

Variable	Low Case	Middle Case	High Case	Interim Calculations	
Price of fuel oil (Nominal \$/Gal) in 2012	\$2.16	\$3.92	\$4.95		
Cost of distillates to industrial users (75% of fuel oil assumed)	\$1.62	\$2.94	\$3.72	75%	
Gas cost (2012 \$/MMBtu) in 2012 at Fairbanks city gate	\$9.59	\$10.00	\$10.15		
Inflation rate	4.00%	5.00%	6.00%		
CAPEX for distribution system (Millions of 2012 \$)	\$282.80	\$404.03	\$606.00		
State of Alaska grant (% of CAPEX)	0%	30%	70%		
Distribution cost	Govt. \$2.50	Co-op \$3.00	Private \$3.50		
Wood cost (2012 \$/MMBtu)	\$10.00	\$15.00	\$20.00		
Propane cost (2012 \$/MMBtu) wholesale	\$10.38	\$10.38	\$12.64		
Residential propane cost	\$23.93	\$23.94	\$29.14	2.306270096	
General inflation rate	2.50%	2.50%	2.50%		
Business Type (Private = 0, Other = 1):		0			
Interest Rate	Private 6.00%	Other 4.50%			
Refinery utilization (BCF/year)	2.7	4.5	9		
FNSB population in 2015	102,425	105,298	110,386		
Number of residential structures in 2012 in pipe distribution area	20,294	20,863	21,871		
Growth rate	0.4%	1.0%	1.6%		
Average square footage of residential structures built in 2012	1,950	2,143	2,500		
Number of commercial structures in 2012 in pipe distribution area	1,658	1,705	1,787		
Growth rate	0.0041	0.0100	0.0160	3,952	
Number of residential structures in 2012 in low density area		2602		926	
Number of commercial structures in 2012 in low density area		89			
Energy efficiency of existing oil boilers/furnaces	65%	75%	85%		
Energy efficiency of new gas boilers/furnaces	85%	90%	95%		
Energy efficiency of wood stoves	68%	68%	68%		
Energy efficiency of coal burners		55%			
Cost of conversion	\$2,000	\$8,000	\$20,000		
Weighting for number of structures by size	4.40%	61.00%	34.60%		
	Year 1	Year 2	Year 3	Year 4	Year 5

Residential Conversion rate	10%	25%	25%	25%	10%
Conservation (e.g., rebate program, etc.)	Narrative only				
Discount rate for net present value calculations using nominal \$					
Public or cooperative		7.00%			
Private		7.00%			
Business structure (0=private; 1= others)		1			
Return on equity		12%			
Percent equity for private sector		30%			
Percent of total energy savings needed for fuel oil users to switch to gas		10%			
Convenience factor in terms of additional cost that wood burners are willing to pay for gas		10%			
Estimated 2012 wellhead price of ANS crude by DOR		99.61			

Comments

Price increases at same rate as EIA nominal crude oil price annual changes

Price increases at 75% of EIA nominal crude oil price changes

3/30 cost estimate from Baker
Only to Govt. and Co-op

NEI Estimate based on calls to local forester
ANS propane at 5% of ANS crude per ISER, 2009. Adjusted for average 2015
ANS wellhead price of \$99.61 per DOR Fall Revenue Sources Book. Price
increases at 75% of EIA nominal crude oil prices.
Residential cost (escalator based on EIA data on average wholesale price and
average residential cost).

ADOLWD forecast to 2035 and extrapolated to 2065

Adjusted to remove Aurora and FNG and low density area; increased at
ADOLWD rate of population growth:

Regression equation from Assessor's database for 1961-2010 time period.

Adjusted to remove Aurora and FNG and low density area; increased at
ADOLWD rate of population growth:

adjusted for dry cabins

Representative estimates based on discussions with FNSB and ANC
plumbers/HVAC contractors
Representative estimates based on discussions with FNSB and ANC
plumbers/HVAC contractors

Use this information for distribution in @RISK

Variable	Rate or value	2013	2014	2015	2016	2017	2018	2019	2020	2021
PIPE DISTRIBUTION AREA										
RESIDENTIAL (% of residences in pipe area)	89.0%									
Number of residential structures, growth rate	1.004%	21,073	21,284	21,498	21,714	21,932	22,152	22,374	22,599	22,826
Average annual consumption (MMBtu) per structure		250	250	250	250	250	250	250	250	250
Energy required (MMBtu), HIGH and MEDIUM density		5,268,127	5,321,030	5,374,465	5,428,436	5,482,949	5,538,009	5,593,623	5,649,795	5,706,531
Fuel oil percent	80.4%	4,238,015	4,280,574	4,323,560	4,366,978	4,410,831	4,455,125	4,499,864	4,545,053	4,590,695
Wood percent	19.6%	1,030,112	1,040,457	1,050,905	1,061,458	1,072,118	1,082,884	1,093,758	1,104,742	1,115,836
Percent demand in high area	60.418%			3,247,142	3,279,750	3,312,686	3,345,953	3,379,553	3,413,491	
Conversion rates in high area (97% max)	0.97			10%	25%	25%	25%	12%		
Potential natural gas sales in high area (MMBtu)				324,714	1,147,913	1,987,612	2,844,060	3,278,166	3,311,086	3,344,337
Conversion rates in medium area					10%	25%	25%	25%	12%	
Potential natural gas sales in medium area (MMBtu)				0	214,869	759,592	1,315,234	1,881,959	2,169,215	2,190,998
Potential residential natural gas sales in piped area (MMBtu)				324,714	1,362,781	2,747,204	4,159,294	5,160,126	5,480,301	5,535,335
COMMERCIAL (% of structures in pipe area)	95.0%									
Number of commercial structures, growth rate	1.004%	1,722	1,739	1,757	1,775	1,792	1,810	1,829	1,847	1,865
Average annual consumption (MMBtu) per structure		2533	2533	2533	2533	2533	2533	2533	2533	2533
Energy required (millions of Btus), HIGH and MEDIUM density		4,362,146	4,405,962	4,450,218	4,494,919	4,540,069	4,585,673	4,631,734	4,678,258	4,725,250
Fuel oil percent	100%									
Percent demand in high area	84.964%			3,781,080	3,819,059	3,857,420	3,896,167	3,935,303	3,974,831	
Conversion rates in high area (100%)				15%	35%	35%	15%			
Potential natural gas sales in high area (MMBtu)				567,162	1,909,530	3,278,807	3,896,167	3,935,303	3,974,831	4,014,757
Conversion rates in medium area					15%	35%	35%	15%		
Potential natural gas sales in medium area (MMBtu)				0	101,379	341,324	586,080	696,432	703,427	710,493
Potential commercial natural gas sales in piped area (MMBtu)				567,162	2,010,909	3,620,132	4,482,247	4,631,734	4,678,258	4,725,250
INDUSTRIAL (MMBtu)	7,900,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
Potential Demand Pipe Distribution Area (MMBtu)		9,930,273	10,026,992	10,124,683	10,223,355	10,323,018	10,423,682	10,525,357	10,628,053	10,731,780
LOW DENSITY AREA (Propane)										
RESIDENTIAL(% of residences in low density area)	11.0%									
Number of residential structures net of dry cabins, growth rate	1.004%	2,628	2,655	2,681	2,708	2,735	2,763	2,791	2,819	2,847
Average annual consumption (MMBtu) per structure		250	250	250	250	250	250	250	250	250
Energy required (MMBtu)		657,032	663,630	670,295	677,026	683,825	690,692	697,628	704,633	711,709
Fuel Oil (MMBtu)		528,558	533,866	539,227	544,642	550,112	555,636	561,216	566,852	572,544
Wood (MMBtu)		128,474	129,764	131,067	132,383	133,713	135,056	136,412	137,782	139,165
Conversion rates in low density area, 95% max				10%	25%	25%	25%	10%		
Potential residential propane sales in low area				67,029	236,959	410,295	587,088	662,746	669,402	676,124
COMMERCIAL	5.0%									
Number of commercial structures, growth rate	1.004%	90	91	92	93	94	95	95	96	97
Average annual consumption (MMBtu) per structure		2,533	2,533	2,533	2,533	2,533	2,533	2,533	2,533	2,533
Energy required (millions of Btus)		227,701	229,989	232,299	234,632	236,989	239,369	241,774	244,202	246,655
Conversion rates in low density area				15%	35%	35%	15%			
Potential commercial propane sales in low area, MMBtu				34,845	117,316	201,441	239,369	241,774	244,202	246,655
Potential Demand Low Density Area, MMBtu		884,734	893,619	902,593	911,658	920,814	930,061	939,401	948,836	958,365
Potential Demand in FNSB, MMBtu		10,815,007	10,920,611	11,027,276	11,135,013	11,243,832	11,353,743	11,464,758	11,576,889	11,690,145
General Inflation Rate	2.500%									

