



Washington, D.C. SREC Market Update

July 8, 2018

- Implications of RPS Expansion Act of 2016
- DC Solar Build Rates
- DC Compliance Obligations Scenarios
- DC SREC Supply and Demand Scenarios (Grandfathered Load)
- DC SREC Supply and Demand Scenarios (Without Grandfathered Load)
- DC SREC Market Pricing

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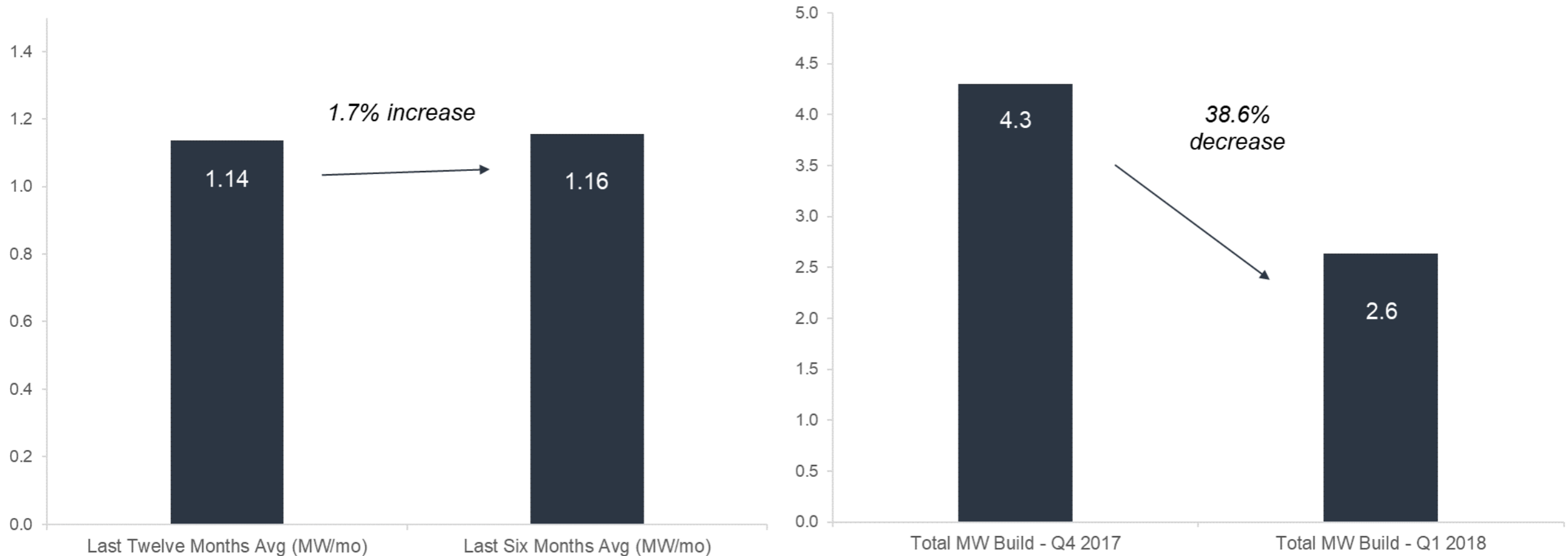
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- July 25, 2016, the DC Mayor signed the [Renewable Portfolio Standard Expansion Act of 2016](#); the Act was put into effect on October 8, 2016
- The Act established in section 2(c) the new RPS (including the solar carve out) and ACP schedules through 2033
- Section 4. Applicability. – *For 5 years after the effective date of this act, section 2(c) shall not apply to any contract entered into before the effective date of this act; provided, that section 2(c) shall apply to an extension or renewal of such a contract.*
- This clause in Section 4 allows all electric load established under contract prior to October 8, 2016 to be grandfathered under the old ACP schedule as follows: **2018** = \$300; **2019** = \$200; **2020** = \$200; **2021** = \$150
- Based on compliance data from PJM GATS and the DC Public Service Commission, in Calendar Year (CY) 2017 Solar ACP payments made up 71.2% of CY2017 compliance in the DC market. This implies that 71.2% of total electric load delivered in 2017 was grandfathered under the old Solar ACP schedule
- Naturally, these load contracts will roll off, reducing the amount of grandfathered load each subsequent year

DC SOLAR BUILD RATES



Monthly build over the last 6 months, for DC-eligible systems, has increased slightly by 1.7% to 1.16 MW/month as compared to the longer term last 12 month (LTM) average. Total quarterly MW build for the period ending March 2018 is significantly lower than the previous quarter reflecting a slight build slow down. Please note that this build rate decrease may not be as dramatic as it seems due to Q1 systems that have yet to be approved by GATS.

