



Maryland SREC Market Update

February 13, 2018

- Maryland Solar Build Rates
- MD SREC Supply and Forecast
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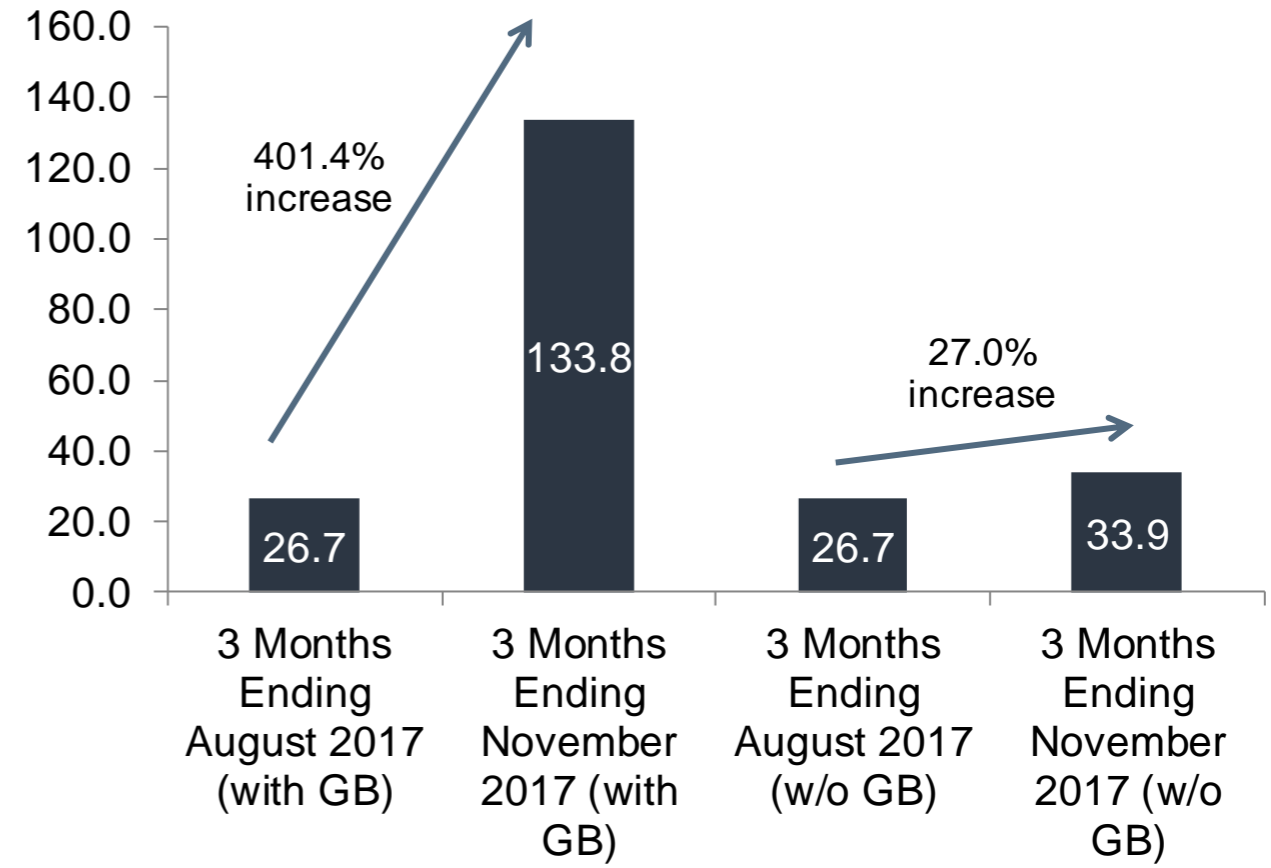
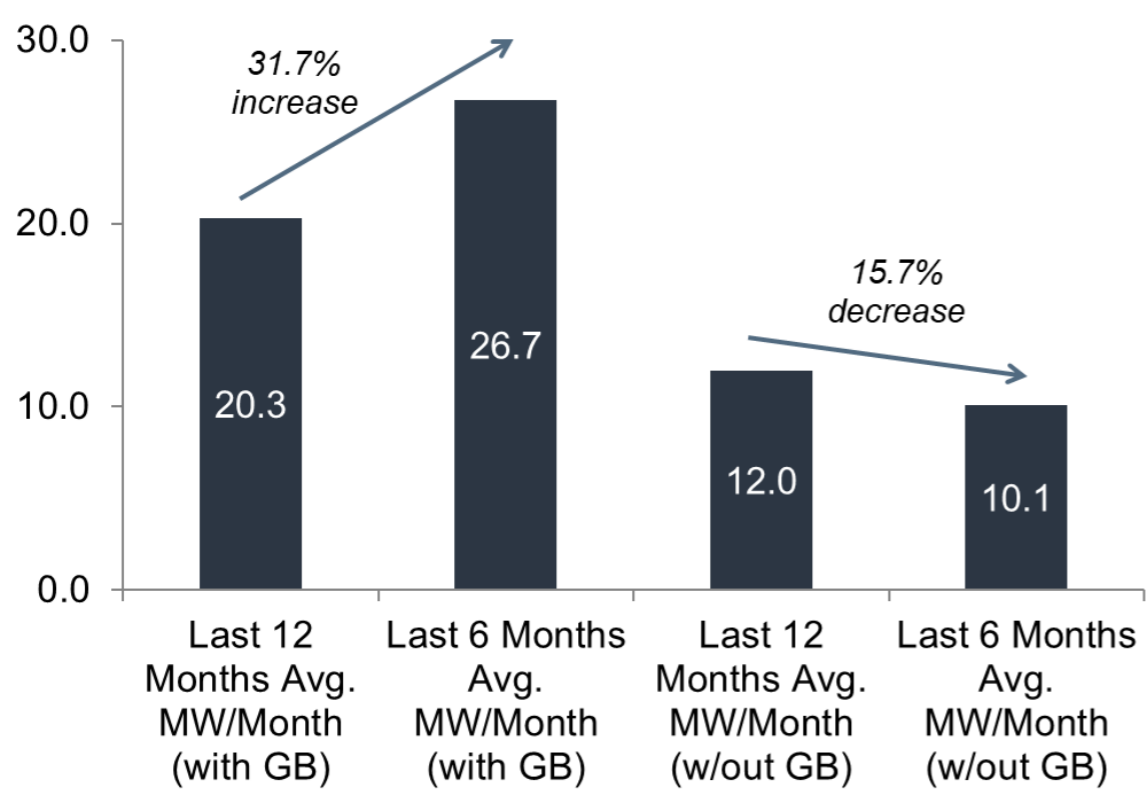
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MD SOLAR BUILD RATES



