

FINAL AFFECTED UTILITY DETERMINATIONS AS APPROVED BY THE VERMONT SYSTEM PLANNING COMMITTEE January, 2010

Priority number	Name	Year of Need	Load MW Needed	Low Cost	High Cost	Project Type	Deficiencies	Project	Affected DUs	Lead DU
1	St. Johnsbury	2009	400	\$ 22	\$ 22	Substation	10	Construct new ring substation at or near Lyndonville substation, install capacitor banks	CVPS, LED for station. CVPS, LED & VEC for capacitor banks	LED
2	Middlebury	2009	700	\$ 10	\$ 20	Substation	2	Install 2nd 115/46 kV transformer, rebuild to ring station. <i>(Note: CVPS is pursuing an alternative transmission solution to resolve this deficiency.)</i>	CVPS	CVPS
3A	St. Albans	2009	900	\$ 25	\$ 50	Substation	1	Construct new ring station with two 115/34.5 kV transformers	CVPS, VEC	CVPS
3B	Georgia	2009	1100	\$ 20	\$ 40	Substation	1	Rebuild to ring station	All Vermont DUs	CVPS
3C	Georgia–St. Albans	2018	1275	\$ 15	\$ 30	Transmission	1	Construct new Georgia to St Albans 115 kV transmission line, under 10 miles. <b>Needed before 2018.</b>	All Vermont DUs	VEC
4	South Rutland	2009	1000	\$ 15	\$ 30	Substation	5	Construct new substation with a 115/46 kV transformer	CVPS	CVPS
5	Blissville	2009	800	\$ 15	\$ 30	Substation	3	Install 2nd 115/46 kV transformer, rebuild to ring station, install capacitor banks	CVPS	CVPS
6	Hartford	2009	1000	\$ 15	\$ 30	Substation	4	Install 2nd 115/46 kV transformer, rebuild to ring station	CVPS, GMP	CVPS
7	Ascutney	2009	<1170	\$ 14	\$ 28	Substation	6	Rebuild to breaker-and-a-half station	All Vermont DUs, NU, NGRID	CVPS
8A	Newport	2009	1000	\$ 1	\$ 2	Substation	10	Install capacitor banks	All Vermont DUs	VEC
8B	Queen City	2009	<1170	\$ 2	\$ 4	Substation	8	Install capacitor bank	All Vermont DUs, NGRID	GMP
8C	West Rutland	2009	<1170	\$ 6	\$ 12	Substation	8, 9	Install capacitor banks and shunt reactors	All Vermont DUs, NGRID	CVPS
8D	Ascutney	2009	<1170	\$ 2	\$ 4	Substation	6	Add capacitor banks	All Vermont DUs, NU, NGRID	CVPS
8E	Coolidge Reactor	2011	1200	\$ 4	\$ 8	Substation	9	Install shunt reactor	All Vermont DUs, NU, NGRID, NY	CVPS
9	Coolidge–Ascutney	2009	N/A	\$ 25	\$ 50	Transmission	12	Rebuild transmission line to higher rating, under 15 miles	All Vermont DUs, NU, NGRID	CPVS*
10	Yankee–Vernon Rd	2009	<1170	\$ 5	\$ 10	Transmission	11	Rebuild line for higher rating, under 10 miles	All Vermont DUs, NU, NGRID	CVPS

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11	Vernon	2010	1185	\$ 15	\$ 30	Substation	14	Install 2nd 345/115 kV transformer	All Vermont DUs, NU, NGRID	CVPS
12	Ascutney–Ascutney Tap	2013	1210	\$ 5	\$ 10	Transmission	13	Rebuild transmission line to higher rating, under 10 miles	All Vermont DUs, NU, NGRID	CVPS
13	Coolidge–Cold River	2013	1210	\$ 35	\$ 70	Transmission	15	Rebuild transmission line to higher rating, under 20 miles	All Vermont DUs, NY	CVPS
14	Bennington	2009	<1170	\$ 10	\$ 20	Substation	7	Rebuild to ring substation, install capacitor banks	All Vermont DUs, NGRID	CVPS
15	Ascutney Transformer	2013	1210	\$ 6	\$ 12	Substation	6	Install 2nd 115/46kV transformer	CVPS, Ludlow for station	CVPS
16	Coolidge Transformer	2016	1245	\$ 20	\$ 40	Substation	16	Install 2nd 345/115 kV transformer	All Vermont DUs, NU, NGRID, NY	CVPS
17	Barre	2018	1275	\$ 10	\$ 20	Substation	19	Install 2nd 115/34.5 kV transformer and rebuild to ring station. <b>2018 assumes there will be an upgrade to the 34.5 kV system</b>	GMP, WEC	GMP
18	Chelsea	2018	1275	\$ 15	\$ 30	Substation	4	Install 2nd 115/46 kV transformer, rebuild to ring station	CVPS, WEC	CVPS
19	Plattsburgh–Essex	2021	N/A	\$200	\$300	Transmission	21, 22, 23	Construct new Plattsburgh to Essex 230 kV transmission line, parallel with existing 115 kV lines, under 30 miles, <b>NOTE: timing may be 2016 or earlier depending on other possible scenarios</b>	All Vermont DUs	GMP
<b>TOTAL</b>				<b>\$512</b>	<b>\$902</b>					

\* Change from GMP to CVPS approved by VSPC and affected utilities.