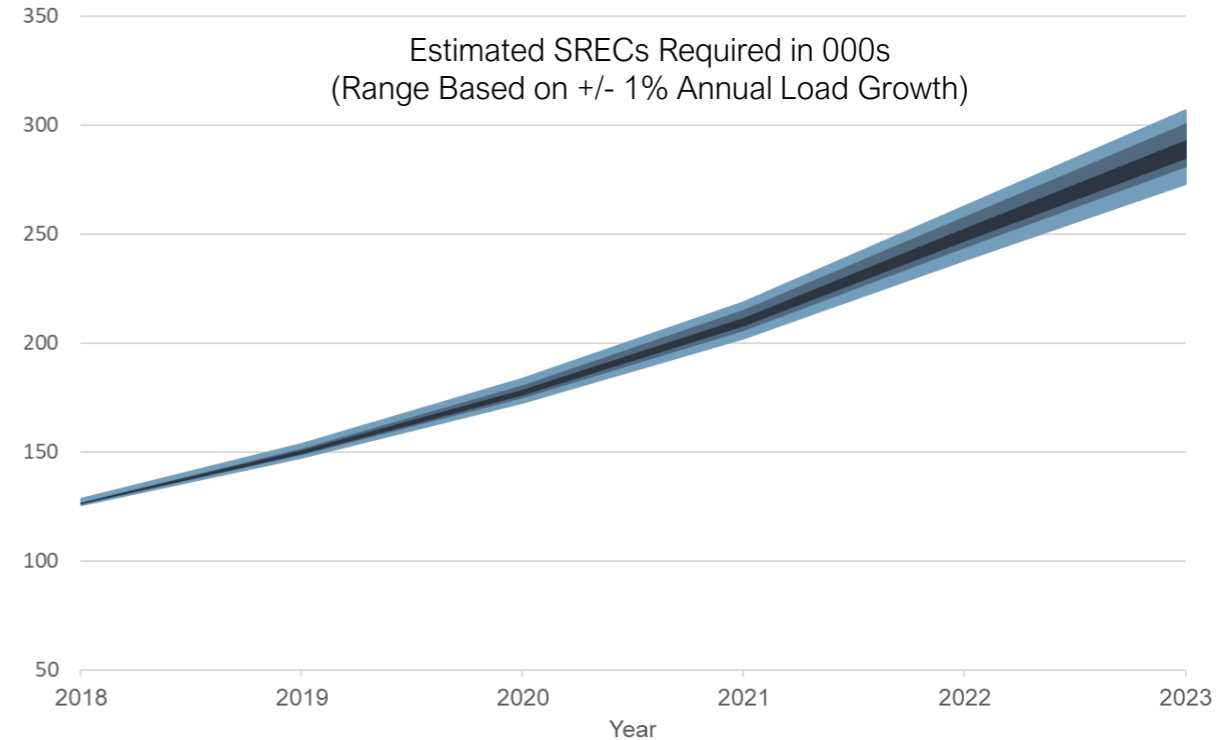
