug Power representatives have confirmed (1) they understand it is the sole responsibility of Plug Power to ensure that the information provided is complete, accurate or up to date; (2) that they have provided Sustainalytics with all relevant information and (3) that any provided material information has been duly disclosed in a timely manner. Sustainalytics also reviewed relevant public documents and non-public information.

This document contains Sustainalytics' opinion of the Framework and should be read in conjunction with that Framework.

Any update of the present Second-Party Opinion will be conducted according to the agreed engagement conditions between Sustainalytics and Plug Power.

Sustainalytics' Second-Party Opinion, while reflecting on the alignment of the Framework with market standards, is no guarantee of alignment nor warrants any alignment with future versions of relevant market standards. Furthermore, Sustainalytics' Second-Party Opinion addresses the anticipated impacts of eligible projects expected to be financed with bond proceeds but does not measure the actual impact. The measurement and reporting of the impact achieved through projects financed under the Framework is the responsibility of the Framework owner.

In addition, the Second-Party Opinion opines on the intended allocation of proceeds but does not guarantee the realised allocation of the bond proceeds towards eligible activities.

[1] The Green Bond Principles are administered by the International Capital Market Association and are available at https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/.
[2] The Plug Power Green Bond Framework will be available on Plug Power's website at: https://www.ir.plugpower.com/Home/default.aspx
[3] When operating multiple lines of business that serve a variety of client types, objective research is a cornerstone of Sustainalytics and ensuring analyst independence is paramount to producing objective, actionable research. Sustainalytics has therefore put in place a robust conflict management framework that specifically addresses the need for analyst independence, consistency of process, structural separation of commercial and research (and engagement) teams, data protection and systems separation. Last but not the least, analyst compensation is not directly tied to specific commercial outcomes. One of Sustainalytics' hallmarks is integrity, another is transparency.

No information provided by Sustainalytics under the present Second-Party Opinion shall be considered as being a statement, representation, warrant or argument either in favor or against, the truthfulness, reliability or completeness of any facts or statements and related surrounding circumstances that Plug Power has made available to Sustainalytics for the purpose of this Second-Party Opinion.

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the Plug Power Green Bond Framework

Sustainalytics is of the opinion that the Plug Power Green Bond Framework is credible and impactful, and aligns with the four core components of the GBP 2018. Sustainalytics highlights the following elements of Plug Power's Green Bond Framework:

- Use of Proceeds:
  - The use of proceeds, Hydrogen Fuel Cell Systems, is aligned with those recognized by the GBP 2018, specifically the GBP categories of Eco-efficient products and processes, Energy Efficiency, and Renewable Energy.
  - Plug Power intends to use to proceeds of its green bond to finance or refinance general corporate purposes expenditures, and as such the GBP's project-focused approach may not be fully applicable. Sustainalytics recognizes that the GBP prefer project-based lending and financing, and that there is, in general, less transparency with non-project-based or general corporate purpose financing. Nevertheless, Sustainalytics has a positive opinion of the Framework due to the fact that it considers Plug Power to be a "green pure-play", i.e. a company that derives a large majority of its revenues from business activities with positive environmental impacts, further noting the following:
    - Plug Power has expressly stated an intention to use the net proceeds of its green bonds to advance environmentally beneficial solutions, including deploying fuel cells and furthering its green hydrogen strategy.
    - Plug Power's current business involves the purchase and use or re-sale of hydrogen, which includes hydrogen produced from fossil fuel sources. Sustainalytics recognizes the current market conditions for hydrogen, while still considering the promotion of hydrogen use to be net-positive. Refer to Section 3 for further discussion of hydrogen production.
    - Plug Power's current business includes the production of hydrogen, including by steam reformation of natural gas. Sustainalytics does not view this technology, when using fossil natural gas as a feedstock, to be aligned with green bond market norms, and highlights that this makes up a very small share[4] of the Company's revenues. Plug Power's green hydrogen strategy endorses the use of green hydrogen (such as from electrolysis) in future applications and the Company has stated its intention not to expand its production of hydrogen from natural gas. The use of the proceeds of the green bonds to further develop facilities that produce hydrogen from natural gas by steam reformation would, in Sustainalytics' view, be contrary to the objectives of the Framework and the expectations of the green bond market.
  - Sustainalytics recognizes the variety of environmental benefits which may be associated with further adoption of hydrogen fuel cells in a diversity of settings, including for commercial vehicles, non-road equipment, passenger cars, and stationary power, in particular that there are zero direct carbon emissions and that lifecycle emissions compare favorably to other options.
  - By repurchasing a portion of its existing 5.50% convertible notes due 2023, which were directed to a variety of expenditures in the 2018 and 2019 calendar years, Plug Power has established a lookback period of 2-3 years, which Sustainalytics considers to be in line with market practice.
    - Plug Power has disclosed to Sustainalytics that majority of the net proceeds from its previous bond were allocated to operational expenditures such as R&D and selling, general and administrative expenses (SG&A).
  - Sustainalytics views investments in R&D aimed at furthering the development of the Company's green hydrogen capacity positively and encourages the Company to prioritize allocating proceeds to investments in such areas, along with working capital and acquisitions that align with its green strategy, over other operational expenditures. While Sustainalytics acknowledges

