

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 2023 to May 2024, 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 2023 to May 2024

- Monthly energy payment averaged \$514,538/month
- Capacity payment averaged \$39,238/month
- Reactive Services payment averaged \$3,750/month
- Miscellaneous payments averaged \$1,437/month

June 2023 through May 2024 Operating Results

This annual report covers the 12th year of operations from June 2023 to May 2024. The Annual total QFCP-RC PJM Revenue was \$7,528,475. Table 1 below summarizes the PJM Revenue on a monthly basis.

Table 1	
Total PJM Revenue	
Month	PJM Revenue
2023/06	\$ 551,830.14
2023/07	\$ 760,481.97
2023/08	\$ 618,735.18
2023/09	\$ 594,618.13
2023/10	\$ 747,397.29
2023/11	\$ 655,800.33
2023/12	\$ 568,636.52
2024/01	\$ 922,478.62
2024/02	\$ 465,229.17
2024/03	\$ 456,225.60
2024/04	\$ 530,159.19
2024/05	\$ 656,882.55
Total	\$ 7,528,474.69

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 7,071. The average output for the period was 23.5 MW. The QFCP mmBTU Bank position is positive 6,929,673. 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
2023/06	15,300	111,132	4,384	534,303	7,263	21.3	27.5
2023/07	16,016	116,084	4,841	539,144	7,248	21.5	27.5
2023/08	16,670	119,842	6,019	545,163	7,189	22.4	27.5
2023/09	16,651	118,654	7,064	552,227	7,126	23.1	27.5
2023/10	17,468	123,999	7,883	560,110	7,099	23.5	27.5
2023/11	17,480	122,570	9,402	569,512	7,012	24.2	27.5
2023/12	18,075	126,437	10,031	579,543	6,995	24.3	27.5
2024/01	18,138	126,415	10,527	590,070	6,970	24.4	27.5
2024/02	16,909	117,817	9,845	599,915	6,968	24.3	27.5
2024/03	18,073	126,231	10,220	610,135	6,985	24.3	27.5
2024/04	17,534	122,671	9,713	619,848	6,996	24.4	27.5
2024/05	17,958	125,730	9,855	629,703	7,001	24.1	27.5
Totals	206,272	1,457,582	99,784	6,929,673	7,071	23.5	27.5

Total QFCP Contract Payments for the period: \$34,420,881.47

Plus Total Gas Cost for the period: \$4,465,117.36

Minus Total PJM Revenues for the period: \$7,528,474.69

Equals Total Disbursements to QFCP for the period: \$31,357,524.14

Fuel Cell Capacity Factor: 85.4%

Maintenance

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

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

2024/2025

DSGP cleared 25.7 MWs at \$53.60/MW-day for the Base Residual Auction. The third Incremental Auction was held on May 10, 2024. DSGP entered a buy bid for 3.3 MWs but did not clear.

2025/26

The Base Residual Auction for 2025/2026 is scheduled for July 17, 2024. There is no First or Second Incremental Auction and the Third Incremental Auction is scheduled for February 2025. DSGP plans on offering all 25.4 MWs of available capacity into the Base Residual Auction.

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	3/21/2023
2024/25	12/7/2022	N/A	N/A	5/10/2024
2025/26	7/17/2024	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	\$ 53.60

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
2024/25 -1st		N/A
2024/25 - 2nd		N/A
2024/25 -3rd	\$	175.81