

*Table AR-5  
Transmission System Additions – Asset Renewal Circuit Breakers*

<b>System Additions</b>	<b>Projected In-Service Year</b>	<b>Planning Zone</b>	<b>Need Category</b>
Circuit breaker replacements	2011	Various	Mechanism design issues (5 units) 69 kV
Circuit breaker replacements	2011	Various	Type U bushings (17 units) 69 kV
Circuit breaker replacements	2011	Various	End of life, parts obsolescence (2 unit) 138 kV
Circuit breaker replacements	2011	Various	Type U bushings (15 units) 138 kV
Circuit breaker replacements	2011	Various	Ratings (5 units) 69 kV
Circuit breaker replacements	2012	Various	End of life, parts obsolescence (4 units) 69 kV
Circuit breaker replacements	2012	Various	Type U bushings (37 units) 69 kV
Circuit breaker replacements	2012	Various	Ratings (6 units) 69 kV
Circuit breaker replacements	2012	Various	Mechanism design issues (1 units) 69kV
Circuit breaker replacements	2012	Various	Type U Bushings (9 units) 138kV
Circuit breaker replacements	2012	Various	Planning stability issues (3 units) 138 KV

System Additions	Projected In-Service Year	Planning Zone	Need Category
Circuit breaker replacements	2012	Various	Ratings (3 units) 138kV
Circuit breaker replacements	2013	Various	Type U Bushings (12 units) 69kV
Circuit breaker replacements	2013	Various	Planning stability issues (1 units) 69 KV
Circuit breaker replacements	2013	Various	Type S bushings (1 unit) 69 kV
Circuit breaker replacements	2013	Various	Type U Bushings (4 units) 138kV
Circuit breaker replacements	2013	Various	End of life, part obsolescence (6 units) 138 kV
Circuit breaker replacements	2013	Various	EPA SF6 emission reduction (7units) 345 kV
Circuit breaker replacements	2014	Various	End of life, parts obsolescence (7 units) 138 kV
Circuit breaker replacements	2014	Various	Mechanism design issues (11 units) 69 kV
Circuit breaker replacements	2014	Various	Type U Bushings (4 units) 138kV
Circuit breaker replacements	2014	3	Type U Bushings (1 unit) 69kV

System Additions	Projected In-Service Year	Planning Zone	Need Category
Circuit breaker replacements	2014	5	Over duty rating (1 unit) 138 kV
Circuit breaker replacements	2015-2020	Various	Mechanism design issues (30 units) 69 kV
Circuit breaker replacements	2015-2020	Various	End of life, parts obsolescence (7 units) 69 kV
Circuit breaker replacements	2015-2020	Various	Mechanism design issues (3 units) 138 kV
Circuit breaker replacements	2015-2020	Various	End of life, parts obsolescence (5 units) 138 kV
Circuit breaker replacements	2015-2020	Various	Bushing flange oil leak (21 units) 345 kV
Circuit breaker replacements	2015-2020	Various	End of life, parts obsolescence (8 units) 345 kV