Registered MD Capacity in PJM GATS as of January 2018 = 962.3MW

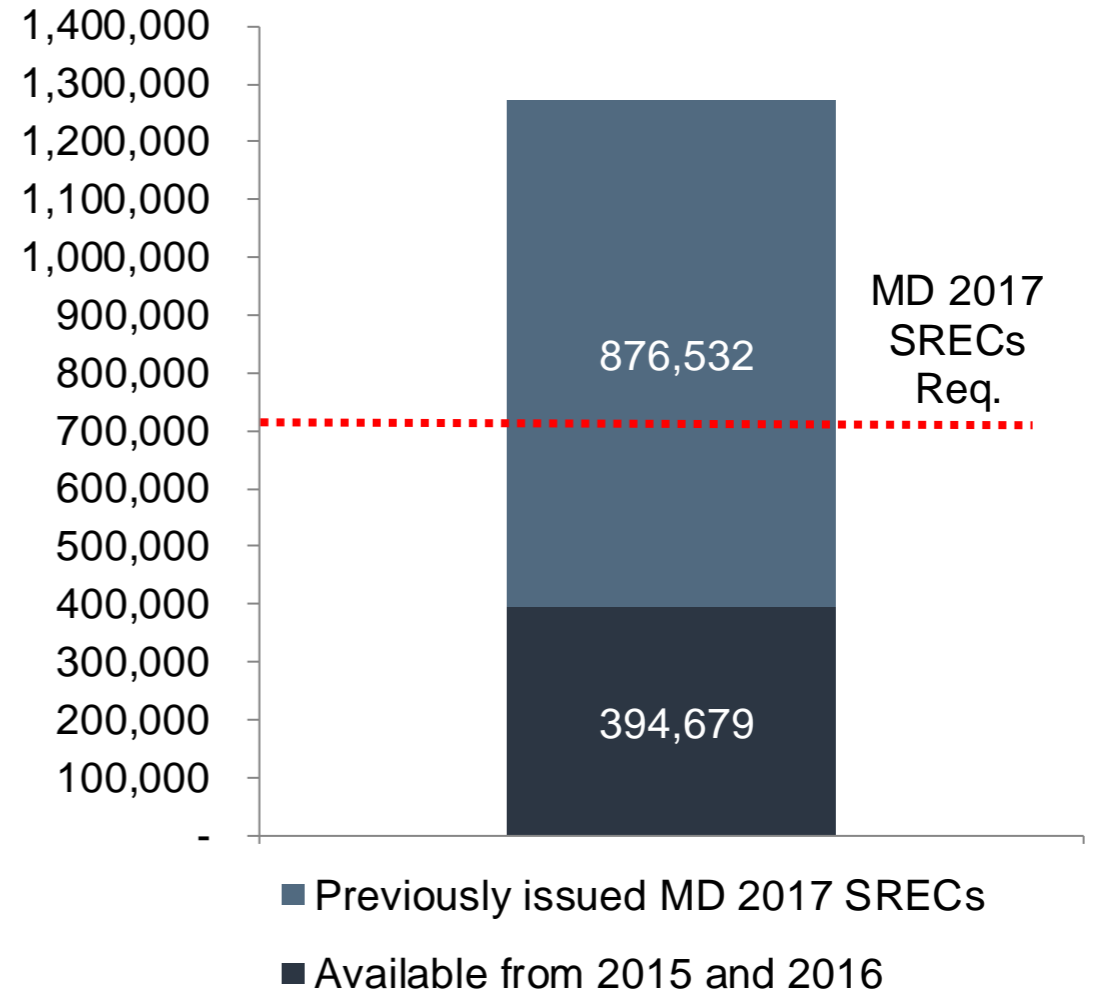
- These figures consider scenarios with and without the ~100 MW facility that came online in September 2017, DPL GREAT BAY 1 SP – 1 (“Great Bay” or “GB”)



Source: PJM GATS. Does not include Washington DC cross-registered capacity; note LTM and LSM data as of 1/17/18 for systems online through November 2017.

Using GATS recent issuance data as of February 2018

- 394.7k CY2015 and CY2016 SRECs remain
- 876.5k CY2017 SRECs have been issued
- CY2017 SREC Requirement is 705.6k (assuming flat load)
- CY2017 estimated oversupply is 565.5k SRECs or approximately 80.2% over the 2017 SREC compliance obligation.*



Source: PJM GATS and SRECTrade Estimates. Figures obtained from PJM GATS were updated as of 02/12/2018.