[4] Plug Power has disclosed to Sustainalytics the approximate share of the hydrogen it supplies to customers that is produced by SRM facilities operated by the Company.

the challenges inherent in measuring the direct impacts of such R&D related activities, it is recognized that R&D can drive significant positive environmental outcomes. Through its past R&D expenditures, Plug Power has successfully implemented new and advanced technology that has accelerated the adoption of fuel cells and hydrogen fueling stations and that the Company has a concrete sustainability strategy and target in place that are closely tied to its investments in R&D.
  - It is recognized that SG&A expenditures are required in order to support the implementation of green technologies, and considers this category of allocation to be reasonable in the context of Plug Power's designation as a "green pure-play". Nevertheless, Sustainalytics does not take a stance on the appropriate balance of SG&A expenditures, and encourages the Company where possible to prioritize the allocation of green bond proceeds to projects and expenditures with direct linkages to environmentally beneficial activities.
- Project Evaluation and Selection:
  - Plug Power's Finance team is responsible for reviewing the net proceeds and recommending capital expenditure and resource planning in line with the objectives of the Framework to Company's Board of Directors. This includes capital expenditures and resource plans. The Finance team and the Board will convene annually to review financial reporting, projects, cash position and any significant spend items. The Company's CEO is responsible for approving any expenditures and/or resource investments up to USD 1 million; anything in excess of this amount requires Board approval. The Board is also responsible for reviewing and approving any emerging opportunities such as acquisitions or technology investments, on a regular basis.
  - While noting that this process is distinct from the traditional approach in the green bond market, Sustainalytics considers the project selection process to be appropriate for the circumstances, and therefore in line with market expectations.
- Management of Proceeds:
  - Plug Power's Finance team will be responsible for managing the net proceeds. The Company intends to allocate the majority of the proceeds within the first two calendar years after issuance, 2020 and 2021. Pending allocation, proceeds may be temporarily held in cash investment accounts, in cash or other short-term liquid instruments, or used to pay back outstanding indebtedness of the Company.
  - Based on the definition of management approaches and the disclosures around temporary management, Sustainalytics considers this process to be in line with market practice.
- Reporting:
  - Plug Power intends to report on the allocation of proceeds on its website on an annual basis, until full allocation.
    - Allocation reporting will include a breakdown of the total share (%) and associated dollar amount of allocated proceeds vs. unallocated proceeds. In addition, Plug Power will report on the quantity of fuel cells deployed, quantity of hydrogen stations deployed and hydrogen fuel consumed by its various fleet, where feasible.
    - In regards to impact reporting, the Framework states that reporting will include the number of fuel cells and stations deployed, as well as the amount of hydrogen provided, Additionally, the Company has stated its intention to report on broader key sustainability metrics in the future.
  - The report will include management's assertion on the allocation of net proceeds and an examination report on such assertion conducted by an independent accounting firm.
  - Given these commitments, Sustainalytics views the Company's reporting to be aligned with market practice.