PIPED DISTRIBUTION AREA GAS PRICE, HIGH and MEDIUM

Natural gas price (\$/MMBtu)	3.00	3.21	3.37	3.51	3.52	3.63	3.72	3.82	3.91	4.00
Other costs to city gate (\$/MMBtu)				6.49	6.51	6.72	6.89	7.06	7.23	7.41
Operations & maintenance cost (\$/MMBtu), base amount	\$0.45	\$0.47	\$0.48	\$0.49	\$0.50	\$0.51	\$0.53	\$0.54	\$0.55	\$0.57
Admin & General Overhead, base amount	\$2.32	\$2.38	\$2.44	\$2.50	\$2.55	\$2.60	\$2.66	\$2.72	\$2.78	\$2.85
Depreciation, Distribution System, total and \$/MMBtu	\$8,080,660			\$6.78	\$2.20	\$1.21	\$0.90	\$0.80	\$0.77	\$0.77
Debt Service										
Capex (\$ Millions)	404.03		19,602,985	34,802,985						
CAPEX High	230.83									
CAPEX Medium	173.21		1.78							
Grants %	30.0%		O&M							
Equity contribution (\$ Millions)	121.2		A&GE							
Amount to be amortized (\$ Millions)	282.8									
Interest rate	6.0%									
Return on equity	12%									
Percent equity	30%									
Term, years	20									
Annual Payment (millions of \$)	\$24.66			\$6.16	\$24.66	\$24.66	\$24.66	\$24.66	\$24.66	\$24.66
Required Return on Equity (millions of \$)	\$10.18			\$2.55	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18
Debt service and return on equity per MMBtu				\$0.79	\$3.13	\$3.10	\$3.07	\$3.04	\$3.01	\$2.98
Total cost per MMBtu				\$20.56	\$18.41	\$17.77	\$17.77	\$17.97	\$18.26	\$18.58

LOW DENSITY AREA PROPANE (from ANS) PRICE

Wholesale propane price at city gate (MMBtu)				\$10.38	\$10.41	\$10.74	\$11.02	\$11.30	\$11.57	\$11.85
Delivered price (MMBtu)				\$23.94	\$24.00	\$24.78	\$25.42	\$26.05	\$26.68	\$27.33
Price per gallon				\$2.19	\$2.20	\$2.27	\$2.33	\$2.39	\$2.44	\$2.50

WOOD FUEL PRICE (MMBtu)	2.50%	\$14.26	\$14.63	\$15.00	\$15.38	\$15.76	\$16.15	\$16.56	\$16.97	\$17.40
Cost of useable energy (MMBtu)	22%	\$17.40	\$17.84	\$18.30	\$18.76	\$19.23	\$19.71	\$20.20	\$20.70	\$21.22
Percent of FNSB that use wood for primary heat	19.6%									
HEATING FUEL PRICE (MMBtu)		\$31.56	\$33.61	\$35.45	\$35.57	\$37.10	\$38.38	\$39.65	\$40.93	\$42.25
Cost of useable energy (MMBtu)	15%	\$36.29	\$38.66	\$40.76	\$40.91	\$42.67	\$44.14	\$45.60	\$47.07	\$48.59
Conversion: MMBtu to gallons of heating fuel equivalent	7.353									
Percent of FNSB that use fuel oil for primary heat	80.4%									
Conversion cost per residential structure (annual payment)	\$8,000			\$1,086.94	\$1,086.94	\$1,086.94	\$1,086.94	\$1,086.94	\$1,086.94	\$1,086.94
Cost per MMBtu used per year				\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35
Same estimate used for commercial structures										

PIPED DISTRIBUTION AREA

Amount of residential fuel oil that switches to gas (MMBtu)				261,221	1,096,308	2,210,025	3,345,999	4,151,132	4,408,701	4,452,974
Amount of residential wood that switches to gas (MMBtu)				0	0	0	0	0	1,071,600	1,082,361
Amount of residential energy that switches to gas (MMBtu)				261,221	1,096,308	2,210,025	3,345,999	4,151,132	5,480,301	5,535,335
		High Res		157,824	662,367	1,335,252	2,021,585	2,508,029	3,311,086	
Amount of commercial fuel oil that switches to gas (MMBtu)				567,162	2,010,909	3,620,132	4,482,247	4,631,734	4,678,258	4,725,250
Amount of commercial energy that switches to gas (MMBtu)				567,162	2,010,909	3,620,132	4,482,247	4,631,734	4,678,258	4,725,250
Amount of industrial energy that switches to gas (MMBtu)				150,000	300,000	300,000	300,000	300,000	300,000	300,000
Total piped distribution area that switches to gas, MMBtu				978,383	3,407,216	6,130,156	8,128,246	9,082,866	10,458,559	10,560,584
		High Comm		481,883	1,708,547	3,075,806	3,808,292	3,935,303	3,974,831	
		Med Res		0	433,941	874,773	1,324,415	1,643,102	2,169,215	
		Med Comm		0	302,362	544,326	673,954	696,432	703,427	

