



STATE OF THE U.S. VOLUNTARY GREEN POWER MARKET

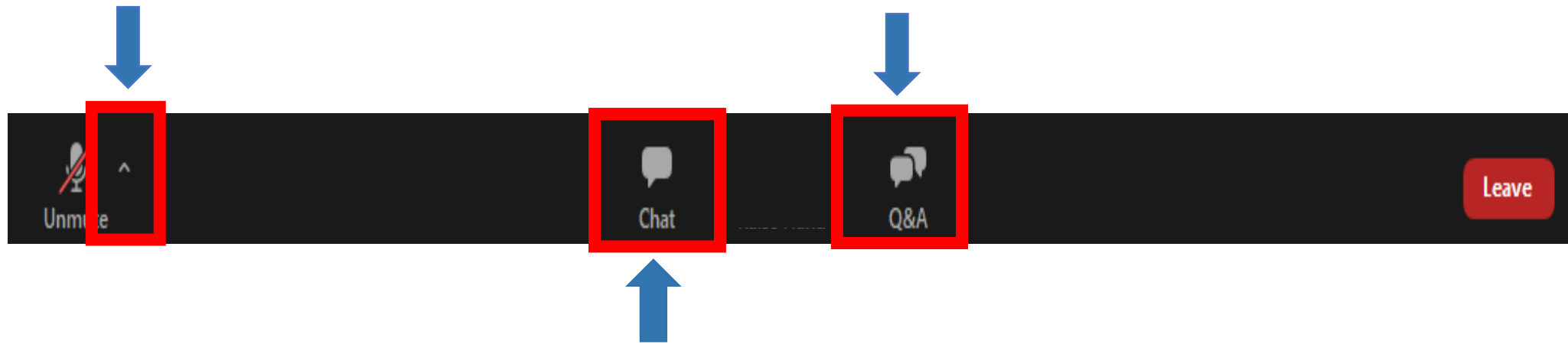
February 23, 2022

Webinar Logistics

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Webinar ID: 160 650 5497

Q&A Box: Questions and Comments for Presenters / Technical Difficulties



Chat Box: Resources from Presenters

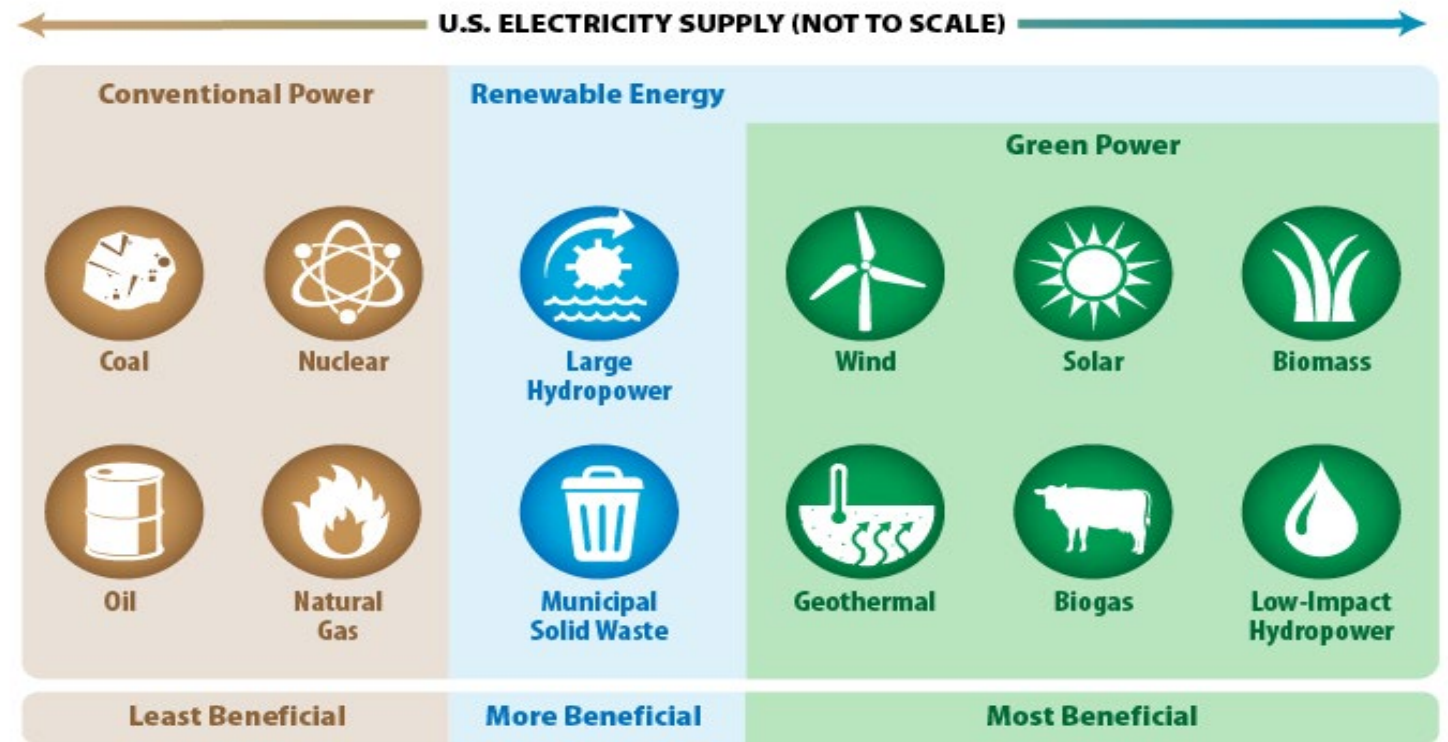
If you experience technical difficulties, please contact Olivia Newport: Olivia.Newport@erg.com

