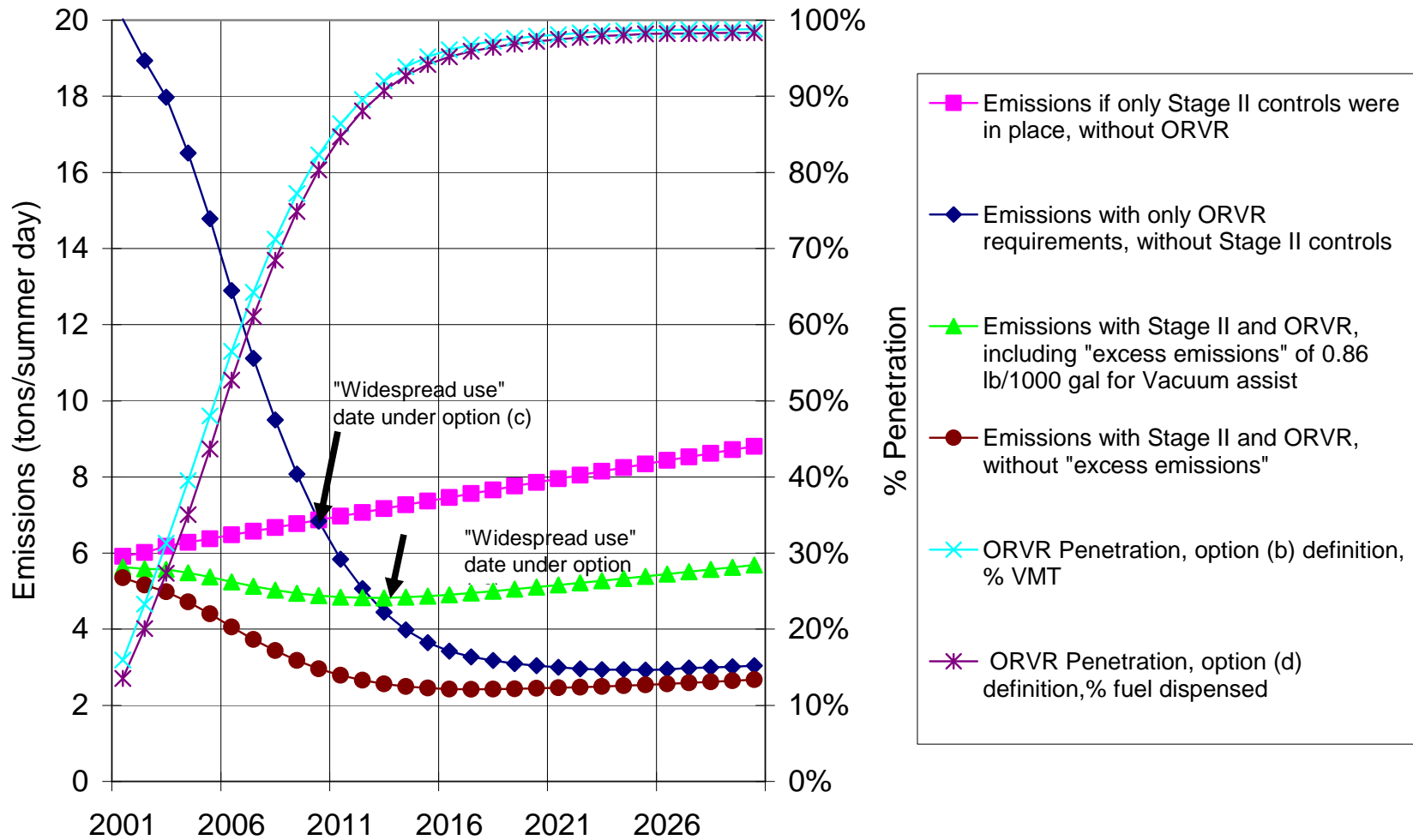




APPENDIX B

**ORVR WIDESPREAD USE ANALYSIS
FOR
MASSACHUSETTS, NEW HAMPSHIRE, & VERMONT
(2005 ANALYSIS)**