Alignment with Green Bond Principles 2018

Sustainalytics has determined that the Plug Power Green Bond Framework aligns to the intent of the four core components of the GBP 2018, based on the commitments within the Framework as well as an assessment of the "green pure-play" nature of the Company's business activities. For detailed information please refer to Appendix 1: Green Bond/Green Bond Programme External Review Form.

Section 2: Sustainability Strategy of Plug Power

Contribution of framework to Plug Power's sustainability strategy

Plug Power's overall sustainability vision is to leverage green hydrogen technology to improve overall supply chain practices across different industries in order to enable sustainability on a larger scale. The Company's efforts towards achieving this are driven by its Green Hydrogen Strategy which comprises of four key strategic pillars: 1) increase green hydrogen to represent 50% of the Company's hydrogen portfolio by 2024, 2) focus on cash generating hydrogen fuel activities, 3) stabilize and reduce fuel price and expand addressable market opportunity and 4) focus on strategic partnerships.

In order to execute on its mission, the Company has established a strategic roadmap, and has provided progress to date on its efforts from 2019-2020 and its plans for 2021-2024. In the first two years, the Company has developed strategic partnerships, invested in R&D focused on small scale on-site generation and has targeted city/regional gas delivery. In the subsequent years, the Company intends to develop solutions that integrate renewables into all generation outputs and develop partnerships focused on reformer and electrolyzer manufacturing capabilities. To date, the Company has over 80 fueling stations in operation and is the largest user of liquid hydrogen in the United States. Plug Power is also actively seeking out opportunities to leverage renewable energy in order to enable long-term generation, and has conducted a scenario-analysis that looks at the specific energy resources available by region in the United States in order to determine the best solution within each region. In addition to advancing its Green Hydrogen Strategy, the Company intends to deploy a number of initiatives, including, but not limited to:

- Automating fueling technology and data collection to improve operator safety and efficiency;
- Improving its cryogenic system efficiency which will in turn lower overall energy requirements;
- Expanding its gas delivery solutions to accelerate fuel cell consumption in lower volume hydrogen consumers;
- Increasing the recycling and re-use of core components in order to keep existing fleets of fuel cells and hydrogen systems operation.

In line with its overall sustainability strategy, Plug Power intends to continue investing in technologies that will help accelerate the adoption of clean hydrogen and low-emission fuel cell solutions. Through increased scale and accessibility to fuel cell products, Plug Power intends to incentivize green hydrogen fuel consumption, which will result in lower peak demands on the electric grid, reductions in GHG emissions and improvements in the supply chains in which it operates.

Sustainalytics is of the opinion that the Plug Power Green Bond Framework is aligned with the Company's ongoing sustainability efforts and will further the Company's action on its key environmental priorities.

Well positioned to address common environmental and social risks associated with the projects

While Sustainalytics is aware that Plug Power's intended investments and use of proceeds will lead to positive environmental outcomes, it does recognize that as a large-scale manufacturer, such expenditures could also lead to negative environmental and social outcomes. Some of the key risks associated with Plug Power's operations include health and safety risks associated with the construction and maintenance of hydrogen generation and distribution infrastructure, risks associated with the materials and manufacturing of equipment, potential emission of harmful substances, as well as effects on local biodiversity.

In order to manage and mitigate such risks, Plug Power has implemented and/or complies with the following procedures.

- The Company must provide stamped engineering drawings prior to obtaining construction permits; such designs must meet National Fire Protection Association codes and the construction is further reviewed by local Fire Marshals.
- Upon installation, the Company's Project Management department, comprised of staff certified in OSHA 10 and OSHA 30 safety and construction, are responsible for supervising the hydrogen infrastructure on an ongoing basis.
- Sustainalytics notes that Plug Power's headquarters and primary market is the United States, which is recognized under the Equator Principle's Designated Countries[5] list for having robust environmental and social governance, as well as strong legislation in place.
- Plug Power has established internal procedures intended to mitigate supply chain risks associated with the procurement of fuel cell components. This includes both a due

[5] Designated Countries are those countries deemed to have robust environmental and social governance, legislation systems and institutional capacity designed to protect their people and the natural environment.

diligence process which qualifies and approves new suppliers as well as the use of contractual agreements to specify criteria with which suppliers must comply.