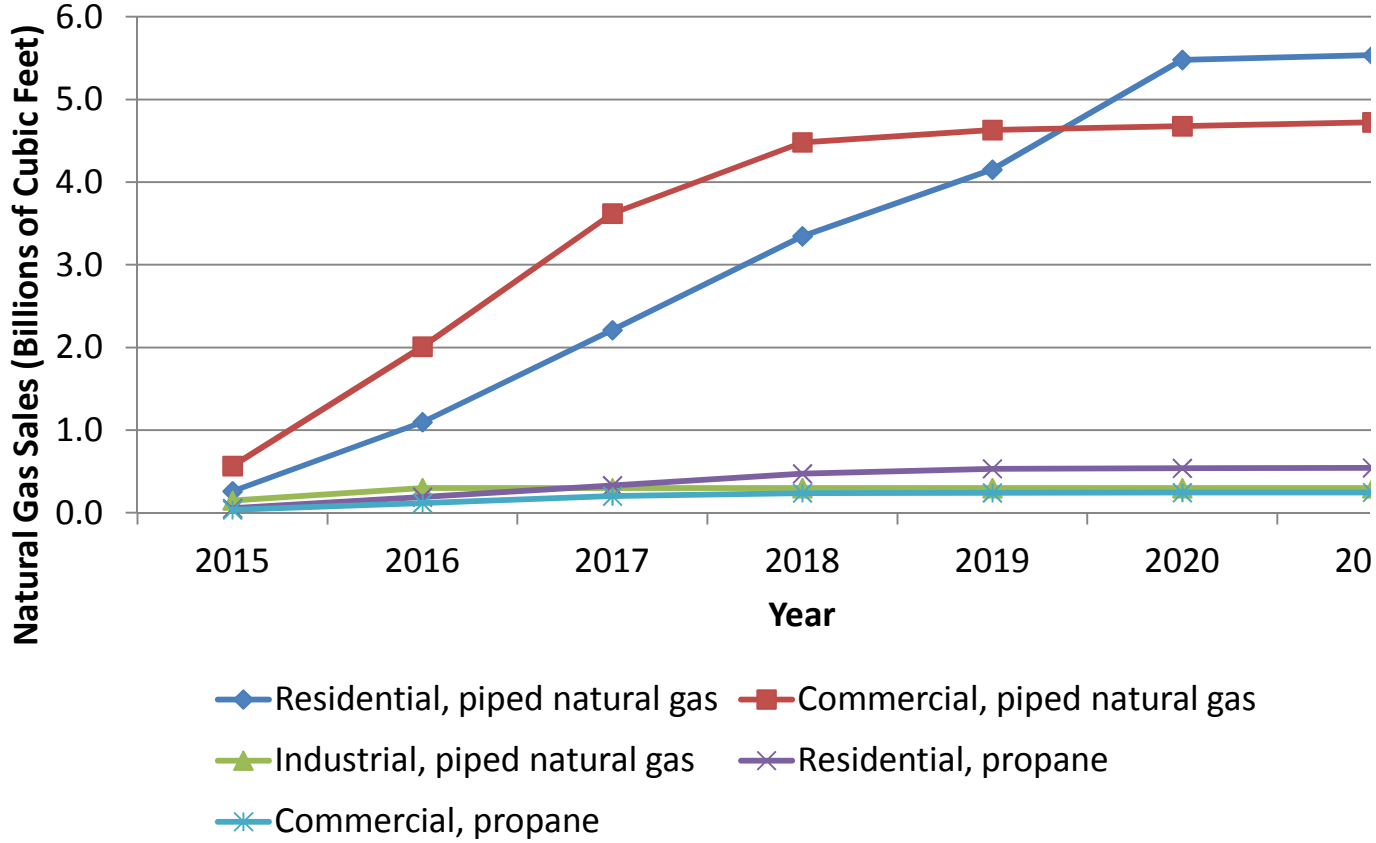
LOW DENSITY AREA PROPANE (from ANS)

FROM FUEL OIL										
Amount of residential energy that switches to propane (MMBtu)				53,923	190,625	330,067	472,291	533,155	538,509	543,917
Amount of commercial energy that switches to propane (MMBtu)				34,845	117,316	201,441	239,369	241,774	244,202	246,655

FROM WOOD

Amount of residential energy that switches to propane (MMBtu)			0	0	0	0	0	0	0
Total energy that switches to gas in Low Density Area (MMBtu)			88,768	307,941	531,508	711,660	774,929	782,711	790,572
Total energy that switches to gas in FNSB (MMBtu)			1,067,150	3,715,157	6,661,664	8,839,906	9,857,795	11,241,270	11,351,157
	2015	2016	2017	2018	2019	2020	2021		
Residential, piped natural gas	0.3	1.1	2.2	3.3	4.2	5.5	5.5	10.6	
Commercial, piped natural gas	0.6	2.0	3.6	4.5	4.6	4.7	4.7		
Industrial, piped natural gas	0.2	0.3	0.3	0.3	0.3	0.3	0.3		
Residential, propane	0.1	0.2	0.3	0.5	0.5	0.5	0.5	0.8	
Commercial, propane	0.0	0.1	0.2	0.2	0.2	0.2	0.2		
						11.2	11.4		