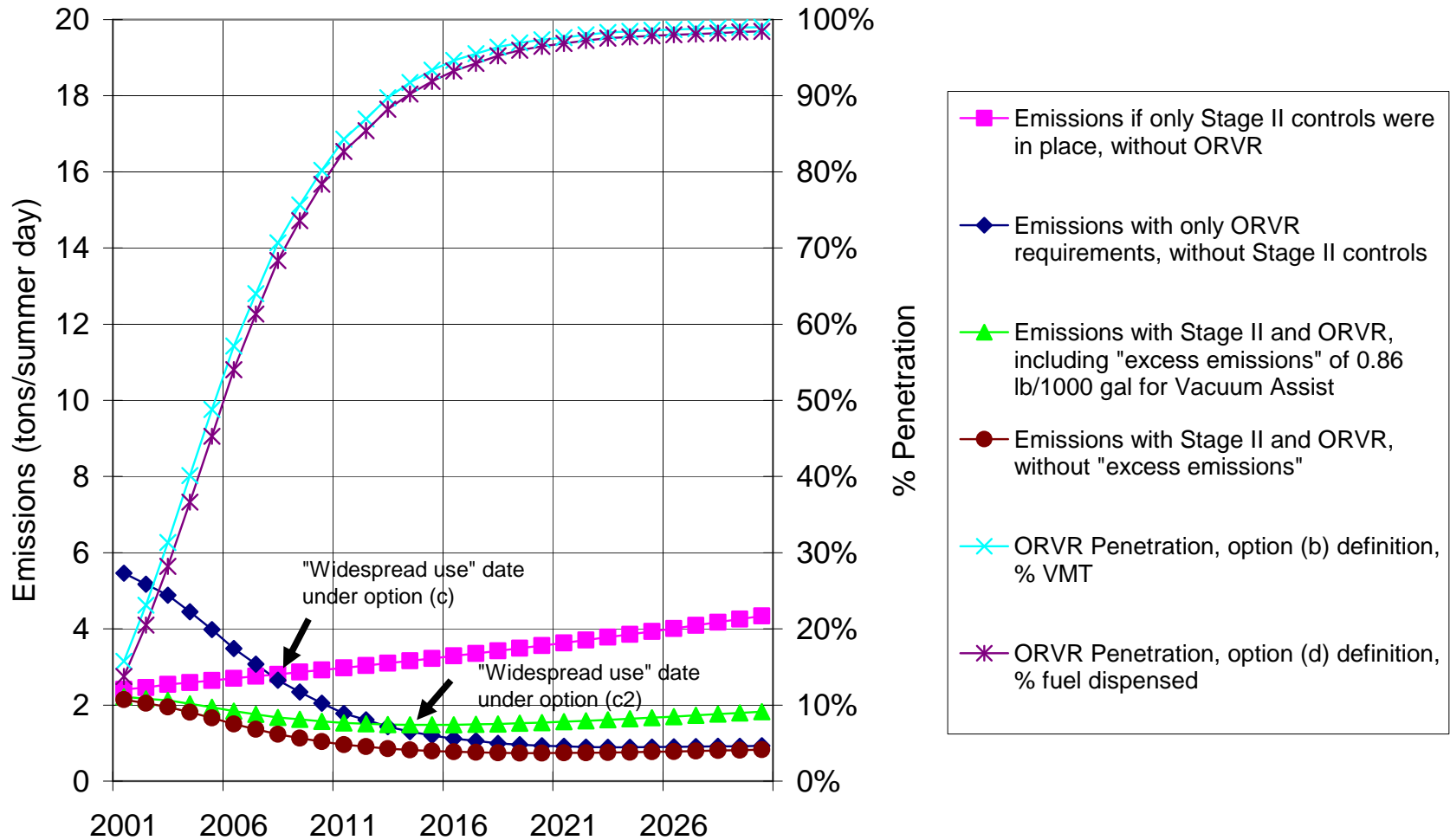
MASSACHUSETTS (IEE 0.86)



TOTAL REFUELING EMISSIONS –MASSACHUSETTS (Calculations assume all VA have IEE of 0.86, uncorrected)

