

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 2021 to May 2022, 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 2021 to May 2022

- Monthly energy payment averaged: \$896,915/month
- Capacity payment averaged: \$131,042/month
- Reactive Services payment averaged: \$3,750/month
- Miscellaneous payments averaged: \$1,732/month

June 2021 through May 2022 Operating Results

This annual report covers the 10th year of operations from June 2021 to May 2022. The annual Total QFCP-RC PJM Revenue was \$13,271,328. Table 1 below summarizes the monthly PJM Revenue.

Table 1
Total PJM Revenue

Month	PJM Revenue
2021/06	\$ 706,235.43
2021/07	\$ 830,207.85
2021/08	\$ 943,662.32
2021/09	\$ 945,086.20
2021/10	\$ 1,219,753.03
2021/11	\$ 1,273,269.91
2021/12	\$ 951,499.85
2022/01	\$ 1,426,674.83
2022/02	\$ 996,470.48
2022/03	\$ 987,877.92
2022/04	\$ 1,312,317.97
2022/05	\$ 1,678,271.87
Total	\$ 13,271,327.66

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 6,920. The average output for the period was 24.6 MW. The QFCP MMBtu Bank position is positive 479,409. 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
2021/06	18,119	122,403	14,397	357,452	6,755	25.2	27.5
2021/07	18,677	126,391	14,621	372,073	6,767	25.1	27.5
2021/08	18,628	126,618	14,021	386,094	6,797	25.0	27.5
2021/09	18,027	122,417	13,688	399,782	6,791	25.0	27.5
2021/10	18,527	126,612	13,267	413,049	6,834	24.9	27.5
2021/11	17,749	121,938	12,065	425,114	6,870	24.6	27.5
2021/12	18,328	126,717	11,656	436,770	6,914	24.6	27.5
2022/01	18,196	127,011	10,365	447,135	6,980	24.5	27.5
2022/02	16,366	114,612	8,951	456,086	7,003	24.4	27.5
2022/03	17,896	126,597	8,515	464,601	7,074	24.1	27.5
2022/04	17,247	122,562	7,656	472,257	7,106	24.0	27.5
2022/05	17,665	126,559	7,152	479,409	7,146	23.8	27.5
Totals	215,425	1,490,437	136,354	479,409	6,920	24.6	27.5

Total QFCP Contract Payments for the period: \$35,955,487.58

Plus Total Gas Cost for the period: \$9,158,060.07

Minus Total PJM Revenues for the period: \$13,271,327.66

Equals Total Disbursements to QFCP for the period: \$31,842,219.99

Fuel Cell Capacity Factor: 89.4%

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 2022-May 2023

- Red Lion 11/30/2022, impact of 24.9 MW, approximately 10 hours

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

2022/2023

DSGP has a 25.5 MW commitment for the 2022/2023 Delivery Year, acquired via the Base Residual Auction and the Third Incremental Auction.

2023/2024

DSGP cleared 25.7 MW at \$49.49/MWD 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 2023.

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

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

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