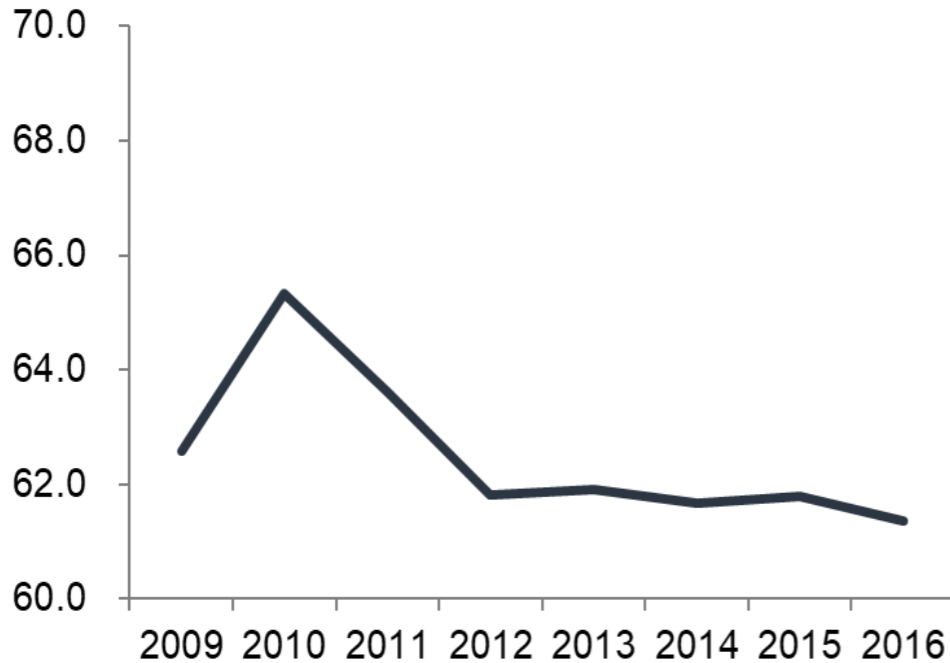
*It is possible this number could increase if more MD2017 vintage SRECs are issued in 2018 periods (i.e. late generation reporting).

MD ELECTRICITY SALES (MWh) AND SRECs REQUIRED CURRENT RPS



Recent years have declined or are flat; 2016 = 61.4 mm MWh

Electricity Sales (MWh in millions)



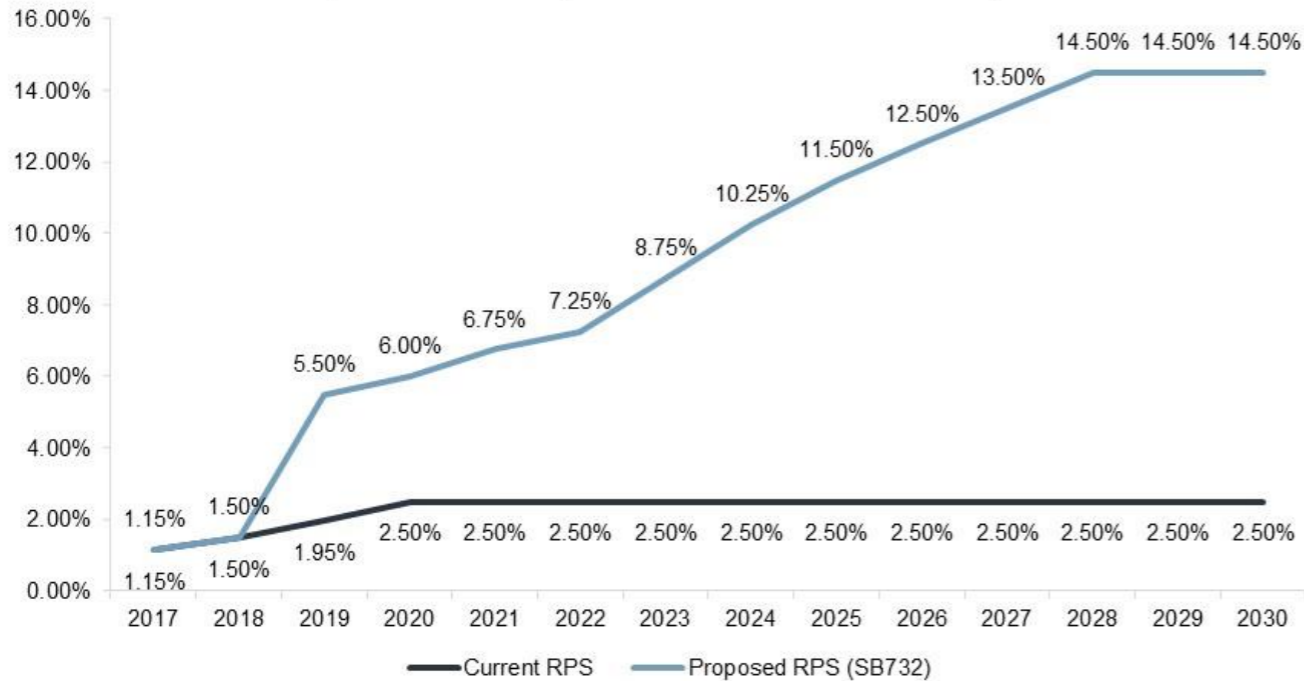
Year	SRECs Required (in 000s)				
	RPS Solar %	0% Annual Load Growth	1.0% Annual Load Growth	SREC Difference	SACP
2017	1.15%	705.6	719.8	14.2	\$ 195.00
2018	1.50%	920.3	948.2	27.9	\$ 175.00
2019	1.95%	1,196.4	1,245.0	48.6	\$ 150.00
2020	2.50%	1,533.8	1,612.1	78.2	\$ 125.00
2021	2.50%	1,533.8	1,628.2	94.4	\$ 100.00
2022	2.50%	1,533.8	1,644.5	110.6	\$ 75.00