Speakers and Agenda

- Speakers:
 - Eric O'Shaughnessy, an independent renewable energy research consultant, Clean Kilowatts LLC
 - Christopher Kent, Program Manager, U.S. EPA's Green Power Partnership
- Agenda:
 - Basics of Green Power
 - Status and Trends in U.S. Voluntary Green Power Market
 - Green Power Partnership Overview
 - GPP Program Data Summary
 - Question & Answer Session

What is Green Power?

- **Green power** is a subset of renewable electricity and represents those renewable energy resources and technologies that provide the highest environmental benefit.
 - Meets national standards for product quality and content
 - Green Power is specific to the “voluntary market” and is driven by consumer preference rather than by policy mandate
 - Is generation that is incremental to what is required by mandate
- **Renewable Electricity** is a broader category and includes some resources and technologies that have significant impact on the environment.





Green Power Supply Options

Retail Options

Unbundled Renewable Energy Certificates (RECs)

Competitive Green Power Products

Utility Green Power Products or Programs

Community Choice Aggregations

Project Specific

Self- Supply

Physical PPAs

Shared Renewables

Utility Green Tariffs

Financial Contracts (PPAs)



GREEN POWER PARTNERSHIP OVERVIEW AND DATA VISUALIZATION TOOLS



What is the Green Power Partnership?

- **Summary**
 - The U.S. EPA's Green Power Partnership is a voluntary program that recognizes organizational use of green power.
- **Objectives**
 - Reduce U.S. greenhouse gas emissions
 - Expand the voluntary green power market
 - Standardize green power procurement as part of best practice environmental management
- **Program Activities**
 - Provide technical assistance and tools on procuring green power
 - Provide recognition platform for organizations using green power in the hope that others follow their lead
- At the end of calendar year 2020, more than 700 Partners were collectively using nearly 70 billion kWh of green power annually



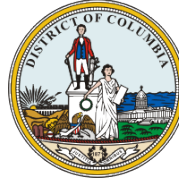
Partnership Requirements

- EPA supports Partners' procurement of green power by offering advice, technical support, tools and resources, and recognition.
- Partners agree to procure green power and provide an annual update.
- In return, EPA commits to:
 - Provide public recognition
 - Provide procurement and communications assistance, as requested
 - Provide a brief description of the Partner's green power use on EPA's website

	Partnership Benchmark
If your annual electricity use is:	You must, at minimum, use this much green power:
Over 100,000,000 kWh	7% of your use
10,000,001 - 100,000,000 kWh	10% of your use
1,000,001 - 10,000,000 kWh	25% of your use
100,000 - 1,000,000 kWh	50% of your use



CAL POLY



Unilever



JPMORGAN CHASE & CO.



FIFTH THIRD BANK



KOHLER

GENERAL MOTORS



Bloomberg



EPA's Top Partner Lists

Green Power Partnership National Top 100



As of January 24, 2022, the combined annual green power use of EPA's Top 100 Partners amounts to more than 74 billion kilowatt-hours, which is equivalent to the annual electricity use of nearly 7 million average American homes.

- [\[National Top 100 \]](#)
- [Top 30 Retail](#)
- [Top 30 College & University](#)
- [Top 30 Tech & Telecom](#)
- [Top 30 K-12 Schools](#)
- [100% Green Power Users](#)
- [Top 30 Local Government](#)
- [Fortune 500® Partners List](#)
- [Top 30 On-site Generation](#)
- [Long-term Contracts](#)

Partner Name	Annual Green Power Usage (kWh)	GP % of Total Electricity Use*	Industry	Green Power Resources
1. Google LLC	7,914,747,101	93%	Technology & Telecom	Solar, Wind
2. Microsoft Corporation	6,684,879,000	100%	Technology & Telecom	Small-hydro, Solar, Wind
3. Intel Corporation	5,022,773,872	100%	Technology & Telecom	Various
4. Walmart Inc.	2,718,227,534	14%	Retail	Various
5. The Procter & Gamble Company	2,530,523,507	100%	Consumer Products	Various
6. Equinix, Inc.	2,484,616,951	106%	Technology & Telecom	Biomass, Geothermal, Small-hydro, Solar, Wind
7. AT&T	2,360,337,220	18%	Technology & Telecom	Wind
8. Apple Inc.	2,202,581,271	101%	Technology & Telecom	Biogas, Biomass, Small-hydro, Solar, Wind
9. Bank of America	1,773,446,499	109%	Banking & Fin. Svcs.	Various
10. T-Mobile	1,757,017,000	25%	Technology & Telecom	Solar, Wind

Program Data Viewer

[Green Power Partnership](#)

[CONTACT US](#)

Program Data Viewer

The Program Data Viewer graphically presents green power use by EPA Green Power Partners gathered through their annual green power data submittals. The graphs allow users to view the aggregated green power usage and resource trends collected from organizational Partners at the Partnership-wide level, as well as view green power use by subsets of Partners or green power supply options by utilizing filters. The Viewer also provide users an easy-to-interpret overview of the status and trends in the voluntary green power use by EPA Green Power Partners, which are likely reflective of trends in the larger voluntary green power market. The graphs below are based on collection year data. For more information on collection years and how EPA collects and presents information from Partners refer to the Reference Documentation.