19
17.6
1.4
0.073684211
24
22.23157895



2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
23,055 250	23,287 250	23,521 250	23,757 250	23,995 250	24,236 250	24,480 250	24,726 250	24,974 250	25,225 250	25,478 250	25,734 250	25,992 250	26,253 250	26,517 250
5,763,836	5,821,717	5,880,180	5,939,229	5,998,872	6,059,113	6,119,959	6,181,417	6,243,491	6,306,189	6,369,517	6,433,480	6,498,086	6,563,341	6,629,251
4,636,795	4,683,358	4,730,389	4,777,892	4,825,872	4,874,334	4,923,283	4,972,723	5,022,660	5,073,098	5,124,043	5,175,499	5,227,472	5,279,967	5,332,989
1,127,041	1,138,359	1,149,791	1,161,337	1,172,999	1,184,779	1,196,676	1,208,694	1,220,831	1,233,091	1,245,474	1,257,981	1,270,614	1,283,374	1,296,262
3,377,921	3,411,842	3,446,104	3,480,711	3,515,664	3,550,969	3,586,628	3,622,646	3,659,025	3,695,769	3,732,882	3,770,369	3,808,231	3,846,474	3,885,101
2,213,000	2,235,224	2,257,670	2,280,342	2,303,241	2,326,371	2,349,732	2,373,329	2,397,162	2,421,235	2,445,549	2,470,107	2,494,913	2,519,967	2,545,273
5,590,921	5,647,066	5,703,774	5,761,052	5,818,906	5,877,340	5,936,361	5,995,974	6,056,187	6,117,004	6,178,431	6,240,476	6,303,144	6,366,441	6,430,373
1,884 2533	1,903 2533	1,922 2533	1,942 2533	1,961 2533	1,981 2533	2,001 2533	2,021 2533	2,041 2533	2,062 2533	2,082 2533	2,103 2533	2,124 2533	2,146 2533	2,167 2533
4,772,713	4,820,654	4,869,075	4,917,984	4,967,383	5,017,279	5,067,676	5,118,579	5,169,993	5,221,924	5,274,376	5,327,356	5,380,867	5,434,916	5,489,508
4,055,084	4,095,816	4,136,957	4,178,511	4,220,483	4,262,876	4,305,696	4,348,945	4,392,629	4,436,751	4,481,317	4,526,330	4,571,795	4,617,718	4,664,101
717,629	724,838	732,118	739,472	746,900	754,402	761,980	769,634	777,365	785,173	793,060	801,026	809,072	817,199	825,407
4,772,713	4,820,654	4,869,075	4,917,984	4,967,383	5,017,279	5,067,676	5,118,579	5,169,993	5,221,924	5,274,376	5,327,356	5,380,867	5,434,916	5,489,508
300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
10,836,550	10,942,371	11,049,255	11,157,213	11,266,255	11,376,392	11,487,635	11,599,996	11,713,485	11,828,113	11,943,893	12,060,836	12,178,953	12,298,257	12,418,759
2,875 250	2,904 250	2,933 250	2,963 250	2,993 250	3,023 250	3,053 250	3,084 250	3,115 250	3,146 250	3,178 250	3,209 250	3,242 250	3,274 250	3,307 250
718,856	726,075	733,367	740,731	748,170	755,683	763,272	770,936	778,678	786,498	794,396	802,373	810,431	818,569	826,790
578,294	584,101	589,967	595,891	601,875	607,919	614,024	620,190	626,418	632,709	639,062	645,480	651,962	658,509	665,122
140,563	141,974	143,400	144,840	146,295	147,764	149,248	150,746	152,260	153,789	155,334	156,893	158,469	160,060	161,668
682,914	689,772	696,698	703,695	710,761	717,899	725,108	732,390	739,744	747,173	754,676	762,255	769,909	777,641	785,450
98	99	100	101	102	103	104	105	107	108	109	110	111	112	113
2,533	2,533	2,533	2,533	2,533	2,533	2,533	2,533	2,533	2,533	2,533	2,533	2,533	2,533	2,533
249,133	251,635	254,163	256,716	259,294	261,899	264,530	267,187	269,871	272,581	275,319	278,085	280,878	283,699	286,549
249,133	251,635	254,163	256,716	259,294	261,899	264,530	267,187	269,871	272,581	275,319	278,085	280,878	283,699	286,549
967,989	977,711	987,529	997,447	1,007,464	1,017,582	1,027,801	1,038,123	1,048,549	1,059,079	1,069,715	1,080,458	1,091,309	1,102,269	1,113,339
11,804,539	11,920,082	12,036,785	12,154,660	12,273,719	12,393,974	12,515,436	12,638,119	12,762,034	12,887,193	13,013,609	13,141,294	13,270,262	13,400,526	13,532,097

4.11	4.21	4.32	4.44	4.55	4.67	4.78	4.90	5.03	5.16	5.29	5.42	5.57	5.72	5.86
7.60	7.80	8.00	8.21	8.42	8.64	8.85	9.07	9.30	9.55	9.80	10.04	10.31	10.58	10.84
\$0.58	\$0.60	\$0.61	\$0.63	\$0.64	\$0.66	\$0.67	\$0.69	\$0.71	\$0.73	\$0.74	\$0.76	\$0.78	\$0.80	\$0.82
\$2.92	\$2.99	\$3.07	\$3.15	\$3.22	\$3.30	\$3.38	\$3.47	\$3.55	\$3.64	\$3.73	\$3.83	\$3.92	\$4.02	\$4.12
\$0.76	\$0.75	\$0.74	\$0.74	\$0.73	\$0.72	\$0.71	\$0.71	\$0.70	\$0.69	\$0.69	\$0.68	\$0.67	\$0.67	\$0.66

\$24.66	\$24.66	\$24.66	\$24.66	\$24.66	\$24.66	\$24.66	\$24.66	\$24.66	\$24.66	\$24.66	\$24.66	\$24.66	\$24.66	\$18.49
\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18
\$2.95	\$2.92	\$2.89	\$2.87	\$2.84	\$2.81	\$2.78	\$2.76	\$2.73	\$2.70	\$2.68	\$2.65	\$2.63	\$2.14	\$0.75
\$18.92	\$19.28	\$19.64	\$20.02	\$20.40	\$20.80	\$21.19	\$21.59	\$22.02	\$22.48	\$22.93	\$23.39	\$23.89	\$23.93	\$23.04

\$12.16	\$12.48	\$12.80	\$13.13	\$13.46	\$13.81	\$14.15	\$14.50	\$14.88	\$15.28	\$15.67	\$16.06	\$16.49	\$16.92	\$17.33
\$28.04	\$28.77	\$29.52	\$30.28	\$31.05	\$31.86	\$32.64	\$33.45	\$34.31	\$35.23	\$36.14	\$37.03	\$38.03	\$39.03	\$39.97
\$2.57	\$2.64	\$2.70	\$2.77	\$2.84	\$2.92	\$2.99	\$3.06	\$3.14	\$3.23	\$3.31	\$3.39	\$3.48	\$3.58	\$3.66
\$17.83	\$18.28	\$18.73	\$19.20	\$19.68	\$20.17	\$20.68	\$21.19	\$21.72	\$22.27	\$22.82	\$23.39	\$23.98	\$24.58	\$25.19
\$21.75	\$22.30	\$22.85	\$23.43	\$24.01	\$24.61	\$25.23	\$25.86	\$26.50	\$27.17	\$27.85	\$28.54	\$29.26	\$29.99	\$30.74

\$43.71	\$45.24	\$46.80	\$48.42	\$50.07	\$51.80	\$53.49	\$55.26	\$57.16	\$59.21	\$61.24	\$63.26	\$65.54	\$67.83	\$70.01
\$50.27	\$52.03	\$53.83	\$55.68	\$57.58	\$59.56	\$61.51	\$63.54	\$65.73	\$68.09	\$70.42	\$72.75	\$75.37	\$78.01	\$80.51

\$1,086.94	\$1,086.94	\$1,086.94												
\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35

4,497,691	4,542,857	4,588,477	4,634,555	4,681,096	4,728,104	4,775,585	4,823,542	4,871,980	4,920,905	4,970,322	5,020,234	5,070,648	5,121,568	5,172,999
1,093,230	1,104,208	1,115,297	1,126,497	1,137,809	1,149,235	1,160,776	1,172,433	1,184,207	1,196,098	1,208,110	1,220,242	1,232,496	1,244,873	1,257,374
5,590,921	5,647,066	5,703,774	5,761,052	5,818,906	5,877,340	5,936,361	5,995,974	6,056,187	6,117,004	6,178,431	6,240,476	6,303,144	6,366,441	6,430,373
4,772,713	4,820,654	4,869,075	4,917,984	4,967,383	5,017,279	5,067,676	5,118,579	5,169,993	5,221,924	5,274,376	5,327,356	5,380,867	5,434,916	5,489,508
4,772,713	4,820,654	4,869,075	4,917,984	4,967,383	5,017,279	5,067,676	5,118,579	5,169,993	5,221,924	5,274,376	5,327,356	5,380,867	5,434,916	5,489,508
300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
10,663,634	10,767,719	10,872,850	10,979,036	11,086,289	11,194,619	11,304,036	11,414,553	11,526,180	11,638,928	11,752,808	11,867,832	11,984,011	12,101,357	12,219,881