CURRENT VS PROPOSED RPS REQUIREMENTS AND SACP

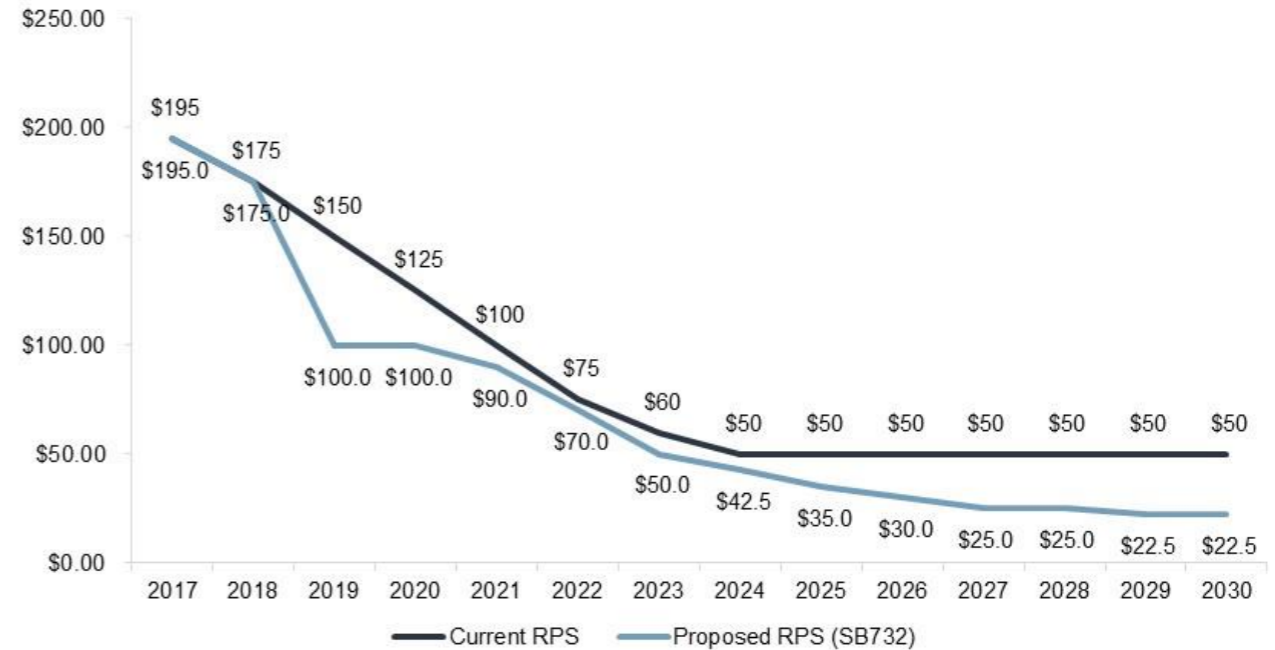


The following charts illustrate the differences between the current MD RPS schedule and the new, proposed Renewable Energy and Job Development Bill (SB732/HB1453). The proposed bill increases the Solar RPS % requirements while reducing the Solar Alternative Compliance Payment (SACP) (i.e. \$/MWh).

