

PSC Annual Report

Diamond State Generation Partners

Executive Summary

Diamond State Generation Partners, LLC (“DSGP”) owns and operates two facilities that generate energy from Bloom Energy Servers manufactured in Delaware. Throughout the period of June 2022 to May 2023, the fuel cell project remained in operation at its 27.5 megawatts nameplate capacity (24.9 megawatts at the Red Lion site and 2.6 megawatts at the Brookside site).

DSGP continues to receive revenue from PJM through the sale of energy, capacity and reactive services. DSGP operates to maximize PJM revenue through all of the sources for which it is currently eligible in the PJM market.

For the period of June 2022 to May 2023

- Monthly energy payment averaged: \$974,162/month
- Capacity payment averaged: \$78,284/month
- Reactive Services payment averaged: \$3,750/month
- Miscellaneous payments averaged: \$1,233/month

June 2022 through May 2023 Operating Results

This annual report covers the 11th year of operations from June 2022 to May 2023. The annual Total QFCP-RC PJM Revenue was \$14,253,328. Table 1 below summarizes the monthly PJM Revenue.

Table 1
Total PJM Revenue

Month	PJM Revenue
2022/06	\$ 1,648,542.92
2022/07	\$ 1,793,505.55
2022/08	\$ 1,970,357.76
2022/09	\$ 1,544,350.45
2022/10	\$ 1,180,724.12
2022/11	\$ 1,069,208.98
2022/12	\$ 1,774,824.00
2023/01	\$ 781,573.76
2023/02	\$ 589,849.31
2023/03	\$ 622,418.28
2023/04	\$ 632,426.10
2023/05	\$ 645,546.56
Total	\$ 14,253,327.79

Fuel cell operating data is presented in Table 2 below. The table includes information on the energy produced, natural gas consumed, average output, heat rate, and nameplate capacity installed. The average heat rate for the period was 7,296. The average output for the period was 22.6 MW. The QFCP MMBtu Bank position is positive 529,919. Table 2 provides the MMBtu banking activity for the year. The next section of the report provides detailed information on the factors that drove the QFCP heat rate and availability for the period.

Table 2

Fuel Cell Operating Results							
Month	MWH Generated	mmBTU Reformed	mmBTU Banked	Cumulative mmBTU Banked	Heat Rate	Avg Output, MW	Approx. Name Plate MW @ Month End
2022/06	16,884	122,105	5,373	484,782	7,232	23.5	27.5
2022/07	17,112	125,029	4,169	488,951	7,306	23.0	27.5
2022/08	17,527	126,366	5,965	494,916	7,210	23.6	27.5
2022/09	16,779	121,984	4,694	499,610	7,270	23.3	27.5
2022/10	17,138	125,185	4,203	503,813	7,305	23.0	27.5
2022/11	16,488	120,443	4,038	507,851	7,305	22.9	27.5
2022/12	16,594	122,631	2,656	510,507	7,390	22.3	27.5
2023/01	16,045	118,266	2,876	513,383	7,371	21.6	27.5
2023/02	14,650	107,728	2,876	516,259	7,354	21.8	27.5
2023/03	16,927	122,968	4,829	521,088	7,265	22.8	27.5
2023/04	16,012	116,178	4,711	525,799	7,256	22.2	27.5
2023/05	15,881	115,783	4,120	529,919	7,291	21.4	27.5
Totals	198,037	1,444,666	50,510	529,919	7,296	22.6	27.5

Total QFCP Contract Payments for the period: \$33,064,846.13

Plus Total Gas Cost for the period: \$9,228,167.59

Minus Total PJM Revenues for the period: \$14,253,327.79

Equals Total Disbursements to QFCP for the period: \$28,039,685.93

Fuel Cell Capacity Factor: 82.2%

Maintenance

There were no significant changes during the period. DSGP continued to execute its maintenance plans through various routine preventive maintenance events.

Planned maintenance for June 2023-May 2024

- 11/30/2023: 35kV Switchgear (35kV) West Units (Half of Red Lion) for approximately 13 hours spread out between two days.