Calendar Year	Grams Emitted Per Gallon Gasoline						Tons Per Summer Day				
	Stage II Controls Only	ORVR Only	Stage II with ORVR, No IEE	Stage II with ORVR,	% Decrease from Uncontrolled Emissions		Stage II Controls Only	ORVR Only	Stage II with ORVR, No IEE	Stage II with ORVR, IEE	Excess Emissions
2001	0.682	2.307	0.617	0.649	75%		5.92	20.02	5.35	5.63	0.28
2002	0.682	2.147	0.585	0.633	76%		6.01	18.93	5.16	5.58	0.42
2003	0.689	2.005	0.556	0.622	77%		6.18	17.97	4.98	5.57	0.59
2004	0.690	1.813	0.518	0.602	78%		6.28	16.51	4.72	5.49	0.77
2005	0.690	1.599	0.476	0.581	78%		6.38	14.78	4.40	5.37	0.97
2006	0.690	1.373	0.432	0.559	79%		6.48	12.90	4.06	5.25	1.19
2007	0.690	1.166	0.391	0.538	80%		6.57	11.12	3.73	5.13	1.40
2008	0.690	0.982	0.355	0.519	81%		6.67	9.50	3.44	5.03	1.59
2009	0.690	0.823	0.324	0.504	81%		6.77	8.08	3.18	4.94	1.76
2010	0.690	0.687	0.297	0.490	82%		6.87	6.84	2.96	4.88	1.92
2011	0.690	0.578	0.276	0.479	82%		6.97	5.84	2.79	4.84	2.05
2012	0.690	0.494	0.259	0.471	83%		7.07	5.06	2.66	4.83	2.17
2013	0.690	0.428	0.246	0.464	83%		7.17	4.45	2.56	4.82	2.26
2014	0.690	0.378	0.237	0.459	83%		7.27	3.98	2.49	4.84	2.34
2015	0.690	0.342	0.230	0.456	83%		7.36	3.65	2.45	4.87	2.41
2016	0.690	0.317	0.225	0.453	83%		7.46	3.43	2.43	4.90	2.47
2017	0.690	0.299	0.221	0.451	83%		7.56	3.27	2.42	4.95	2.52
2018	0.690	0.286	0.219	0.450	83%		7.66	3.17	2.43	5.00	2.57
2019	0.690	0.275	0.217	0.449	83%		7.76	3.09	2.44	5.05	2.62
2020	0.690	0.267	0.215	0.448	83%		7.86	3.04	2.45	5.10	2.66
2021	0.690	0.260	0.214	0.448	83%		7.95	3.00	2.46	5.16	2.70
2022	0.690	0.253	0.212	0.447	83%		8.05	2.96	2.48	5.22	2.74
2023	0.690	0.249	0.211	0.446	83%		8.15	2.94	2.50	5.27	2.78
2024	0.690	0.246	0.211	0.446	83%		8.24	2.94	2.52	5.33	2.81
2025	0.690	0.242	0.210	0.446	83%		8.34	2.92	2.54	5.39	2.85
2026	0.690	0.241	0.210	0.446	83%		8.43	2.95	2.57	5.45	2.88
2027	0.690	0.241	0.210	0.446	83%		8.53	2.98	2.59	5.51	2.92
2028	0.690	0.240	0.210	0.446	83%		8.62	3.00	2.62	5.57	2.95
2029	0.690	0.239	0.209	0.445	83%		8.71	3.01	2.64	5.63	2.98
2030	0.690	0.238	0.209	0.445	83%		8.81	3.04	2.67	5.69	3.01

NEW HAMPSHIRE (IEE 0.86)