Maryland RPS Requirements: Current vs. Proposed



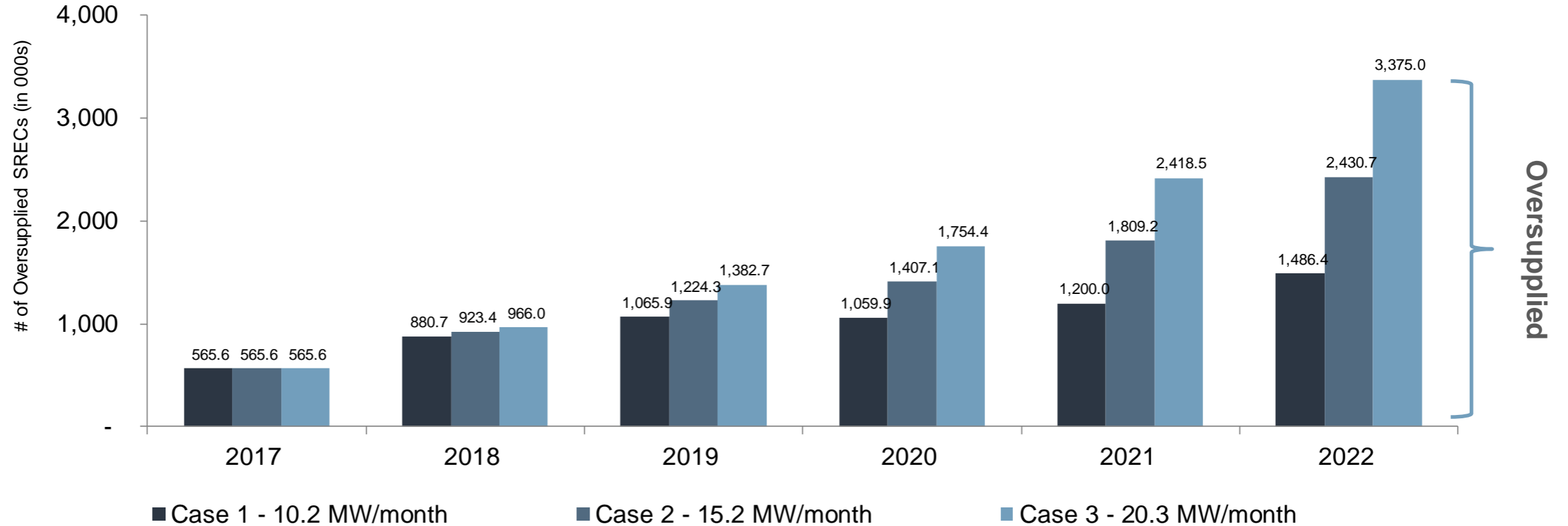
Maryland SACP: Current vs. Proposed



The following analysis assumes the following:

- Load growth remains flat at 2016 MWh sold - 61.4 mm MWh per year (source: EIA)
- Exempt load (i.e. supply agreements already executed at time of proposed RPS passage) not considered, but will impact demand
- Supply (i.e. build forecast) is based on registered projects in PJM GATS as of January 17, 2018
- Scenarios presented are derived from Last Twelve Month (LTM) average build rates per month. Due to the likely impact of dramatically depressed SREC prices, we assume that the 100% of LTM “base case” is actually an aggressive case, and the other two presented scenarios are of different rates of new capacity deceleration – 50% / 75% / 100% of current LTM build rates per month
- PJM queue (particularly the large scale projects) could certainly further impact the supply forecast in the enclosed scenarios, but is not reflected in the following analysis
- Under proposed RPS, new increases in solar carve out would allow for new build and solar growth to continue in MD