No selections applied Selections

Green Power Partnership

[Tour This Dashboard](#) [Information](#)

Industry Partner Size Supply Option Renewable Resource Provider Third-Party Certified

Cumulative Green Power Use (kWh) - 2001 to 2020
379,773,281,898

Green Power Use by Supply Option by Collection Year

[Download Supply Option Summary](#)

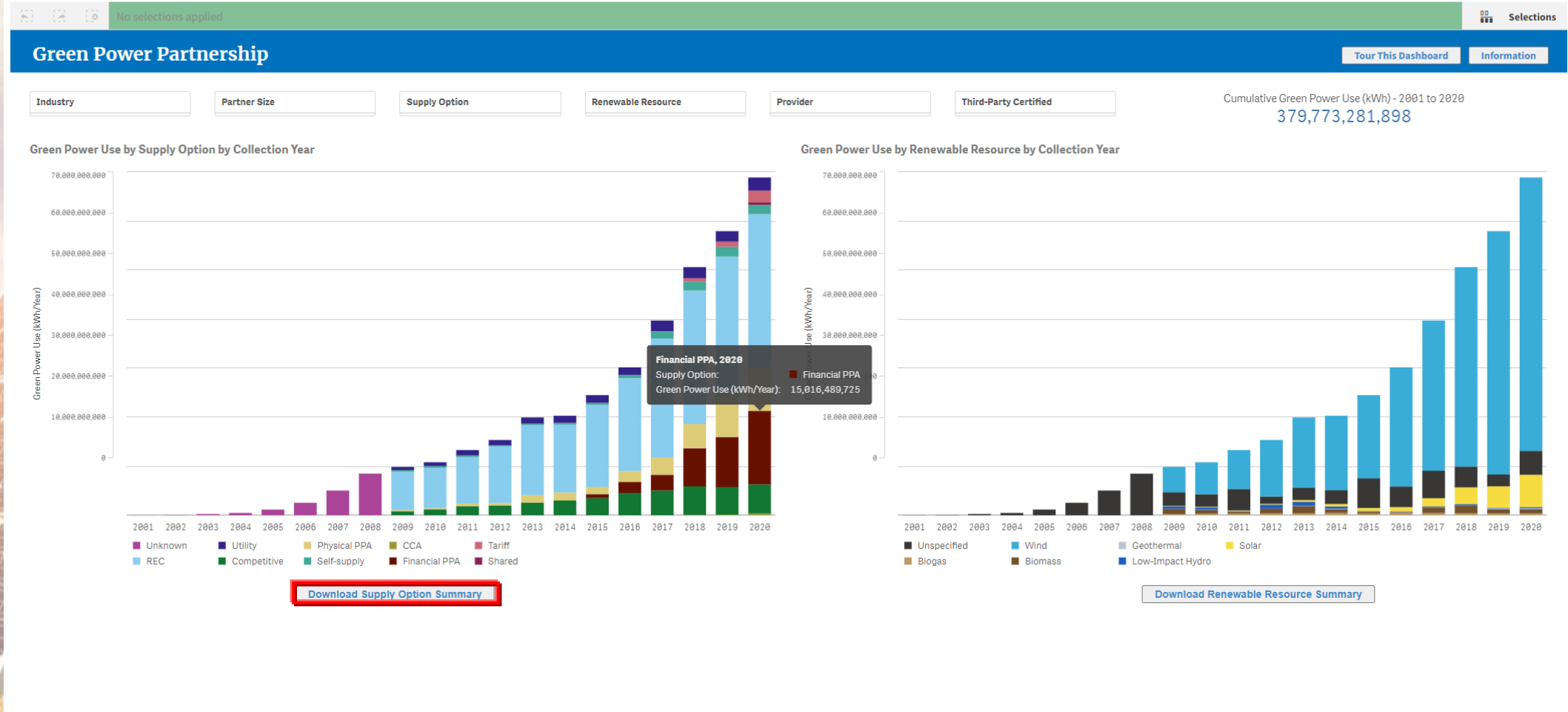
Green Power Use by Renewable Resource by Collection Year

[Download Renewable Resource Summary](#)