549,379	554,896	560,468	566,097	571,781	577,523	583,323	589,181	595,097	601,073	607,109	613,206	619,364	625,584	631,866
249,133	251,635	254,163	256,716	259,294	261,899	264,530	267,187	269,871	272,581	275,319	278,085	280,878	283,699	286,549

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
798,512	806,531	814,631	822,812	831,076	839,422	847,852	856,367	864,968	873,655	882,429	891,291	900,242	909,283	918,415
11,462,146	11,574,251	11,687,481	11,801,848	11,917,365	12,034,041	12,151,889	12,270,921	12,391,148	12,512,582	12,635,237	12,759,123	12,884,253	13,010,640	13,138,296



Year														
2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
26,783	27,052	27,324	27,598	27,875	28,155	28,438	28,724	29,012	29,303	29,598	29,895	30,195	30,498	30,805
250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
6,695,822	6,763,063	6,830,978	6,899,576	6,968,862	7,038,844	7,109,529	7,180,924	7,253,036	7,325,872	7,399,439	7,473,745	7,548,797	7,624,603	7,701,170
5,386,544	5,440,636	5,495,271	5,550,456	5,606,194	5,662,492	5,719,356	5,776,790	5,834,801	5,893,395	5,952,577	6,012,354	6,072,731	6,133,714	6,195,309
1,309,279	1,322,427	1,335,707	1,349,120	1,362,668	1,376,352	1,390,174	1,404,134	1,418,234	1,432,476	1,446,862	1,461,391	1,476,067	1,490,889	1,505,861
3,924,115	3,963,522	4,003,324	4,043,526	4,084,131	4,125,145	4,166,570	4,208,411	4,250,672	4,293,358	4,336,473	4,380,020	4,424,005	4,468,431	4,513,304
2,570,832	2,596,649	2,622,725	2,649,063	2,675,665	2,702,534	2,729,673	2,757,085	2,784,772	2,812,737	2,840,983	2,869,513	2,898,329	2,927,434	2,956,832
6,494,948	6,560,171	6,626,049	6,692,588	6,759,796	6,827,679	6,896,243	6,965,496	7,035,445	7,106,095	7,177,456	7,249,533	7,322,333	7,395,865	7,470,135
2,189	2,211	2,233	2,256	2,278	2,301	2,324	2,348	2,371	2,395	2,419	2,443	2,468	2,493	2,518
2533	2533	2533	2533	2533	2533	2533	2533	2533	2533	2533	2533	2533	2533	2533
5,544,648	5,600,343	5,656,596	5,713,415	5,770,804	5,828,770	5,887,318	5,946,454	6,006,184	6,066,514	6,127,450	6,188,998	6,251,165	6,313,956	6,377,377
4,710,950	4,758,270	4,806,065	4,854,341	4,903,101	4,952,351	5,002,096	5,052,340	5,103,089	5,154,348	5,206,122	5,258,415	5,311,234	5,364,584	5,418,469
833,698	842,072	850,531	859,074	867,703	876,419	885,222	894,114	903,095	912,166	921,329	930,583	939,931	949,372	958,908
5,544,648	5,600,343	5,656,596	5,713,415	5,770,804	5,828,770	5,887,318	5,946,454	6,006,184	6,066,514	6,127,450	6,188,998	6,251,165	6,313,956	6,377,377
300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
12,540,471	12,663,405	12,787,574	12,912,990	13,039,666	13,167,614	13,296,847	13,427,378	13,559,220	13,692,386	13,826,889	13,962,743	14,099,962	14,238,559	14,378,548
3,340	3,374	3,408	3,442	3,477	3,511	3,547	3,582	3,618	3,655	3,691	3,728	3,766	3,804	3,842
250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
835,092	843,478	851,949	860,504	869,145	877,873	886,689	895,593	904,587	913,671	922,846	932,114	941,474	950,928	960,478
671,801	678,547	685,361	692,244	699,196	706,217	713,309	720,472	727,707	735,015	742,396	749,851	757,381	764,987	772,669
163,291	164,931	166,587	168,260	169,950	171,656	173,380	175,121	176,880	178,656	180,450	182,262	184,093	185,941	187,809
793,338	801,304	809,351	817,479	825,688	833,980	842,355	850,814	859,358	867,987	876,704	885,508	894,400	903,382	912,454
114	115	117	118	119	120	121	123	124	125	126	128	129	130	131
2,533	2,533	2,533	2,533	2,533	2,533	2,533	2,533	2,533	2,533	2,533	2,533	2,533	2,533	2,533
289,427	292,335	295,271	298,237	301,233	304,258	307,315	310,401	313,519	316,668	319,849	323,062	326,307	329,585	332,895
289,427	292,335	295,271	298,237	301,233	304,258	307,315	310,401	313,519	316,668	319,849	323,062	326,307	329,585	332,895
1,124,520	1,135,813	1,147,220	1,158,741	1,170,378	1,182,132	1,194,004	1,205,995	1,218,106	1,230,339	1,242,695	1,255,176	1,267,781	1,280,513	1,293,373
13,664,990	13,799,218	13,934,794	14,071,731	14,210,044	14,349,746	14,490,851	14,633,373	14,777,326	14,922,725	15,069,585	15,217,919	15,367,743	15,519,072	15,671,921

6.00	6.16	6.31	6.47	6.63	6.80	6.97	7.14	7.32	7.50	7.69	7.88	8.08	8.28	8.48
11.11	11.39	11.68	11.97	12.28	12.58	12.90	13.22	13.55	13.89	14.23	14.59	14.95	15.32	15.69
\$0.84	\$0.86	\$0.89	\$0.91	\$0.93	\$0.95	\$0.98	\$1.00	\$1.03	\$1.05	\$1.08	\$1.11	\$1.13	\$1.16	\$1.19
\$4.22	\$4.32	\$4.43	\$4.54	\$4.65	\$4.77	\$4.89	\$5.01	\$5.13	\$5.26	\$5.39	\$5.52	\$5.66	\$5.80	\$5.94
\$0.65	\$0.65	\$0.64	\$0.64	\$0.63	\$0.62	\$0.62	\$0.61	\$0.61	\$0.60	\$0.59	\$0.59	\$0.58	\$0.58	\$0.57

\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18
\$0.75	\$0.74	\$0.73	\$0.72	\$0.72	\$0.71	\$0.70	\$0.70	\$0.69	\$0.68	\$0.68	\$0.67	\$0.66	\$0.66	\$0.65
\$23.58	\$24.12	\$24.68	\$25.25	\$25.84	\$26.44	\$27.05	\$27.68	\$28.32	\$28.98	\$29.66	\$30.35	\$31.06	\$31.78	\$32.52

