

PSC Annual Report

Diamond State Generation Partners, LLC

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 2020 to May 2021, 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 2020 to May 2021

- Monthly energy payment averaged \$453,204/month
- Capacity payment averaged \$146,999/month
- Reactive Services payment averaged \$3,750/month

DSGP received \$3,750/month in reactive services payment. However, there was a refund for amounts previously paid of \$65,769.22 pursuant to FERC Docket No. ER14-1421-005.

- Miscellaneous payment averaged \$2,296/month

June 2020 through May 2021 Operating Results

This annual report covers the 9th year of operations from June 2020 to May 2021. The Annual total QFCP-RC PJM Revenue was \$7,483,381. Table 1 below summarizes the PJM Revenue on a monthly basis.

Table 1

Total PJM Revenue	
Month	PJM Revenue
2020/06	\$ 503,007.27
2020/07	\$ 634,188.58
2020/08	\$ 594,791.65
2020/09	\$ 508,689.22
2020/10	\$ 563,098.99
2020/11	\$ 536,678.75
2020/12	\$ 640,672.70
2021/01	\$ 642,697.32
2021/02	\$ 876,589.50
2021/03	\$ 625,054.52
2021/04	\$ 657,365.57
2021/05	\$ 700,546.78
Total	\$ 7,483,380.85

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 6,698. The average output for the period was 25.4 MW. The QFCP MMBtu Bank position is positive 343,055. 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
2020/06	18,515	122,601	17,190	170,567	6,622	25.7	27.5
2020/07	19,011	126,698	16,833	187,400	6,665	25.6	27.5
2020/08	18,925	126,651	16,233	203,633	6,692	25.4	27.5
2020/09	18,446	122,897	16,367	220,000	6,663	25.6	27.5
2020/10	19,059	126,875	17,017	237,017	6,657	25.6	27.5
2020/11	18,440	122,221	17,001	254,018	6,628	25.6	27.5
2020/12	18,768	126,858	14,839	268,857	6,759	25.2	27.5
2021/01	18,433	123,970	15,199	284,056	6,725	24.8	27.5
2021/02	16,935	114,846	13,013	297,069	6,782	25.2	27.5
2021/03	18,826	126,614	15,522	312,591	6,725	25.3	27.5
2021/04	18,272	122,593	15,361	327,952	6,709	25.4	27.5
2021/05	18,768	126,593	15,103	343,055	6,745	25.2	27.5
Totals	222,398	1,489,417	189,678	343,055	6,698	25.4	27.5

Total QFCP Contract Payments for the period: \$37,111,382.05

Plus Total Gas Cost for the period: \$4,533,532.69

Minus Total PJM Revenues for the period: \$7,483,380.85

Equals Total Disbursements to QFCP for the period: \$34,161,533.89

Fuel Cell Capacity Factor: 92.3%

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 2021- May 2022

- Brookside 11/1/2021, impact of 2.6 MW, approximate 8 hours
- Red Lion 11/30/2021, impact 14.9 MW, approximate 8 hours
- Red Lion 12/1/2021, impact 7.7 MW, approximate 8 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

DSGP PJM Auction Results

2021/2022

DSGP has a 25.6 MW commitment for the 2021/2022 Delivery Year, acquired via the Base Residual Auction and the Third Incremental Auction.

2022/2023

DSGP cleared 26.3 MW at \$97.86/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 2022.

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	Feb-22
2023/24	12/1/2021	N/A	N/A	Feb-23

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

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

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 (see last year's report for additional detail).