Program Data Viewer

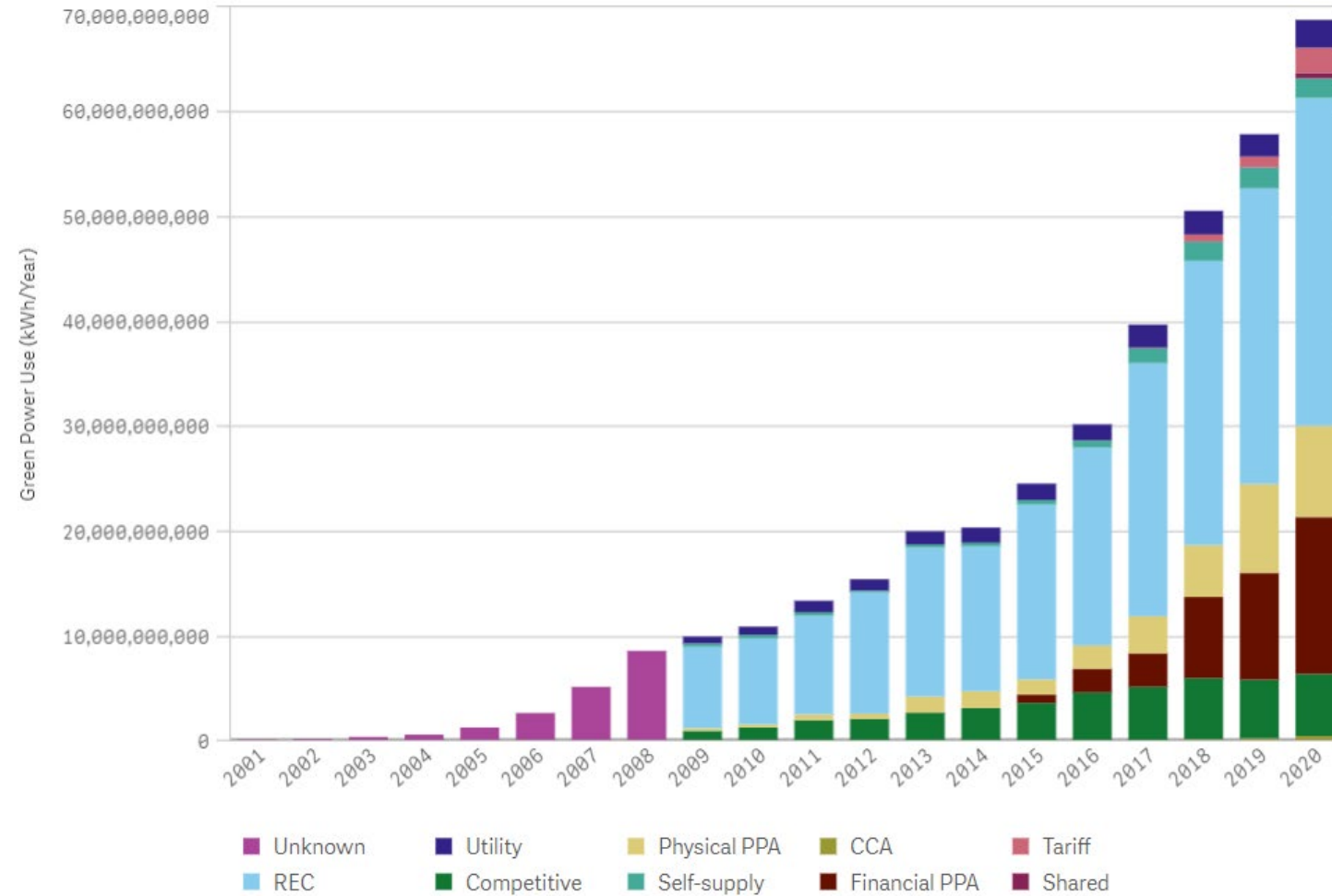
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Annual Green Power Use by Supply Option