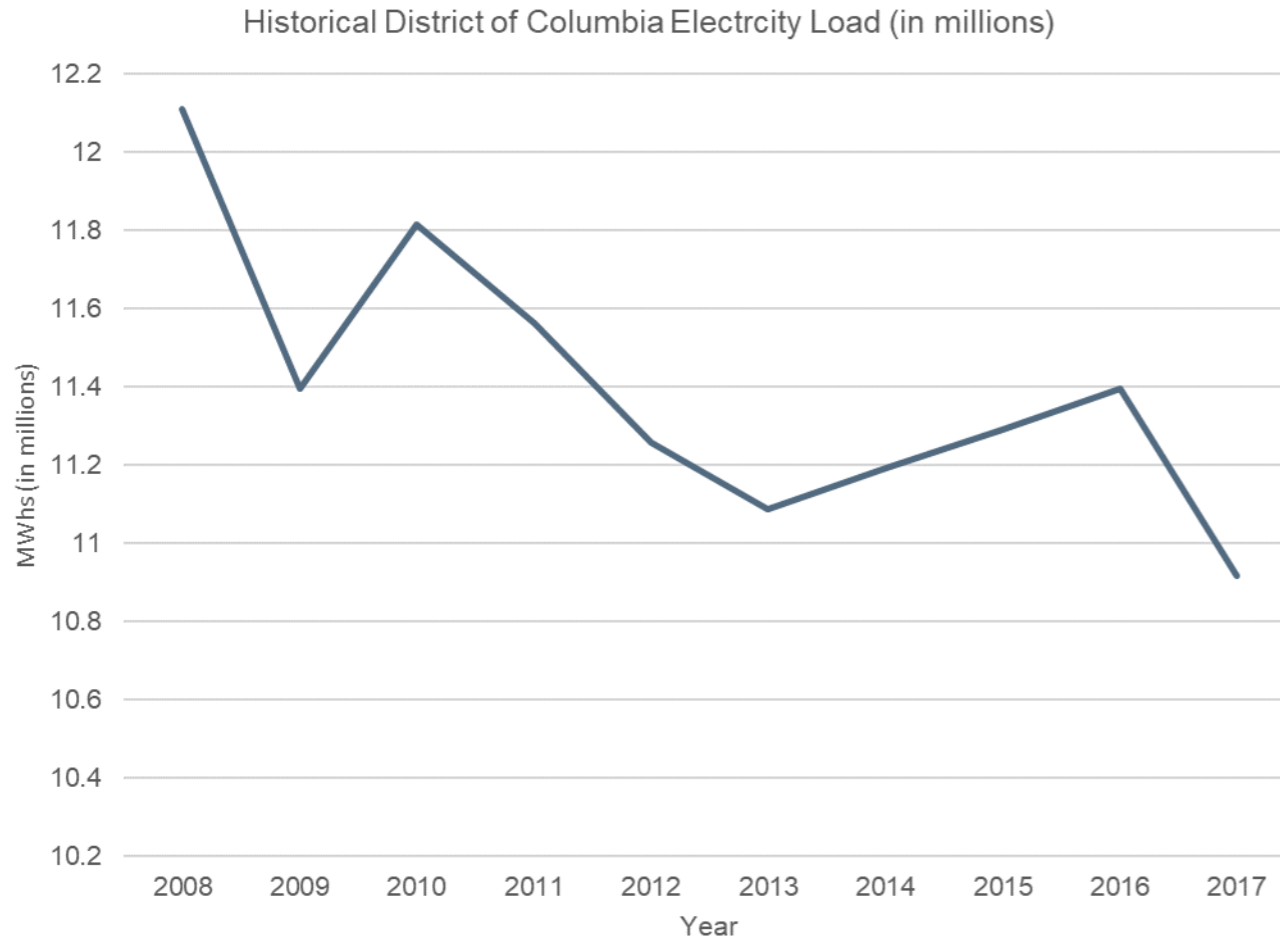