\$17.77	\$18.22	\$18.68	\$19.15	\$19.63	\$20.13	\$20.63	\$21.15	\$21.67	\$22.21	\$22.76	\$23.33	\$23.91	\$24.50	\$25.10
\$40.99	\$42.02	\$43.09	\$44.17	\$45.28	\$46.42	\$47.58	\$48.77	\$49.98	\$51.23	\$52.50	\$53.80	\$55.13	\$56.49	\$57.89
\$3.75	\$3.85	\$3.95	\$4.05	\$4.15	\$4.25	\$4.36	\$4.47	\$4.58	\$4.69	\$4.81	\$4.93	\$5.05	\$5.17	\$5.30
\$25.82	\$26.47	\$27.13	\$27.81	\$28.50	\$29.22	\$29.95	\$30.70	\$31.46	\$32.25	\$33.06	\$33.88	\$34.73	\$35.60	\$36.49
\$31.50	\$32.29	\$33.10	\$33.93	\$34.78	\$35.64	\$36.54	\$37.45	\$38.39	\$39.35	\$40.33	\$41.34	\$42.37	\$43.43	\$44.52

\$72.38	\$74.82	\$77.34	\$79.94	\$82.62	\$85.38	\$88.23	\$91.17	\$94.20	\$97.33	\$100.55	\$103.88	\$107.30	\$110.84	\$114.48
\$83.24	\$86.05	\$88.94	\$91.93	\$95.01	\$98.19	\$101.47	\$104.85	\$108.33	\$111.93	\$115.64	\$119.46	\$123.40	\$127.46	\$131.65

\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35
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5,224,947	5,277,417	5,330,413	5,383,942	5,438,008	5,492,617	5,547,775	5,603,486	5,659,757	5,716,593	5,774,000	5,831,983	5,890,549	5,949,702	6,009,450
1,270,000	1,282,754	1,295,635	1,308,646	1,321,788	1,335,062	1,348,468	1,362,010	1,375,687	1,389,502	1,403,456	1,417,549	1,431,785	1,446,163	1,460,685
6,494,948	6,560,171	6,626,049	6,692,588	6,759,796	6,827,679	6,896,243	6,965,496	7,035,445	7,106,095	7,177,456	7,249,533	7,322,333	7,395,865	7,470,135
5,544,648	5,600,343	5,656,596	5,713,415	5,770,804	5,828,770	5,887,318	5,946,454	6,006,184	6,066,514	6,127,450	6,188,998	6,251,165	6,313,956	6,377,377
5,544,648	5,600,343	5,656,596	5,713,415	5,770,804	5,828,770	5,887,318	5,946,454	6,006,184	6,066,514	6,127,450	6,188,998	6,251,165	6,313,956	6,377,377
300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
12,339,596	12,460,513	12,582,645	12,706,003	12,830,600	12,956,449	13,083,561	13,211,950	13,341,629	13,472,610	13,604,906	13,738,531	13,873,498	14,009,821	14,147,512

638,211	644,620	651,093	657,632	664,236	670,906	677,643	684,448	691,322	698,264	705,276	712,359	719,512	726,738	734,036
289,427	292,335	295,271	298,237	301,233	304,258	307,315	310,401	313,519	316,668	319,849	323,062	326,307	329,585	332,895

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
927,638	936,955	946,364	955,869	965,468	975,164	984,958	994,850	1,004,841	1,014,933	1,025,125	1,035,421	1,045,819	1,056,322	1,066,931
13,267,235	13,397,468	13,529,009	13,661,872	13,796,069	13,931,613	14,068,519	14,206,800	14,346,470	14,487,542	14,630,031	14,773,952	14,919,317	15,066,143	15,214,443

2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065
31,114 250	31,426 250	31,742 250	32,061 250	32,383 250	32,708 250	33,036 250	33,368 250	33,703 250	34,042 250	34,384 250	34,729 250	35,078 250	35,430 250
7,778,506	7,856,619	7,935,516	8,015,206	8,095,695	8,176,993	8,259,108	8,342,047	8,425,819	8,510,432	8,595,895	8,682,216	8,769,403	8,857,467
6,257,523	6,320,362	6,383,832	6,447,939	6,512,690	6,578,091	6,644,149	6,710,871	6,778,262	6,846,330	6,915,082	6,984,524	7,054,664	7,125,507
1,520,983	1,536,257	1,551,684	1,567,267	1,583,005	1,598,902	1,614,958	1,631,176	1,647,556	1,664,101	1,680,813	1,697,691	1,714,740	1,731,960
4,558,627	4,604,405	4,650,643	4,697,345	4,744,517	4,792,162	4,840,285	4,888,892	4,937,987	4,987,575	5,037,661	5,088,249	5,139,346	5,190,956
2,986,524	3,016,515	3,046,808	3,077,404	3,108,308	3,139,522	3,171,049	3,202,893	3,235,057	3,267,544	3,300,357	3,333,500	3,366,975	3,400,787
7,545,151	7,620,921	7,697,451	7,774,750	7,852,825	7,931,684	8,011,335	8,091,785	8,173,044	8,255,119	8,338,018	8,421,749	8,506,321	8,591,743
2,543 2533	2,569 2533	2,594 2533	2,620 2533	2,647 2533	2,673 2533	2,700 2533	2,727 2533	2,755 2533	2,782 2533	2,810 2533	2,839 2533	2,867 2533	2,896 2533
6,441,436	6,506,138	6,571,490	6,637,498	6,704,170	6,771,511	6,839,528	6,908,229	6,977,620	7,047,708	7,118,499	7,190,002	7,262,224	7,335,170
5,472,896	5,527,869	5,583,395	5,639,478	5,696,125	5,753,341	5,811,131	5,869,502	5,928,459	5,988,008	6,048,156	6,108,907	6,170,269	6,232,248
968,540	978,269	988,095	998,020	1,008,045	1,018,170	1,028,397	1,038,727	1,049,161	1,059,699	1,070,344	1,081,095	1,091,954	1,102,923
6,441,436	6,506,138	6,571,490	6,637,498	6,704,170	6,771,511	6,839,528	6,908,229	6,977,620	7,047,708	7,118,499	7,190,002	7,262,224	7,335,170
300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
14,519,942	14,662,757	14,807,006	14,952,704	15,099,865	15,248,504	15,398,636	15,550,276	15,703,438	15,858,139	16,014,394	16,172,218	16,331,627	16,492,637
3,880 250	3,919 250	3,959 250	3,999 250	4,039 250	4,079 250	4,120 250	4,162 250	4,203 250	4,246 250	4,288 250	4,331 250	4,375 250	4,419 250
970,123	979,865	989,705	999,644	1,009,682	1,019,822	1,030,063	1,040,407	1,050,855	1,061,407	1,072,066	1,082,832	1,093,706	1,104,689
780,428	788,265	796,181	804,177	812,252	820,409	828,648	836,969	845,374	853,863	862,438	871,099	879,846	888,682
189,695	191,600	193,524	195,467	197,430	199,413	201,415	203,438	205,481	207,544	209,628	211,733	213,860	216,007
921,617	930,872	940,220	949,661	959,198	968,830	978,560	988,386	998,312	1,008,337	1,018,463	1,028,690	1,039,021	1,049,455
133 2,533	134 2,533	135 2,533	137 2,533	138 2,533	140 2,533	141 2,533	142 2,533	144 2,533	145 2,533	147 2,533	148 2,533	150 2,533	151 2,533
336,239	339,617	343,028	346,474	349,954	353,469	357,019	360,606	364,228	367,886	371,581	375,314	379,084	382,892
336,239	339,617	343,028	346,474	349,954	353,469	357,019	360,606	364,228	367,886	371,581	375,314	379,084	382,892
1,306,362	1,319,482	1,332,733	1,346,117	1,359,636	1,373,290	1,387,082	1,401,012	1,415,082	1,429,294	1,443,648	1,458,146	1,472,790	1,487,581
15,826,304	15,982,239	16,139,739	16,298,821	16,459,501	16,621,795	16,785,718	16,951,288	17,118,521	17,287,433	17,458,042	17,630,364	17,804,417	17,980,218