Green Power Use by Supply Option by Collection Year

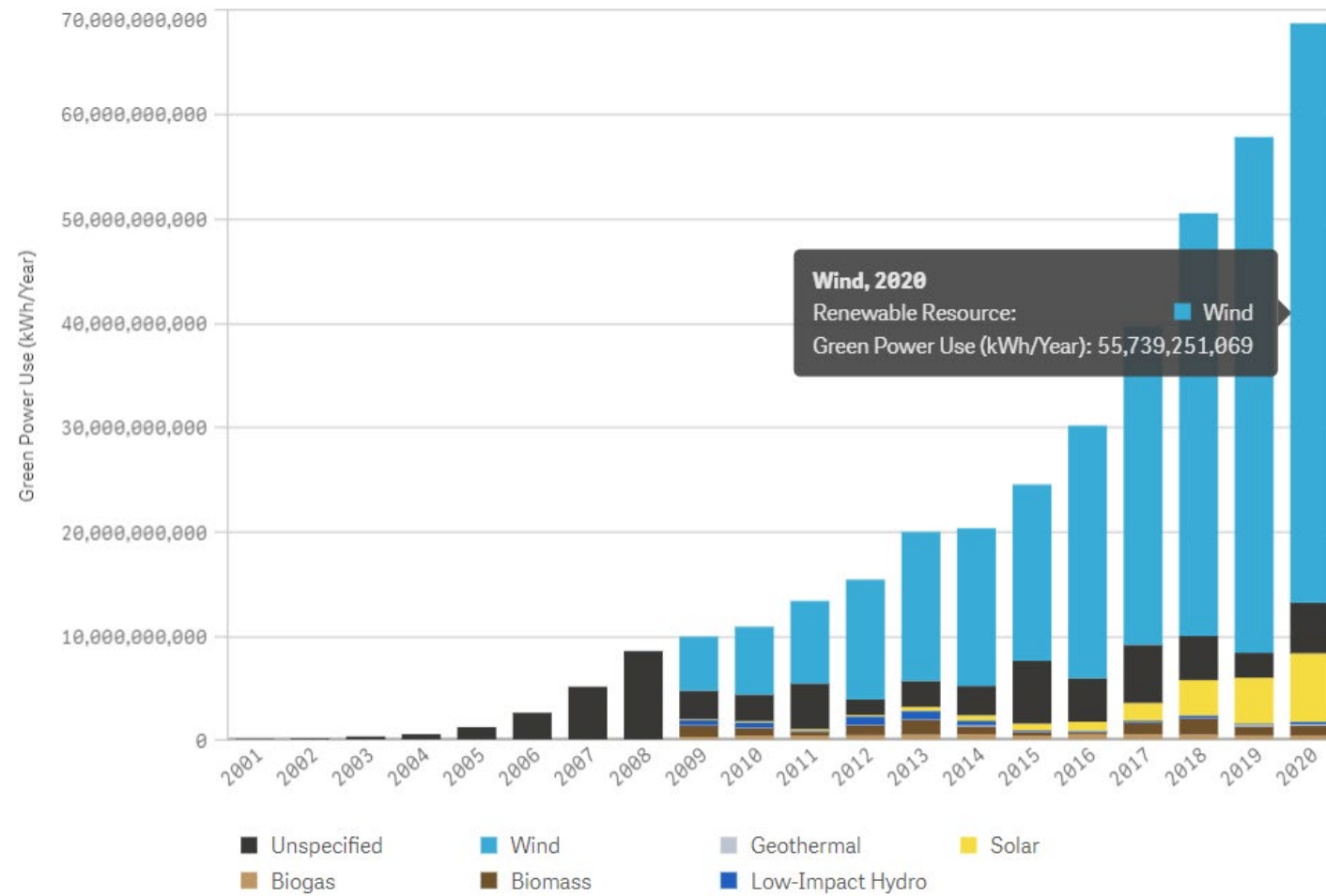


[Download Supply Option Summary](#)

Annual Green Power Use by Resource Type



Green Power Use by Renewable Resource by Collection Year

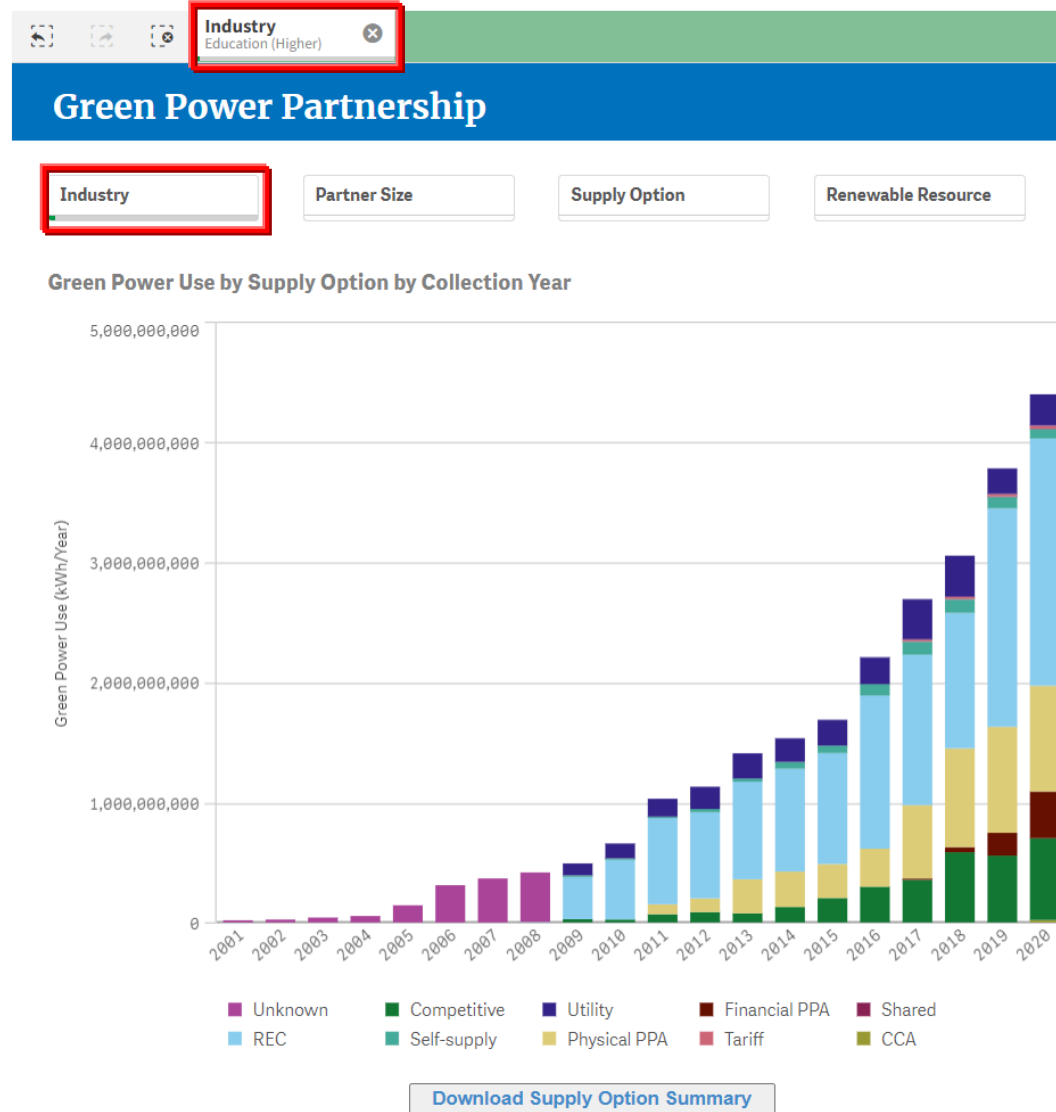


[Download Renewable Resource Summary](#)