Source: PJM GATS. Last 12 month and last 6 month averages use data through March 2018.

DC ELECTRICITY LOAD GROWTH SCENARIO ANALYSIS: SRECs REQUIRED



Electricity load served has been declining in recent years.



SRECs Required (in 000s)							
Year	RPS Solar %	-1.0% Annual Load Growth	0% Annual Load Growth	1.0% Annual Load Growth	SREC Compliance Range	SACP	Grandfathered SACP
2018	1.15%	124.3	125.5	126.8	2.5	\$500	\$300
2019	1.35%	144.4	147.4	150.3	5.9	\$500	\$200
2020	1.58%	167.4	172.5	177.7	10.3	\$500	\$200
2021	1.85%	194.0	202.0	210.2	16.2	\$500	\$150
2022	2.18%	226.3	238.0	250.1	23.8	\$500	\$150
2023	2.50%	256.9	272.9	289.7	32.8	\$500	\$50

The following analysis assumes the following:

- Electric load growth remains flat at 2017 MWh sold – 10.92 million MWh per year through 2023 (source: EIA)
- Load served under contracts signed *prior* to the effective date of the Renewable Portfolio Standard Expansion Act of 2016 (Oct 8, 2016) is assumed to be rolling off proportionately each year, over the next three years (CY2018, CY2019, CY2020)
- Scenarios presented are derived from Last Twelve Month (LTM) average build rates per month (Apr 2017 - Mar 2018). Due to the potential increase in DC-eligible commercial solar build, three scenarios are presented representing different rates of new capacity acceleration – 100%/200%/300% of current LTM build rates per month.
- Existing cross-certified, DC-eligible facilities assumed to sell into the DC market due to high SREC pricing

DC 2018 ESTIMATED SREC SUPPLY



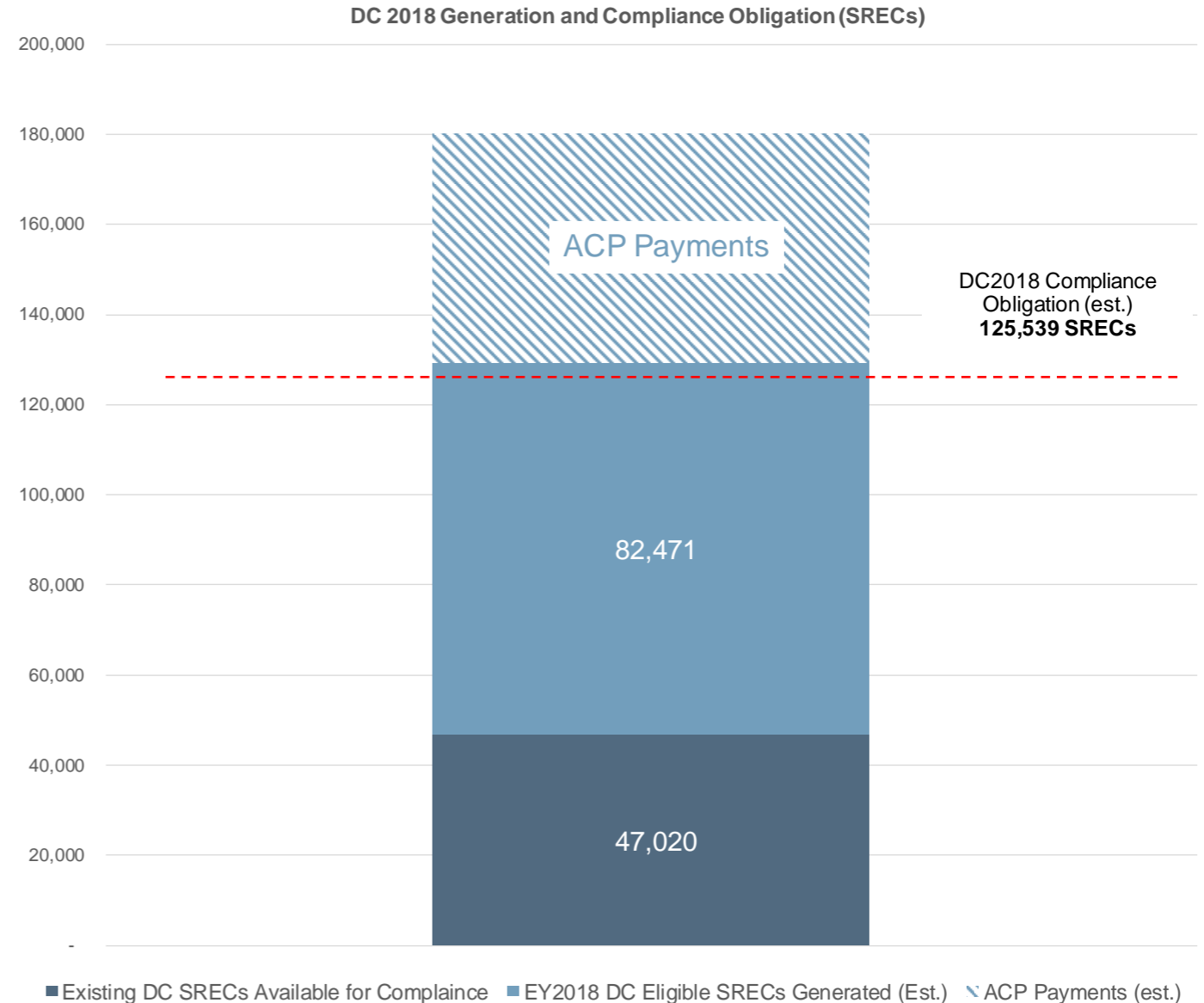
Using GATS recent issuance data as of June 2018