8.69	8.90	9.12	9.34	9.57	9.80	10.04	10.29	10.54	10.79	11.05	11.32	11.59	11.87
16.08	16.47	16.88	17.29	17.71	18.15	18.59	19.04	19.50	19.97	20.46	20.95	21.46	21.97
\$1.22	\$1.25	\$1.28	\$1.31	\$1.35	\$1.38	\$1.42	\$1.45	\$1.49	\$1.52	\$1.56	\$1.60	\$1.64	\$1.68
\$6.09	\$6.24	\$6.39	\$6.55	\$6.71	\$6.88	\$7.05	\$7.22	\$7.40	\$7.58	\$7.77	\$7.96	\$8.16	\$8.36
\$0.57	\$0.56	\$0.55	\$0.55	\$0.54	\$0.54	\$0.53	\$0.53	\$0.52	\$0.52	\$0.51	\$0.51	\$0.50	\$0.50

\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18	\$10.18
\$0.64	\$0.64	\$0.63	\$0.62	\$0.62	\$0.61	\$0.61	\$0.60	\$0.59	\$0.59	\$0.58	\$0.58	\$0.57	\$0.57
\$33.28	\$34.06	\$34.86	\$35.67	\$36.51	\$37.36	\$38.23	\$39.13	\$40.04	\$40.98	\$41.94	\$42.92	\$43.93	\$44.95

\$25.72	\$26.35	\$27.00	\$27.66	\$28.33	\$29.02	\$29.73	\$30.45	\$31.19	\$31.95	\$32.72	\$33.51	\$34.32	\$35.14
\$59.31	\$60.77	\$62.26	\$63.78	\$65.34	\$66.93	\$68.56	\$70.23	\$71.94	\$73.68	\$75.46	\$77.28	\$79.15	\$81.05
\$5.43	\$5.57	\$5.70	\$5.84	\$5.99	\$6.13	\$6.28	\$6.43	\$6.59	\$6.75	\$6.91	\$7.08	\$7.25	\$7.42
\$37.40	\$38.34	\$39.29	\$40.28	\$41.28	\$42.31	\$43.37	\$44.46	\$45.57	\$46.71	\$47.88	\$49.07	\$50.30	\$51.56
\$45.63	\$46.77	\$47.94	\$49.14	\$50.37	\$51.62	\$52.91	\$54.24	\$55.59	\$56.98	\$58.41	\$59.87	\$61.36	\$62.90

\$118.23	\$122.11	\$126.10	\$130.21	\$134.46	\$138.83	\$143.34	\$147.98	\$152.77	\$157.71	\$162.79	\$168.03	\$173.44	\$179.01
\$135.97	\$140.42	\$145.01	\$149.75	\$154.62	\$159.65	\$164.84	\$170.18	\$175.69	\$181.36	\$187.21	\$193.24	\$199.45	\$205.86

\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35
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6,069,798	6,130,751	6,192,317	6,254,501	6,317,309	6,380,749	6,444,825	6,509,545	6,574,914	6,640,940	6,707,630	6,774,988	6,843,024	6,911,742
1,475,354	1,490,169	1,505,134	1,520,249	1,535,515	1,550,935	1,566,510	1,582,241	1,598,130	1,614,178	1,630,388	1,646,761	1,663,298	1,680,001
7,545,151	7,620,921	7,697,451	7,774,750	7,852,825	7,931,684	8,011,335	8,091,785	8,173,044	8,255,119	8,338,018	8,421,749	8,506,321	8,591,743
6,441,436	6,506,138	6,571,490	6,637,498	6,704,170	6,771,511	6,839,528	6,908,229	6,977,620	7,047,708	7,118,499	7,190,002	7,262,224	7,335,170
6,441,436	6,506,138	6,571,490	6,637,498	6,704,170	6,771,511	6,839,528	6,908,229	6,977,620	7,047,708	7,118,499	7,190,002	7,262,224	7,335,170
300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
14,286,587	14,427,058	14,568,941	14,712,248	14,856,994	15,003,194	15,150,863	15,300,014	15,450,664	15,602,826	15,756,517	15,911,752	16,068,545	16,226,913

741,407	748,852	756,372	763,968	771,640	779,389	787,215	795,121	803,105	811,170	819,316	827,544	835,854	844,248
336,239	339,617	343,028	346,474	349,954	353,469	357,019	360,606	364,228	367,886	371,581	375,314	379,084	382,892

0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,077,646	1,088,469	1,099,400	1,110,441	1,121,593	1,132,857	1,144,235	1,155,726	1,167,333	1,179,056	1,190,898	1,202,858	1,214,938	1,227,139
15,364,233	15,515,527	15,668,341	15,822,689	15,978,588	16,136,052	16,295,098	16,455,741	16,617,997	16,781,883	16,947,415	17,114,609	17,283,483	17,454,052

FINANCIAL PRO FORMAS, Rounded**Rate or value 2013 2014****Assets**

Property, plant, equipment (PPE), \$millions, BOY

Depreciation, straight-line, years

50

Net PPE

Other assets

Total Assets, EOY

Liabilities

Long-term debt (LTD), beginning of year

Interest

Principal

Current maturity of LTD, P+I

Long-term debt (LTD), end of year

Retained Earnings, Capital Grants, net income, contributed capital

Total Liabilities, Owners Equity

Income Statement

Natural gas sales, volumes (MMBtu)

Natural gas selling value (\$/MMBtu), cost

Natural gas selling value (\$/MMBtu), margin

20%

Natural gas selling value (\$/MMBtu), with margin

Natural gas revenue, \$millions, rounded

Less (\$/MMBtu):