SUPPLY / DEMAND SCENARIOS – LOAD SALES FLAT, CURRENT RPS



Energy Year	2017	2018	2019	2020	2021	2022
Estimated % Over (Under) Supplied						
Case 1 - 10.2 MW/month	80.2%	95.7%	89.1%	69.1%	78.2%	96.9%
Case 2 - 15.2 MW/month	80.2%	100.3%	102.3%	91.7%	118.0%	158.5%
Case 3 - 20.3 MW/month	80.2%	105.0%	115.6%	114.4%	157.7%	220.0%

SUPPLY / DEMAND SCENARIOS – LOAD SALES FLAT, CURRENT RPS

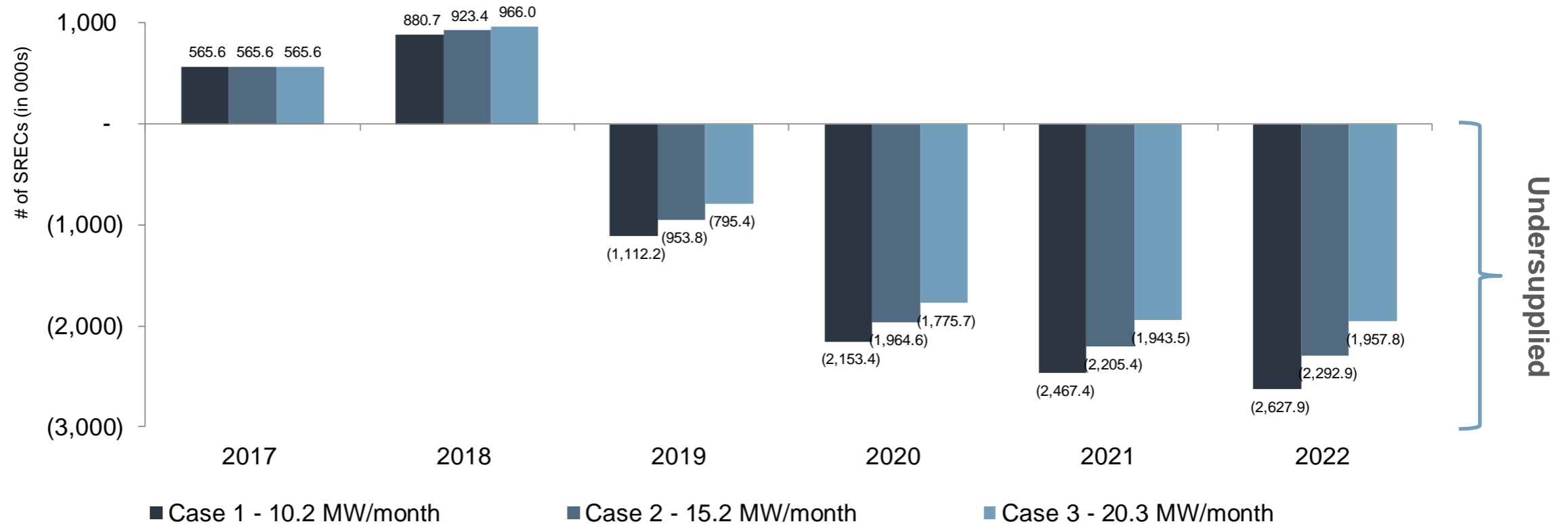


Case 1 - 50% of LTM Average MW Added Per Month Throughout the Forecast	2017	2018	2019	2020	2021	2022
MD SREC Requirements	705,570	920,309	1,196,401	1,533,848	1,533,848	1,533,848
Less: Excess SRECs From Prior Period	394,679	565,641	880,717	1,065,910	1,059,868	1,200,036
Less: Case 1 Estimated SRECs Produced	876,532	1,235,384	1,381,595	1,527,806	1,674,016	1,820,227
# of SRECs Under / (Over) Supplied	(565,641)	(880,717)	(1,065,910)	(1,059,868)	(1,200,036)	(1,486,415)