DC2018 Supply and Demand Summary

- DC2016 & DC2017 SRECs Available for Compliance: **47,020**
- DC2018 Supply (projected): **82,471**
- Compliance Obligation (est.): **125,539**
- ACP Payments (est.): **50,611**
- Oversupply: **54,564** (43.5% of obligation)

Factors that could impact this include:

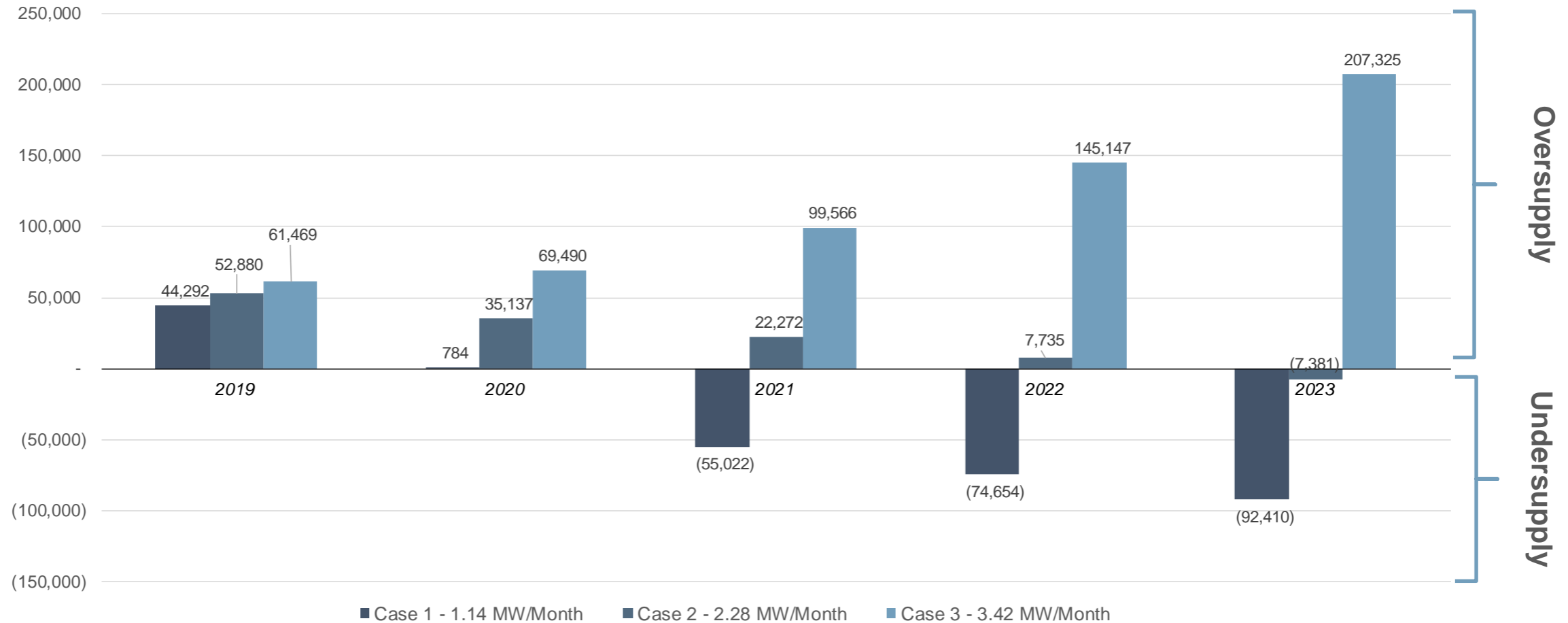
- Final DC 2018 load service figures
- Final DC2018 SRECs produced
- Grandfathered load for DC 2018 compliance



FORECASTED SUPPLY WITH GRANDFATHERED LOAD: BUILD RATE SCENARIOS



Using supply and demand assumptions from slide 6, DC SREC supply 2019 through 2023 would be as follows.