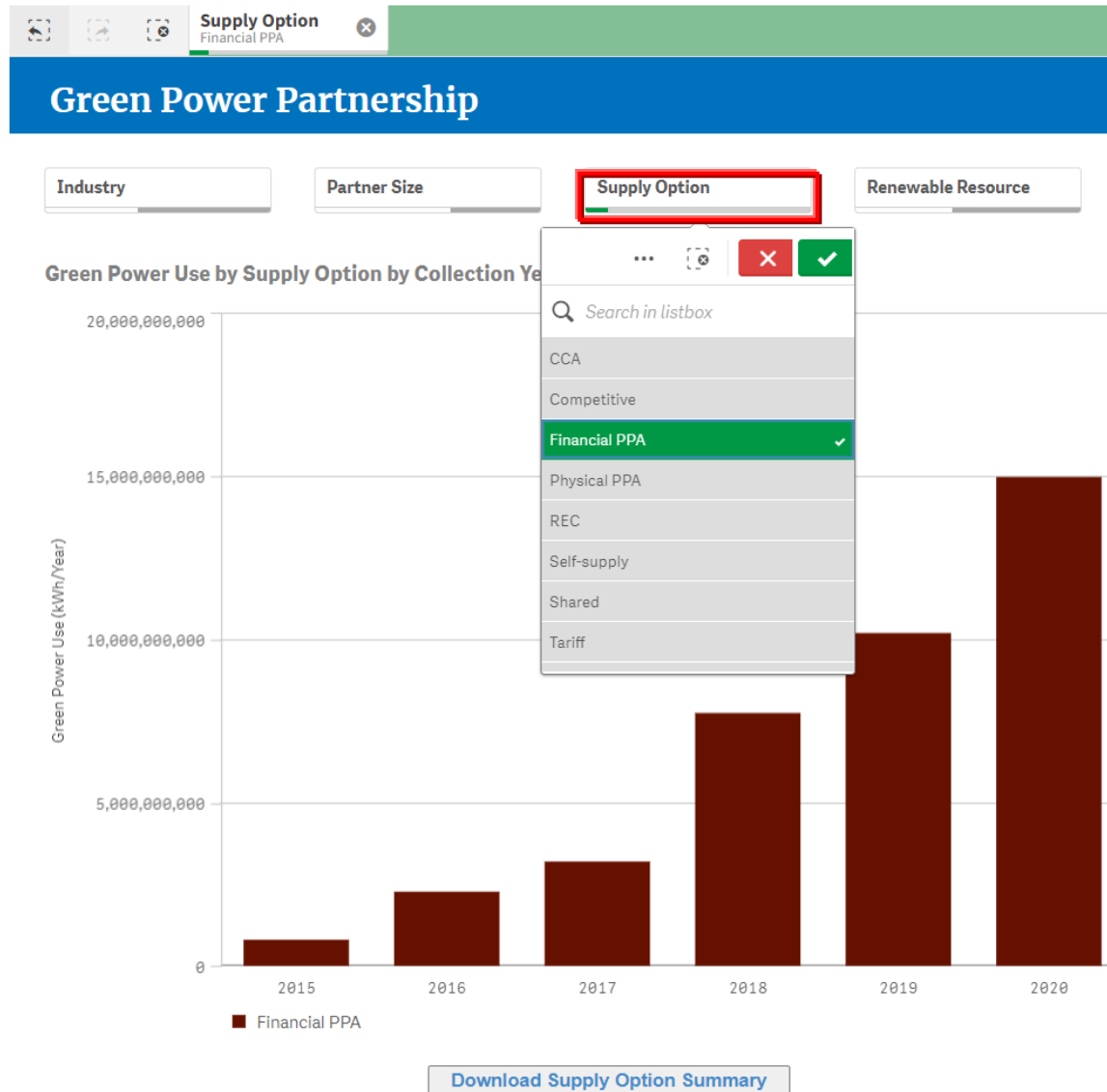
Annual Green Power Use by Industry



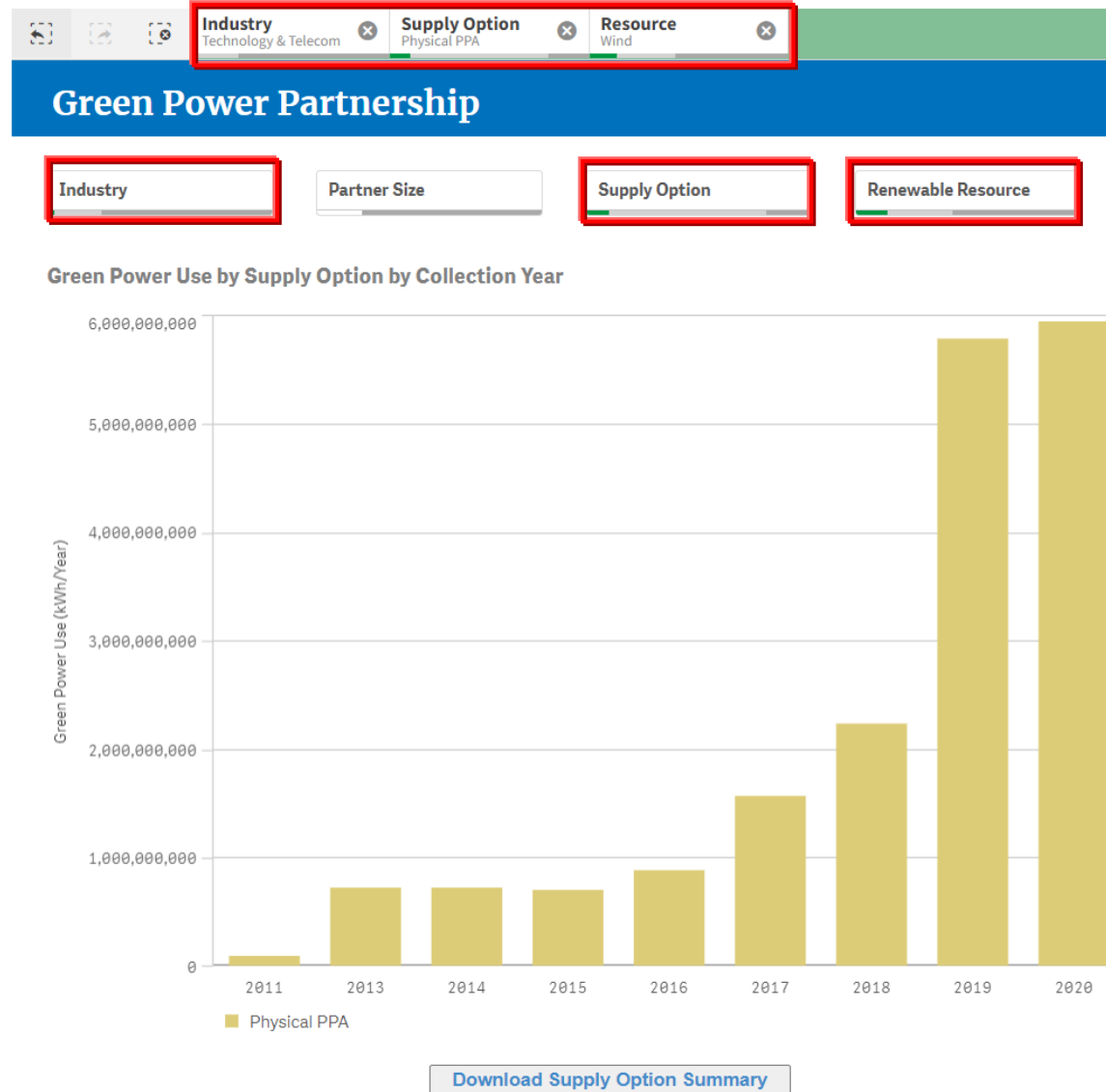
Annual Green Power Use by Industry



Annual Green Power Use by Supply Option



Green Power Use Multi-Filter Example



Filters selected:
Industry = Tech & Telecom
Supply Option = Physical PPA
Resource = Wind



Partner Profile Viewer

Partner Profile Viewer

Tour This Dashboard Information

To select a new Partner, first click the Clear button to the right.

Clear

University of California

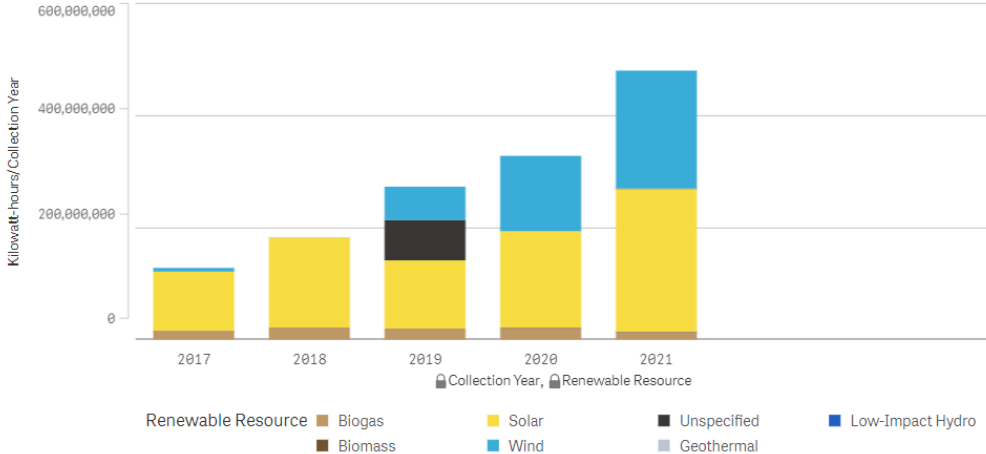
[Info on Awards](#)

Location	Industry	Awards
Oakland, CA	Education (Higher)	2017, 2018, 2021
Partnership Agreement Signed	Period of Reported Green Power ...	Collection Year: Last Data Report
3/24/2017	1/1/2020 - 12/31/2020	4/19/2021

Sustainability Website

<https://www.universityofcalifornia.edu/initiative/carbon-neutrality-initiative>

Green Power Use by Renewable Resource



Partner Profile Viewer

Profile

The University of California opened its doors in 1869 with just 10 faculty members and 38 students. Today, the UC system includes more than 290,000 students and more than 169,000 faculty and staff, with more than 2 million alumni. UC has expanded the horizons of what we know about ourselves and our world on its 150 years of operation, and has become a living laboratory for scalable renewable energy projects.