Overall, Sustainalytics is of the opinion that Plug Power has implemented appropriate measures to manage and mitigate the environmental and social risks most commonly associated with its operations.

Section 3: Impact of Use of Proceeds

Applications of hydrogen fuel cells

Plug Power's business activities are focused on the implementation of hydrogen fuel cell technology across a variety of applications. Hydrogen fuel cells are recognized for their ability to cleanly and efficiently produce energy with no direct emissions other than water and operational efficiencies of up to 60%, much higher than combustion engines.[6] Sustainalytics highlights below several implementations of Plug Power's technology, and discusses the environmental impacts.

Vehicles and mobility
One of the key use cases for hydrogen fuel cells has been in the transportation sector with the onset of fuel cell electric vehicles (FCEVs). By combining hydrogen stored in a tank with oxygen from the air to produce electricity, such technologies emit only water and zero tailpipe emissions.[7] FCEVs are equipped with notable energy efficiency features such as regenerative braking systems, which capture the energy lost during braking and store it in a battery for future consumption.[8] According to the U.S. Department of Energy, while FCEVs and the hydrogen infrastructure needed to fuel them are still in the early stages of wide-spread implementation, it has proven to be a viable and environmentally friendly alternative to fossil fuel-powered transportation.[9] Given Plug Power's intention to focus on renewable sources of hydrogen and the potential for such technologies to accelerate the transition away from traditional gas and diesel vehicles, Sustainalytics notes the benefits of using hydrogen fuel cells in this context.

Battery-replacement
Hydrogen fuel cells have the potential to displace the use of lead-acid batteries in applications such as automotive batteries, industrial traction (ie. forklifts), and uninterruptible power supply. Lead-acid batteries are a well-established technology with a proven record, however, approximately 3 million tons of battery waste is generated annually, posing a challenge to end-of-life management and safe handling considering the hazardous nature of the materials, namely lead and sulfuric acid.[10] Plug Power's primary market at this time is in forklifts, and the Company has demonstrated a number of environmental and operational performance improvements of hydrogen as compared to batteries.[11] Sustainalytics recognizes the environmental and health benefits of replacing battery use with hydrogen fuel cells in these applications.

Backup and off-grid power
Stationary hydrogen fuel cells may take the place of fossil fuel-fired generators to power small installations in remote areas or in an emergency backup capacity for facilities that require consistent power, including large data centers. Plug Power has identified the telecommunications, utilities, railroads, and government sectors as being potential users of this application.[12] As petroleum fuels such as diesel are most commonly being replaced, the emissions savings can be substantial. According to the Energy Information Administration, the combustion of petroleum products for electricity in the US has an emissions intensity (measured in carbon dioxide per unit of electricity generated) comparable to coal power plants.[13] Considering the potential to provide an alternative to gas and diesel gensets in diverse settings, and in particular the high carbon intensity of the fuel source that H_2 replaces, Sustainalytics views positively these applications.

[6] US DOE, Fuel Cells, https://www.energy.gov/eere/fuelcells/fuel-cells
[7] Digital Trends, Hydrogen was the fuel of tomorrow, so what happened: https://www.digitaltrends.com/cars/hydrogen-cars/
[8] U.S. Department of Energy, Fuel Cell Electric Vehicles: https://afdc.energy.gov/vehicles/fuel_cell.html
[9] *ibid*
[10] Zhang et al, Study on the Environmental Risk Assessment of Lead-Acid Batteries, https://www.sciencedirect.com/science/article/pii/S1878029616001043
[11] Plug Power, GenDrive: https://www.plugpower.com/wp-content/uploads/2018/06/2018GenDriveBrochure_F1Digi.pdf
[12] Plug Power, GenSure: https://www.plugpower.com/products/gensure/
[13] Energy Information Administration, 'How much carbon dioxide is produced per kilowatthour of U.S. electricity generation?' https://www.eia.gov/tools/faqs/faq.php?id=74&t=11

