

Figure 9.3 Ameren Missouri's RES REC Positions

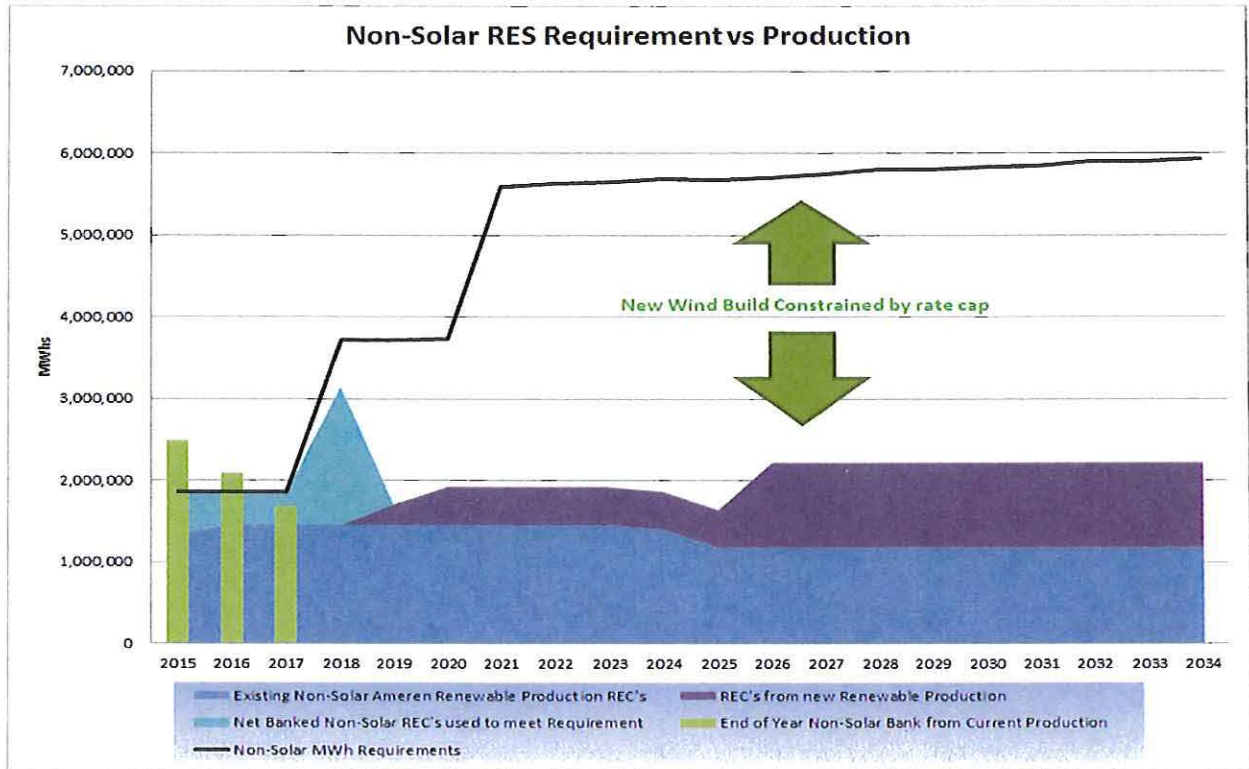


Figure 9.3 shows that Ameren Missouri expects to meet the overall REC requirement until 2018, without being constrained by the 1% rate impact limitation. Ameren Missouri is able to meet the overall standard until 2018 using RECs generated by its existing qualifying resources, including hydro, wind, and landfill gas, and banked RECs from prior years.

Once the standard increases to 10% in 2018, Ameren Missouri exhausts its remaining REC bank then places new wind generation into service starting in 2019. The model shows the amounts of planned new wind and solar resources needed to meet the standard subject to the 1% rate cap. In addition, the model is used to provide a view on RES compliance for both an unconstrained and constrained (i.e., 1% rate impact cap) view of compliance. Table 9.2 shows the unconstrained and constrained amounts of wind, landfill gas (LFG), and solar resources needed. This model was used to develop the RES compliance portfolios for the alternative resource plans. Appendix A shows the unconstrained and constrained amounts of wind, LFG, and solar resources needed in Term 1 (2014-2023) and Term 2 (2025-2034) by year.

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Table 9.2 2014 IRP Compliance Filing Model

Description	10 Year Sum TERM 1 (2015-2024)	10 Year Sum TERM 2 (2025-2034)	20 Year Sum (2015-2034)
Unconstrained Full RES REC Requirement met with new builds			
MW's Installed New Solar	5	54	59
MW's Installed New LFG	5	0	5
MW's Installed New Wind	1,003	110	1,114
RES Requirement within 1% Rate Cap Limit			
MW's Installed New Solar	16	10	26
MW's Installed New LFG	5	0	5
MW's Installed New Wind	100	142	242

Several renewable portfolios were evaluated in the capacity planning process using *2014 IRP RES Compliance Filing Model*: 1) RES compliance with RAP or MAP, 2) RES Compliance with MEEIA Cycle 1 Only, and 3) Balanced (i.e., 400 MW Wind, 45 MW Solar, and 20 MW Small Hydroelectric). The RES portfolios were developed using the described in Section 9.2.

When developing the RES compliance investment needs, consideration was given to the potential difference between RAP DSM investment vs a MAP DSM investment due to their differing impacts on customer sales, which is used as the basis for determining the amount of renewable energy needed to comply with the RES portfolio requirements. After modeling both, the difference in the level of renewable generation added was determined to be insignificant, primarily because of the effect of the 1% rate impact limitation on investment levels. Specifically, the difference was less than 1 MW of investment in solar for Term 1 and less than 4 MW's of wind investment for Term 2. Therefore MAP and RAP portfolios are accompanied by the same level of renewable investment when included in alternative resource plans.

Table 9.3 shows the timing of resources for renewable portfolios included in the alternative resource plans.

Table 9.3 Alternative Resource Plans - Renewable Portfolios

Renewable Portfolios		Nameplate Capacity (MW)																			TOTAL	
		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033		2034
RES with RAP or MAP	Wind	0	0	0	0	50	50	0	0	0	0	0	142	0	0	0	0	0	0	0	0	242
	Solar	5	10	0	0	0	0	2	0	0	0	10	0	0	0	0	0	0	0	0	0	26
	LFG	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	Hydro	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RES with MEEIA Cycle 1	Wind	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Solar	5	10	0	0	0	0	2	0	0	0	10	0	0	0	0	0	0	0	0	0	26
	LFG	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	Hydro	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Balanced	Wind	0	0	0	0	50	50	0	100	0	100	0	100	0	0	0	0	0	0	0	0	400
	Solar	5	10	0	0	0	0	10	0	0	0	10	0	10	0	0	0	0	0	0	0	45
	LFG	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	Hydro	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	10	0	0	0	20