Case 2 - 75% of LTM Average MW Added Per Month Throughout the Forecast	2017	2018	2019	2020	2021	2022
MD SREC Requirements	705,570	920,309	1,196,401	1,533,848	1,533,848	1,533,848
Less: Excess SRECs From Prior Period	394,679	565,641	923,361	1,224,305	1,407,118	1,809,247
Less: Case 2 Estimated SRECs Produced	876,532	1,278,029	1,497,345	1,716,661	1,935,977	2,155,293
# of SRECs Under / (Over) Supplied	(565,641)	(923,361)	(1,224,305)	(1,407,118)	(1,809,247)	(2,430,692)

Case 3 - LTM Average MW Added Remains the Same Per Month Throughout the Forecast	2017	2018	2019	2020	2021	2022
MD SREC Requirements	705,570	920,309	1,196,401	1,533,848	1,533,848	1,533,848
Less: Excess SRECs From Prior Period	394,679	565,641	966,006	1,382,700	1,754,369	2,418,458
Less: Case 3 Estimated SRECs Produced	876,532	1,320,674	1,613,095	1,905,516	2,197,938	2,490,359
# of SRECs Under / (Over) Supplied	(565,641)	(966,006)	(1,382,700)	(1,754,369)	(2,418,458)	(3,374,970)

SUPPLY / DEMAND SCENARIOS – LOAD SALES FLAT, PROPOSED RPS



Energy Year	2017	2018	2019	2020	2021	2022
Estimated % Over (Under) Supplied						
Case 1 - 10.2 MW/month	80.2%	95.7%	-33.0%	-58.5%	-59.6%	-59.1%
Case 2 - 15.2 MW/month	80.2%	100.3%	-28.3%	-53.4%	-53.3%	-51.5%
Case 3 - 20.3 MW/month	80.2%	105.0%	-23.6%	-48.2%	-46.9%	-44.0%

SUPPLY / DEMAND SCENARIOS – LOAD SALES FLAT, PROPOSED RPS



Case 1 - 50% of LTM Average MW Added Per Month Throughout the Forecast	2017	2018	2019	2020	2021	2022
MD SREC Requirements	705,570	920,309	3,374,465	3,681,235	4,141,389	4,448,159
Less: Excess SRECs From Prior Period	394,679	565,641	880,717	-	-	-
Less: Case 1 Estimated SRECs Produced	876,532	1,235,384	1,381,595	1,527,806	1,674,016	1,820,227
# of SRECs Under / (Over) Supplied	(565,641)	(880,717)	1,112,154	2,153,429	2,467,373	2,627,932

Case 2 - 75% of LTM Average MW Added Per Month Throughout the Forecast	2017	2018	2019	2020	2021	2022
MD SREC Requirements	705,570	920,309	3,374,465	3,681,235	4,141,389	4,448,159
Less: Excess SRECs From Prior Period	394,679	565,641	923,361	-	-	-
Less: Case 2 Estimated SRECs Produced	876,532	1,278,029	1,497,345	1,716,661	1,935,977	2,155,293
# of SRECs Under / (Over) Supplied	(565,641)	(923,361)	953,759	1,964,574	2,205,412	2,292,866

Case 3 - LTM Average MW Added Remains the Same Per Month Throughout the Forecast	2017	2018	2019	2020	2021	2022
MD SREC Requirements	705,570	920,309	3,374,465	3,681,235	4,141,389	4,448,159
Less: Excess SRECs From Prior Period	394,679	565,641	966,006	-	-	-
Less: Case 3 Estimated SRECs Produced	876,532	1,320,674	1,613,095	1,905,516	2,197,938	2,490,359
# of SRECs Under / (Over) Supplied	(565,641)	(966,006)	795,364	1,775,718	1,943,451	1,957,800

MD SREC CURRENT PRICING



MD2017 market: \$7.25 @ \$8.50

MD2018 market: \$8.50 @ \$9.50

MD2019 market: \$9.00 @ \$10.00

- MD2017 bid
- MD2018 bid
- MD2019 bid