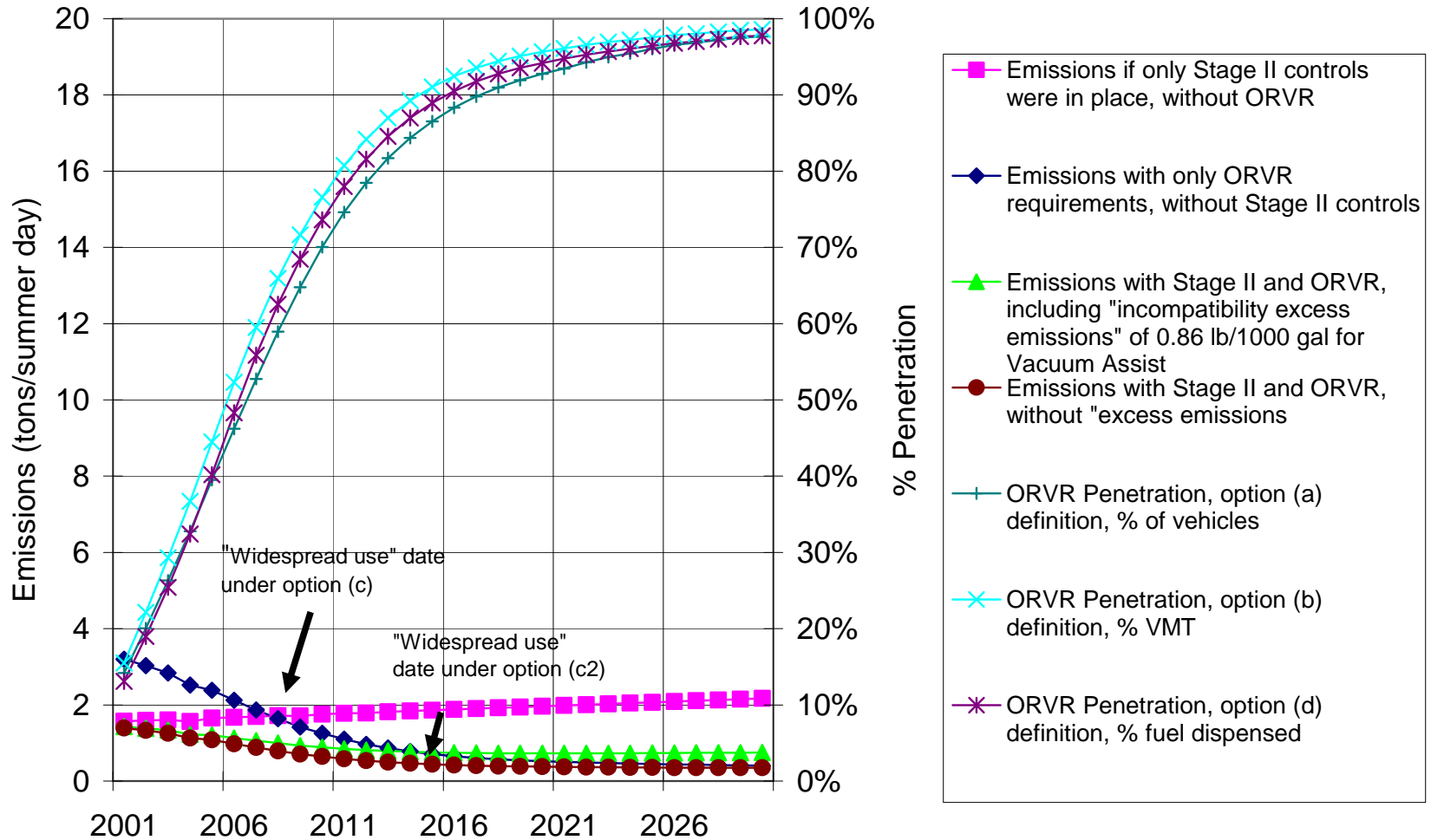


TOTAL REFUELING EMISSIONS - NEW HAMPSHIRE (Calculations assume all VA have IEE of 0.86, uncorrected)

Calendar Year	Grams Emitted Per Gallon Gasoline				% Decrease from Uncontrolled Emissions
	Stage II Controls Only	ORVR Only	Stage II with ORVR, No IEE	Stage II with ORVR, IEE	
2001	1.149	2.604	1.020	1.057	65%
2002	1.149	2.416	0.956	1.011	66%
2003	1.164	2.236	0.895	0.971	68%
2004	1.164	1.998	0.814	0.913	70%
2005	1.164	1.752	0.731	0.854	72%
2006	1.164	1.505	0.647	0.794	74%
2007	1.164	1.299	0.578	0.744	76%
2008	1.164	1.099	0.510	0.696	77%
2009	1.165	0.951	0.460	0.660	78%
2010	1.165	0.817	0.415	0.627	79%
2011	1.164	0.695	0.373	0.598	80%
2012	1.165	0.618	0.347	0.579	81%
2013	1.164	0.538	0.320	0.560	82%
2014	1.165	0.481	0.301	0.546	82%
2015	1.165	0.434	0.285	0.535	82%
2016	1.165	0.395	0.272	0.525	83%
2017	1.165	0.368	0.263	0.519	83%
2018	1.165	0.338	0.253	0.512	83%
2019	1.165	0.319	0.246	0.507	83%
2020	1.165	0.304	0.241	0.503	83%
2021	1.165	0.293	0.238	0.501	84%
2022	1.165	0.282	0.234	0.498	84%
2023	1.165	0.273	0.231	0.496	84%
2024	1.165	0.269	0.229	0.495	84%
2025	1.165	0.265	0.228	0.494	84%
2026	1.165	0.261	0.227	0.493	84%
2027	1.165	0.258	0.226	0.492	84%
2028	1.165	0.255	0.225	0.491	84%
2029	1.165	0.250	0.223	0.490	84%
2030	1.165	0.249	0.223	0.490	84%