Hydrogen production and lifecycle emissions

While electricity generated from hydrogen has no direct or "tailpipe" emissions, it is recognized that the production of hydrogen may have associated greenhouse gas emissions. Currently, in the US, approximately 95% of all hydrogen is produced from the steam reforming of natural gas (steam methane reforming, or SMR), a process which involves the release of 7 kilograms of carbon dioxide[14] for every kg of hydrogen gas (H_2) produced.[15] Despite these upstream emissions, hydrogen from SMR has been calculated to release fewer total carbon emissions than the combustion of fossil fuels for mobile engine applications.[16]

In addition to SMR, hydrogen is also produced by electrolysis and as a by-product of other industrial activities, which can further decrease carbon emissions. When powered by renewable resources, such as wind or solar power, electrolysis can be considered a carbon emissions-free source of hydrogen.[17] Although electrolysis is traditionally much more expensive than SMR hydrogen, improved technology, the decreasing costs of renewable energy, and the growing recognition of the need to transition to low-carbon energy has increased the competitiveness of renewable-powered electrolysis compared to traditional SMR.[18] Chloralkili hydrogen, a by-product of the production of chlorine and sodium hydroxide, has been modeled to produce 20-90% lower emissions than SMR.[19] The methane used in steam reforming can also be sourced from renewable natural gas, such as landfill gas or from the anaerobic digestion of waste, which results in hydrogen with a low or even net-negative lifecycle emissions profile, even using conventional SMR technology.

Considering this industry-wide trend to more environmentally responsible hydrogen sourcing, as well as Plug Power's own commitment to purchase 50% of its hydrogen from "green" sources by 2025, Sustainalytics is confident that the promotion of a more widespread use of hydrogen power will drive lower carbon emissions.

Alignment with/contribution to SDGs

The Sustainable Development Goals (SDGs) were set in September 2015 and form an agenda for achieving sustainable development by the year 2030. This green bond advances the following SDG goals and targets:

Use of Proceeds Category	SDG	SDG target
Hydrogen fuel cell Systems	7. Affordable and Clean Energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix. 7.3 By 2030, double the global rate of improvement in energy efficiency.
	9. Industry, Innovation, and Infrastructure	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities

[14] Office of Energy Efficiency & Renewable Energy: https://www.energy.gov/eere/fuelcells/hydrogen-production-natural-gas-reforming
[15] Soltani et al, Assessment of CO2 capture options from various points in steam methane reforming for hydrogen production, https://www.sciencedirect.com/science/article/abs/pii/S0360319914027566
[16] Union of Concerned Scientists, How Clean Are Hydrogen Fuel Cell Electric Vehicles: https://www.ucsusa.org/sites/default/files/attach/2014/10/How-Clean-Are-Hydrogen-Fuel-Cells-Fact-Sheet.pdf
[17] Office of Energy Efficiency and Renewable Energy, Hydrogen Production: Electrolysis: https://www.energy.gov/eere/fuelcells/hydrogen-production-electrolysis
[18] https://www.iea.org/commentaries/producing-industrial-hydrogen-from-renewable-energy
[19] Lee et al, Life cycle greenhouse gas emissions of hydrogen fuel production from chlor-alkali processes in the United States, https://www.sciencedirect.com/science/article/abs/pii/S0306261918302666

Conclusion

Plug Power has developed the Plug Power Green Bond Framework under which it will issue green bonds to finance general corporate expenditures. Given the nature of Plug Power's business and ongoing sustainability strategy, and in particular considering that its business model supports labelling the Company as a "green pure-play", Sustainalytics considers that the investments undertaken by the green bond proceeds will provide positive environmental impact and accelerate the transition to a low-carbon economy.