Actions Taken during the Year to Maximize Revenue:

DSGP has the fiduciary duty to maximize PJM revenues in order to minimize collections from ratepayers, per the Tariff. DSGP has three streams of revenue from PJM for the QFCP project: energy, capacity, and reactive services.

Energy: DSGP has sold 100% of its energy production to date into the PJM Day Ahead Energy Market. Table 2 summarizes the past year's energy output.

Capacity: DSGP has successfully bid in all available capacity auctions since March 2012.

Reactive Services: DSGP earns \$3,750 per month from PJM for reactive power services. This amount is determined in accordance with the settlement approved by the April 20, 2020, FERC order.

DSGP PJM Auction Results

2023/2024

DSGP cleared 25.7 MW at \$49.49/MWD for the Base Residual Auction. The Third Incremental Auction was held on March 21, 2023. DGSF offered and cleared the remaining 0.1 MWs at \$146.03/MW-day.

2024/2025

DSGP cleared 25.7 MWs at \$54.95/MW-day for the Base Residual Auction. DSGP will buy/sell capacity obligations to align the capacity commitment with the expected output for the period (typically in the third incremental auction). The Third Incremental Auction is scheduled in February 2024.

Table 3
RPM Auction Schedule

Delivery Year	Base Residual Auction	Incremental Auctions		
		First	Second	Third
2013/14	2/3/2010	9/12/2011	7/16/2012	2/25/2013
2014/15	5/2/2011	9/10/2012	7/15/2013	2/24/2014
2015/16	5/7/2012	9/9/2013	7/14/2014	2/23/2015
2016/17	5/13/2013	9/8/2014	7/13/2015	2/29/2016
2017/18	5/12/2014	9/14/2015	7/16/2016	2/28/2017
2018/19	5/10/2015	9/12/2016	7/15/2017	2/28/2018
2019/20	5/11/2016	9/11/2017	7/19/2018	2/25/2019
2020/21	5/10/2017	9/10/2018	7/8/2019	2/24/2020
2021/22	5/10/2018	9/9/2019	7/6/2020	2/22/2021
2022/23	5/19/2021	N/A	N/A	2/28/2022
2023/24	6/8/2022	N/A	N/A	Feb-23
2024/25	12/7/2022	N/A	N/A	Feb-24
2025/26	June 2024	N/A	N/A	Feb-25

Table 4
Historical Base Residual Auction Results

Year	EMAAC
2015/16	\$ 167.46
2016/17	\$ 119.13
2017/2018 Base	\$ -
2017/18 CP Transition	\$ 151.50
2018/19	\$ 225.42
2019/20	\$ 119.77
2020/21	\$ 187.87
2021/22	\$ 165.73
2022/23	\$ 97.86
2023/24	\$ 49.49
2024/25	\$ 54.95

Table 5
Historical Incremental Auction Results

Year	EMAAC
2013/14 - 1st	\$ 178.85
2013/14 - 2nd	\$ 40.00
2014/15 - 1st	\$ 16.56
2014/15 - 2nd	\$ 56.94
2014/15 - 3rd	\$ 132.20
2015/16 - 1st	\$ 111.00
2015/16 - 2nd	\$ 153.56
2015/16 - 3rd	\$ 184.77
2016/17 - 1st	\$ 119.13
2016/17 - 2nd	\$ 71.00
2016/17 - 3rd	\$ 10.02
2017/18 - 1st	\$ 84.00
2017/18 - 2nd	\$ 26.50
2017/18 - 3rd	\$ 36.49
2018/19 - 1st	\$ 84.68
2018/19 - 2nd	\$ 80.02
2019/20 - 1st	\$ 40.00
2019/20 - 1st	\$ 58.55
2019/20 - 2nd	\$ 32.87
2019/20 - 3rd	\$ 28.35
2020/21 - 1st	\$ 42.90
2020/21 - 2nd	\$ 20.25
2020/21 - 3rd	\$ 15.25
2021/22 - 1st	\$ 25.00
2021/22 - 2nd	\$ 15.37
2021/22 - 3rd	\$ 26.36
2022/23 - 1st	N/A
2022/23 - 2nd	N/A
2022/23 - 3rd	\$ 35.00
2023/24 - 1st	N/A
2023/24 - 2nd	N/A
2023/24 - 3rd	\$ 146.03