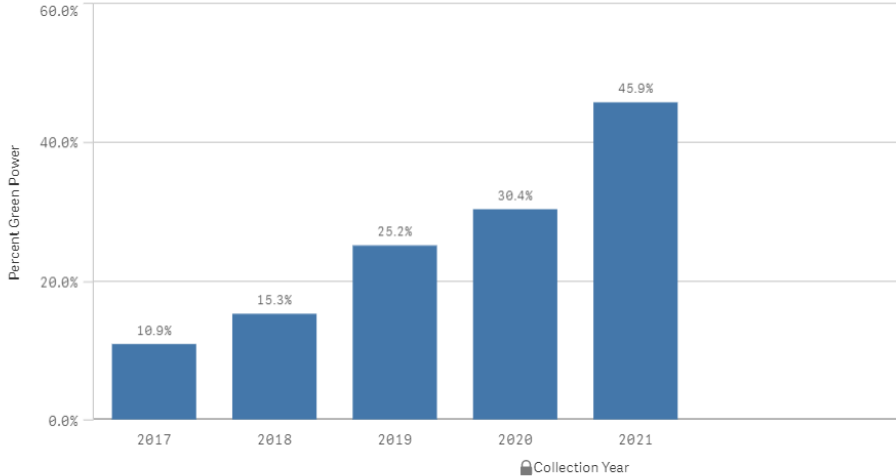
UC, a national leader in sustainability, has pledged to become carbon neutral by 2025. Developing and supporting renewable electricity supplies through both conventional and innovative mechanisms is a key strategy for reaching this goal.

As part of our efforts to reduce greenhouse gas emissions, each UC campus has installed on-site renewable generation, including biogas, electric solar energy, and solar thermal energy projects. The 45+ MW of on-campus solar power systems produced more than 75,000,000 kWh in 2020.

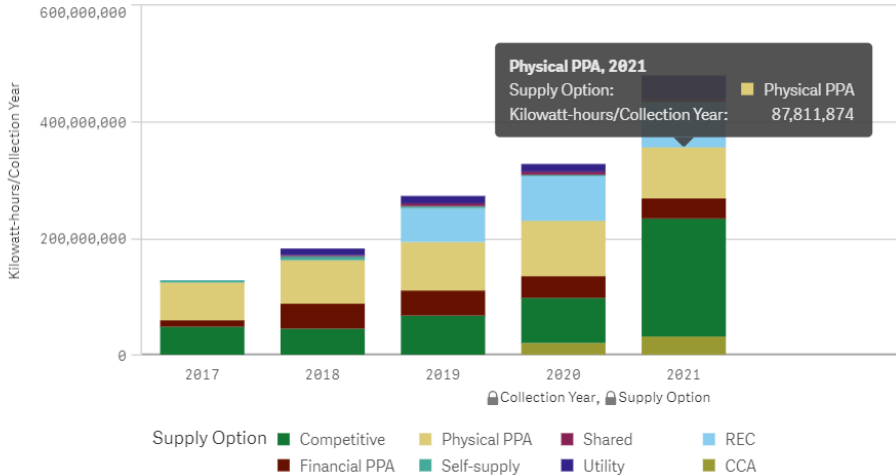
The University of California has also entered into long-term power purchase agreements for energy from two new California grid-connected solar energy resources. Both projects, totaling 80 MW, are now online and providing solar electricity through the California grid. Increasingly, UC is partnering with utility suppliers to increase renewable power supplies through existing green tariff programs, individually negotiated contracts, and Community Choice Aggregation.

While the carbon neutrality initiative builds on UC's pioneering work on climate research, the operational aspects of this goal have allowed us to demonstrate environmental leadership by implementing green power projects in many shapes and sizes.

Green Power Percentage of Electricity Use



Green Power Use by Supply Option



Questions?

- Christopher Kent, EPA,
kent.christopher@epa.gov
- Eric O'Shaughnessy, Clean Kilowatts LLC,
eric.oshaughnessy@cleankws.com

Resources:

About the Green Power Partnership

- <https://www.epa.gov/greenpower/about-green-power-partnership>

Status and Trends in the Voluntary Green Power Market (2020 Data)

- <https://www.nrel.gov/docs/fy22osti/81141.pdf>



A screenshot of the EPA Green Power Partnership website. The header includes the EPA logo, navigation links for "Environmental Topics", "Laws & Regulations", and "About EPA", and a search bar. The main content area features a "Green Power Partnership" title, a "Top Partner lists updated April 27, 2020" announcement, a "What's New" section with links to "May Program Update", "Top Partner Rankings updated April 27, 2020", "New Events and Webinars added", and "Revisions to Partnership Requirements". Below this are three columns of "Key Resources": "Partnership Overview" (Learn about GPP, Program Successes, Events and Webinars, Program Initiatives), "Become a Partner" (Partnership Benefits, Requirements, Steps to Join, Become a Community), and "Meet Our Partners" (Partner List, National Top 100, Green Power Communities, Award Winners). A fourth "Key Resources" box contains links for "Partnership Agreement", "Partnership Requirements", "Project Development Toolbox", and "Guide to Purchasing Green Power".

For more information, visit

www.epa.gov/greenpower