The Plug Power Green Bond Framework outlines a process by which proceeds will be tracked, allocated, and managed, and commitments have been made for reporting on the allocation and impact of the use of proceeds. Sustainalytics believes that the Plug Power Green Bond Framework is aligned with the overall sustainability strategy of the Company and that the green use of proceeds category will contribute to the advancement of the UN Sustainable Development Goals 7 and 9. Additionally, Sustainalytics is of the opinion that Plug Power has adequate measures to manage environmental and social risks commonly associated with the eligible projects funded by the use of proceeds.

Based on the above, Sustainalytics is confident that Plug Power is well-positioned to issue green bonds and that the Plug Power Green Bond Framework is robust and transparent. Although the use of proceeds will include the financing general corporate expenditures, Plug Power's business activities advance environmentally impactful initiatives and the Company has made commitments to management and reporting in line with market expectations. Sustainalytics therefore considers the Framework to be in alignment with the intent of four core components of the Green Bond Principles 2018.

Appendices

Appendix 1: Green Bond / Green Bond Programme - External Review Form

Section 1. Basic Information

Issuer name:	Plug Power
Green Bond ISIN or Issuer Green Bond Framework Name, if applicable:	Plug Power Green Bond Framework
Review provider's name:	Sustainalytics
Completion date of this form:	May 9, 2020
Publication date of review publication:	

Section 2. Review overview

SCOPE OF REVIEW

The following may be used or adapted, where appropriate, to summarise the scope of the review.

The review assessed the following elements and confirmed their alignment with the GBPs:

☒	Use of Proceeds	☒	Process for Project Evaluation and Selection
☒	Management of Proceeds	☒	Reporting

ROLE(S) OF REVIEW PROVIDER

☒	Consultancy (incl. 2nd opinion)	☐	Certification
☐	Verification	☐	Rating
☐	Other *(please specify)*:		

Note: In case of multiple reviews / different providers, please provide separate forms for each review.

EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW *(if applicable)*

Please refer to Evaluation Summary above.

Section 3. Detailed review

Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.

1. USE OF PROCEEDS

Overall comment on section *(if applicable)*:

Sustainalytics recognizes that Plug Power will use the proceeds of its green bond(s) for general corporate purposes, and to repurchase a portion of its previously issued and outstanding 5.50% convertible senior notes due 2023, the proceeds of which were used for general corporate purposes. Sustainalytics considers that, as a "green pure-play", the entirety of its expenditures is supporting positive environmental impacts. Plug Power's business activity, Hydrogen Fuel Cell Systems, is aligned with those recognized by the Green Bond Principles 2018. Sustainalytics views the development and deployment of hydrogen fuel cells as generating environmental benefits and advancing the UN Sustainable Development Goals, specifically SDG Goals 7 and 9.

Use of proceeds categories as per GBP:

☒ Renewable energy	☒ Energy efficiency
☐ Pollution prevention and control	☐ Environmentally sustainable management of living natural resources and land use
☐ Terrestrial and aquatic biodiversity conservation	☐ Clean transportation
☐ Sustainable water and wastewater management	☐ Climate change adaptation
☒ Eco-efficient and/or circular economy adapted products, production technologies and processes	☐ Green buildings
☐ Unknown at issuance but currently expected to conform with GBP categories, or other eligible areas not yet stated in GBPs	☐ Other *(please specify)*:

If applicable please specify the environmental taxonomy, if other than GBPs:

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (if applicable):

Plug Power's Finance team is responsible for reviewing the proceeds and recommending capital expenditure and resource planning in line with the objectives of the Framework to the Company's Board of Directors. The two parties will convene annually to review financial reporting, projects, cash position and any significant spend items. The Company's CEO is responsible for approving any expenditures and/or resource investments up to USD 1 million; anything in excess of this amount requires Board approval. This is in line with market practice.