Tons Per Summer Day				
Stage II Controls Only	ORVR Only	Stage II with ORVR, No IEE	Stage II with ORVR, IEE	Excess Emissions
2.41	5.46	2.14	2.22	0.08
2.46	5.17	2.05	2.16	0.12
2.54	4.88	1.95	2.12	0.17
2.59	4.45	1.81	2.03	0.22
2.64	3.98	1.66	1.94	0.28
2.70	3.49	1.50	1.84	0.34
2.75	3.07	1.36	1.76	0.39
2.81	2.65	1.23	1.68	0.45
2.86	2.34	1.13	1.62	0.49
2.92	2.05	1.04	1.57	0.53
2.98	1.78	0.95	1.53	0.57
3.04	1.61	0.91	1.51	0.61
3.10	1.43	0.85	1.49	0.64
3.16	1.30	0.82	1.48	0.67
3.22	1.20	0.79	1.48	0.69
3.29	1.12	0.77	1.48	0.72
3.36	1.06	0.76	1.49	0.74
3.42	0.99	0.74	1.50	0.76
3.49	0.96	0.74	1.52	0.78
3.56	0.93	0.74	1.54	0.80
3.63	0.91	0.74	1.56	0.82
3.70	0.90	0.74	1.58	0.84
3.78	0.89	0.75	1.61	0.86
3.85	0.89	0.76	1.64	0.88
3.93	0.89	0.77	1.67	0.90
4.01	0.90	0.78	1.70	0.92
4.09	0.91	0.79	1.73	0.94
4.17	0.91	0.80	1.76	0.96
4.26	0.91	0.82	1.79	0.98
4.34	0.93	0.83	1.83	1.00

VERMONT (IEE 0.86)



TOTAL REFUELING EMISSIONS – VERMONT (Calculations assume all VA have IEE of 0.86, uncorrected)

Calendar Year	Grams Emitted Per Gallon Gasoline				% Decrease from Uncontrolled	Tons Per Summer Day				
	Stage II Controls Only	ORVR Only	Stage II with ORVR, No IEE	Stage II with ORVR, IEE		Stage II Controls Only	ORVR Only	Stage II with ORVR, No IEE	Stage II with ORVR, IEE	Excess Emissions
2001	1.519	3.094	1.349	1.386	61%	1.57	3.19	1.39	1.43	0.04
2002	1.519	2.899	1.272	1.327	62%	1.59	3.03	1.33	1.39	0.06
2003	1.519	2.684	1.188	1.261	64%	1.61	2.84	1.26	1.33	0.08
2004	1.519	2.453	1.097	1.190	66%	1.56	2.52	1.13	1.22	0.10
2005	1.520	2.195	0.996	1.111	69%	1.65	2.39	1.08	1.21	0.13
2006	1.520	1.926	0.890	1.029	71%	1.67	2.12	0.98	1.13	0.15
2007	1.520	1.676	0.792	0.952	73%	1.69	1.87	0.88	1.06	0.18
2008	1.520	1.454	0.704	0.884	75%	1.71	1.64	0.79	1.00	0.20
2009	1.520	1.258	0.627	0.824	77%	1.71	1.42	0.71	0.93	0.22
2010	1.520	1.086	0.560	0.772	78%	1.76	1.25	0.65	0.89	0.24
2011	1.520	0.942	0.503	0.728	79%	1.78	1.10	0.59	0.85	0.26
2012	1.520	0.823	0.456	0.691	80%	1.78	0.97	0.54	0.81	0.28
2013	1.520	0.724	0.417	0.661	81%	1.82	0.87	0.50	0.79	0.29
2014	1.520	0.644	0.386	0.636	82%	1.84	0.78	0.47	0.77	0.30
2015	1.520	0.579	0.360	0.616	83%	1.86	0.71	0.44	0.75	0.31
2016	1.520	0.527	0.340	0.601	83%	1.88	0.65	0.42	0.74	0.32
2017	1.520	0.485	0.324	0.588	83%	1.90	0.61	0.40	0.73	0.33
2018	1.520	0.452	0.311	0.578	84%	1.92	0.57	0.39	0.73	0.34
2019	1.520	0.426	0.300	0.570	84%	1.94	0.54	0.38	0.73	0.34
2020	1.520	0.405	0.292	0.563	84%	1.96	0.52	0.38	0.73	0.35
2021	1.520	0.386	0.285	0.557	84%	1.98	0.50	0.37	0.73	0.36
2022	1.520	0.369	0.278	0.552	84%	2.00	0.49	0.37	0.73	0.36
2023	1.520	0.354	0.272	0.548	85%	2.02	0.47	0.36	0.73	0.37
2024	1.520	0.343	0.268	0.544	85%	2.05	0.46	0.36	0.73	0.37
2025	1.520	0.330	0.263	0.540	85%	2.07	0.45	0.36	0.73	0.38
2026	1.520	0.319	0.258	0.537	85%	2.09	0.44	0.35	0.74	0.38
2027	1.520	0.311	0.255	0.534	85%	2.11	0.43	0.35	0.74	0.39
2028	1.520	0.301	0.251	0.531	85%	2.13	0.42	0.35	0.74	0.39
2029	1.520	0.290	0.247	0.528	85%	2.15	0.41	0.35	0.75	0.40
2030	1.520	0.286	0.245	0.527	85%	2.17	0.41	0.35	0.75	0.40