SREC Oversupply (%)	2019	2020	2021	2022	2023
Case 1 - 1.14 MW/Month	30.1%	0.5%	-27.2%	-31.4%	-33.9%
Case 2 - 2.28 MW/Month	35.9%	20.4%	11.0%	3.3%	-2.7%
Case 3 - 3.42 MW/Month	41.7%	40.3%	49.3%	61.0%	76.0%

Source: PJM GATS and SRECTrade Estimates.

FORECASTED SUPPLY WITH GRANDFATHERED LOAD : BUILD RATE SCENARIO DETAIL

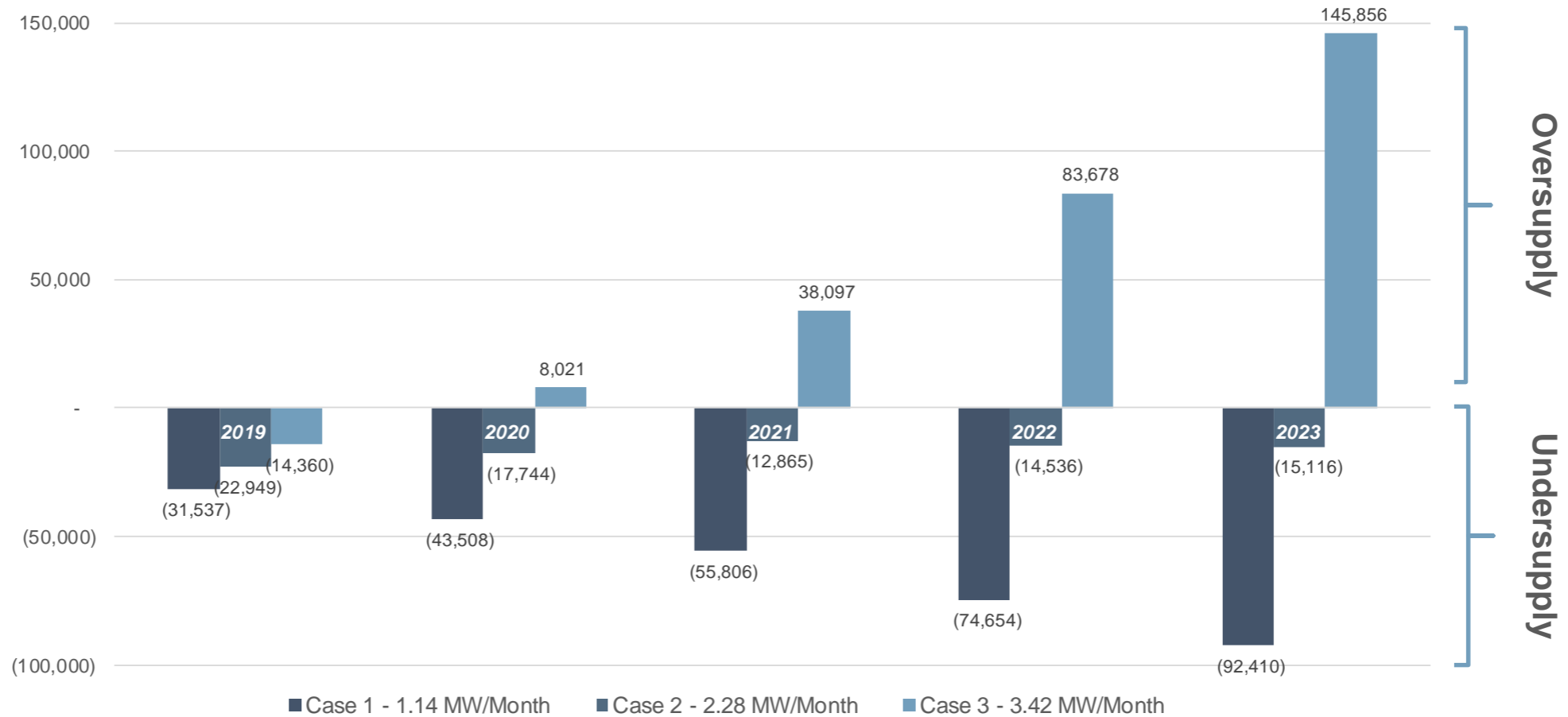


Compliance year	2018	2019	2020	2021	2022	2023
Case 1 - LTM Average MW is Added Per Month Throughout the Forecast						
DC SREC Requirements	125,539	147,372	172,480	201,954	237,979	272,911
<i>Compliance met with old ACP</i>	50,611	25,306	-	-	-	-
Less: Excess SRECs From Prior Period	47,020	54,564	44,292	784	-	-
Less: Case 1 Estimated SRECs Produced	82,471	111,795	128,972	146,148	163,324	180,501
# of SRECs Under / (Over) Supplied	(54,564)	(44,292)	(784)	55,022	74,654	92,410
Case 2 - 200% of LTM Average MW is Added Per Month Throughout the Forecast						
DC SREC Requirements	125,539	147,372	172,480	201,954	237,979	272,911
<i>Compliance met with old ACP</i>	50,611	25,306	-	-	-	-
Less: Excess SRECs From Prior Period	47,020	54,564	52,880	35,137	22,272	7,735
Less: Case 2 Estimated SRECs Produced	82,471	120,383	154,736	189,089	223,442	257,795
# of SRECs Under / (Over) Supplied	(54,564)	(52,880)	(35,137)	(22,272)	(7,735)	7,381
Case 3 - 300% of LTM Average MW is Added Per Month Throughout the Forecast						
DC SREC Requirements	125,539	147,372	172,480	201,954	237,979	272,911
<i>Compliance met with old ACP</i>	50,611	25,306	-	-	-	-
Less: Excess SRECs From Prior Period	47,020	54,564	61,469	69,490	99,566	145,147
Less: Case 3 Estimated SRECs Produced	82,471	128,972	180,501	232,030	283,560	335,089
# of SRECs Under / (Over) Supplied	(54,564)	(61,469)	(69,490)	(99,566)	(145,147)	(207,325)

The following analysis:

- DOES NOT account for grandfathered load contracts and hence does not reflect the *actual* supply and demand dynamic in the DC SREC market