Evaluation and selection

☒ Credentials on the issuer's environmental sustainability objectives	☒ Documented process to determine that projects fit within defined categories
☒ Defined and transparent criteria for projects eligible for Green Bond proceeds	☒ Documented process to identify and manage potential ESG risks associated with the project

☐ Summary criteria for project evaluation and selection publicly available

☐ Other *(please specify):*

Information on Responsibilities and Accountability

☒ Evaluation / Selection criteria subject to external advice or verification

☐ In-house assessment

☐ Other (please specify):

3. MANAGEMENT OF PROCEEDS

Overall comment on section *(if applicable)*:

Plug Power's Finance team will be responsible for managing the proceeds. The Company intends to allocate majority of the proceeds within the first two calendars years after issuance. Pending allocation, proceeds may be temporarily held in cash investment accounts, in cash or other short-term liquid instruments, or used to pay back a portion of the Company's outstanding indebtedness. This is in line with market practice.

Tracking of proceeds:

☒ Green Bond proceeds segregated or tracked by the issuer in an appropriate manner

☒ Disclosure of intended types of temporary investment instruments for unallocated proceeds

☐ Other *(please specify)*:

Additional disclosure:

☐ Allocations to future investments only

☒ Allocations to both existing and future investments

☐ Allocation to individual disbursements

☐ Allocation to a portfolio of disbursements

☐ Disclosure of portfolio balance of unallocated proceeds

☐ Other *(please specify)*:

4. REPORTING

Overall comment on section (if applicable):

Plug Power intends to report on the allocation of proceeds on an annual basis. In addition, Plug Power will report on the quantity of fuel cells deployed, quantity of hydrogen stations deployed and hydrogen fuel consumed by its various fleet, where feasible. The Company has stated its intention to report on key sustainability metrics in the future. Given this commitment, Sustainalytics views the Company's reporting to be aligned with market practice.

Use of proceeds reporting:

☐ Project-by-project

☒ On a project portfolio basis

☐ Linkage to individual bond(s)

☐ Other *(please specify):*

Information reported:

☒ Allocated amounts ☐ Green Bond financed share of total investment

☐ Other *(please specify):*

Frequency:

☐ Annual ☐ Semi-annual

☐ Other (please specify):

Impact reporting:

☐ Project-by-project ☒ On a project portfolio basis

☐ Linkage to individual bond(s) ☐ Other (please specify):

Information reported (expected or ex-post):

☐ GHG Emissions / Savings ☐ Energy Savings

☐ Decrease in water use ☒ Other ESG indicators (please specify): Number of fuel cells and stations deployed, as well as the amount of hydrogen provided. The Company intends to expand on its impact reporting in the future.

Frequency

☐ Annual ☐ Semi-annual

☐ Other (please specify):

Means of Disclosure

☐ Information published in financial report ☐ Information published in sustainability report

☒ Information published in ad hoc documents ☐ Other (please specify):

☐ Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review):

Where appropriate, please specify name and date of publication in the useful links section.

USEFUL LINKS (e.g. to review provider methodology or credentials, to issuer's documentation, etc.)

SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE

Type(s) of Review provided:

☐ Consultancy (incl. 2nd opinion) ☐ Certification

☐ Verification / Audit

☐ Rating

☐ Other *(please specify):*

Review provider(s):

Date of publication:

ABOUT ROLE(S) OF INDEPENDENT REVIEW PROVIDERS AS DEFINED BY THE GBP

i. Second Party Opinion: An institution with environmental expertise, that is independent from the issuer may issue a Second Party Opinion. The institution should be independent from the issuer's adviser for its Green Bond framework, or appropriate procedures, such as information barriers, will have been implemented within the institution to ensure the independence of the Second Party Opinion. It normally entails an assessment of the alignment with the Green Bond Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy and/or processes relating to environmental sustainability, and an evaluation of the environmental features of the type of projects intended for the Use of Proceeds.

ii. Verification: An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or environmental criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Green Bond proceeds, statement of environmental impact or alignment of reporting with the GBP, may also be termed verification.

iii. Certification: An issuer can have its Green Bond or associated Green Bond framework or Use of Proceeds certified against a recognised external green standard or label. A standard or label defines specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.

iv. Green Bond Scoring/Rating: An issuer can have its Green Bond, associated Green Bond framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialised research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on environmental performance data, the process relative to the GBP, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material environmental risks.

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