- Serves as a juxtaposition to the prior analysis, to see the impact that grandfathered load contracts have on the DC SREC market
- Assumptions are the same as in slide 6 with regards to load growth, build rates, and cross-certified eligibility

FORECASTED SUPPLY (NO GRANDFATHERED LOAD): BUILD RATE SCENARIOS



SREC Oversupply (%)	2019	2020	2021	2022	2023
Case 1 - 1.14 MW/Month	-21.4%	-25.2%	-27.6%	-31.4%	-33.9%
Case 2 - 2.28 MW/Month	-15.6%	-10.3%	-6.4%	-6.1%	-5.5%
Case 3 - 3.42 MW/Month	-9.7%	4.7%	18.9%	35.2%	53.4%

FORECASTED SUPPLY (NO GRANDFATHERED LOAD): BUILD RATE SCENARIO DETAIL



Compliance year	2018	2019	2020	2021	2022	2023
Case 1 - LTM Average MW is Added Per Month Throughout the Forecast						
DC SREC Requirements	125,539	147,372	172,480	201,954	237,979	272,911
Less: Excess SRECs From Prior Period	47,108	4,040	-	-	-	-
Less: Case 1 Estimated SRECs Produced	82,471	111,795	128,972	146,148	163,324	180,501
# of SRECs Under / (Over) Supplied	(4,040)	31,537	43,508	55,806	74,654	92,410
Case 2 - 200% of LTM Average MW is Added Per Month Throughout the Forecast						
DC SREC Requirements	125,539	147,372	172,480	201,954	237,979	272,911
Less: Excess SRECs From Prior Period	47,108	4,040	-	-	-	-
Less: Case 2 Estimated SRECs Produced	82,471	120,383	154,736	189,089	223,442	257,795
# of SRECs Under / (Over) Supplied	(4,040)	22,949	17,744	12,865	14,536	15,116
Case 3 - 300% of LTM Average MW is Added Per Month Throughout the Forecast						
DC SREC Requirements	125,539	147,372	172,480	201,954	237,979	272,911
Less: Excess SRECs From Prior Period	47,108	4,040	-	8,021	38,097	83,678
Less: Case 3 Estimated SRECs Produced	82,471	128,972	180,501	232,030	283,560	335,089
# of SRECs Under / (Over) Supplied	(4,040)	14,360	(8,021)	(38,097)	(83,678)	(145,856)

DC SREC CURRENT PRICING



DC2017 market: \$360 bid @ \$370 offer
DC2018 market: \$365 bid @ \$380 offer