Natural gas price (\$/MMBtu)

Operations & maintenance cost

Admin & General Overhead

Depreciation, Distribution System

Subtotal

Debt service and return on equity per MMBtu

Total Expenses, \$/MMBtu

Total Expenses, \$millions, rounded

Net income before taxes, \$millions, rounded

Taxes

40.2%

Estimated net income after taxes

Year 1 2015	Year 2 2016	Year 3 2017	Year 4 2018	Year 5 2019	Year 6 2020	Year 7 2021
\$404,033,000	\$395,952,340	\$390,554,272	\$389,783,340	\$394,046,572	\$402,027,602	\$411,701,197
\$8,080,660	\$8,080,660	\$8,080,660	\$8,080,660	\$8,080,660	\$8,080,660	\$8,080,660
\$395,952,340	\$387,871,680	\$382,473,612	\$381,702,680	\$385,965,912	\$393,946,942	\$403,620,537
\$0	\$2,682,592	\$7,309,729	\$12,343,892	\$16,061,690	\$17,754,255	\$20,477,384
\$395,952,340	\$390,554,272	\$389,783,340	\$394,046,572	\$402,027,602	\$411,701,197	\$424,097,921
\$282,823,100	\$280,900,995	\$273,097,248	\$264,825,276	\$256,056,986	\$246,762,598	\$236,910,548
\$4,242,347	\$16,854,060	\$16,385,835	\$15,889,517	\$15,363,419	\$14,805,756	\$14,214,633
\$1,922,105	\$7,803,747	\$8,271,972	\$8,768,290	\$9,294,388	\$9,852,051	\$10,443,174
\$6,164,452	\$24,657,807	\$24,657,807	\$24,657,807	\$24,657,807	\$24,657,807	\$24,657,807
\$280,900,995	\$273,097,248	\$264,825,276	\$256,056,986	\$246,762,598	\$236,910,548	\$226,467,374
\$115,051,345	\$117,457,024	\$124,958,064	\$137,989,586	\$155,265,004	\$174,790,650	\$197,630,548
\$395,952,340	\$390,554,272	\$389,783,340	\$394,046,572	\$402,027,602	\$411,701,197	\$424,097,921
978,383	3,407,216	6,130,156	8,128,246	9,082,866	10,458,559	10,560,584
\$20.56	\$18.41	\$17.77	\$17.77	\$17.97	\$18.26	\$18.58
\$4.11	\$3.68	\$3.55	\$3.55	\$3.59	\$3.65	\$3.72
\$24.67	\$22.09	\$21.33	\$21.32	\$21.57	\$21.91	\$22.29
\$24,137,244	\$75,261,274	\$130,751,054	\$173,331,953	\$195,909,489	\$229,162,856	\$235,408,743
\$10.00	\$10.02	\$10.35	\$10.61	\$10.88	\$11.14	\$11.41
\$0.49	\$0.50	\$0.51	\$0.53	\$0.54	\$0.55	\$0.57
\$2.50	\$2.55	\$2.60	\$2.66	\$2.72	\$2.78	\$2.85
\$6.78	\$2.20	\$1.21	\$0.90	\$0.80	\$0.77	\$0.77
\$19.77	\$15.28	\$14.68	\$14.70	\$14.94	\$15.25	\$15.60
\$0.79	\$3.13	\$3.10	\$3.07	\$3.04	\$3.01	\$2.98
\$20.56	\$18.41	\$17.77	\$17.77	\$17.97	\$18.26	\$18.58
\$20,114,370	\$62,717,728	\$108,959,211	\$144,443,294	\$163,257,908	\$190,969,046	\$196,173,952
\$4,022,874	\$12,543,546	\$21,791,842	\$28,888,659	\$32,651,582	\$38,193,809	\$39,234,790
\$1,617,195	\$5,042,505	\$8,760,321	\$11,613,241	\$13,125,936	\$15,353,911	\$15,772,386
\$2,405,679	\$7,501,040	\$13,031,522	\$17,275,418	\$19,525,646	\$22,839,898	\$23,462,405

Year 8 2022	Year 9 2023	Year 10 2024	Year 11 2025	Year 12 2026	Year 13 2027	Year 14 2028
\$424,097,921	\$436,490,562	\$448,887,394	\$461,277,060	\$473,636,779	\$485,946,248	\$498,181,038
\$8,080,660	\$8,080,660	\$8,080,660	\$8,080,660	\$8,080,660	\$8,080,660	\$8,080,660
\$416,017,261	\$428,409,902	\$440,806,734	\$453,196,400	\$465,556,119	\$477,865,588	\$490,100,378
\$20,473,300	\$20,477,493	\$20,470,326	\$20,440,379	\$20,390,129	\$20,315,450	\$20,222,178
\$436,490,562	\$448,887,394	\$461,277,060	\$473,636,779	\$485,946,248	\$498,181,038	\$510,322,556
\$226,467,374	\$215,397,610	\$203,663,659	\$191,225,672	\$178,041,406	\$164,066,084	\$149,252,242
\$13,588,042	\$12,923,857	\$12,219,820	\$11,473,540	\$10,682,484	\$9,843,965	\$8,955,135
\$11,069,764	\$11,733,950	\$12,437,987	\$13,184,266	\$13,975,322	\$14,813,842	\$15,702,672
\$24,657,807	\$24,657,807	\$24,657,807	\$24,657,807	\$24,657,807	\$24,657,807	\$24,657,807
\$215,397,610	\$203,663,659	\$191,225,672	\$178,041,406	\$164,066,084	\$149,252,242	\$133,549,570
\$221,092,952	\$245,223,735	\$270,051,388	\$295,595,373	\$321,880,165	\$348,928,796	\$376,772,986
\$436,490,562	\$448,887,394	\$461,277,060	\$473,636,779	\$485,946,248	\$498,181,038	\$510,322,556
10,663,634	10,767,719	10,872,850	10,979,036	11,086,289	11,194,619	11,304,036
\$18.92	\$19.28	\$19.64	\$20.02	\$20.40	\$20.80	\$21.19
\$3.78	\$3.86	\$3.93	\$4.00	\$4.08	\$4.16	\$4.24
\$22.70	\$23.13	\$23.57	\$24.02	\$24.48	\$24.96	\$25.42
\$242,114,876	\$249,106,887	\$256,294,166	\$263,727,004	\$271,390,949	\$279,373,146	\$287,400,492
\$11.71	\$12.01	\$12.33	\$12.64	\$12.97	\$13.30	\$13.63
\$0.58	\$0.60	\$0.61	\$0.63	\$0.64	\$0.66	\$0.67
\$2.92	\$2.99	\$3.07	\$3.15	\$3.22	\$3.30	\$3.38
\$0.76	\$0.75	\$0.74	\$0.74	\$0.73	\$0.72	\$0.71
\$15.97	\$16.36	\$16.75	\$17.15	\$17.56	\$17.99	\$18.40
\$2.95	\$2.92	\$2.89	\$2.87	\$2.84	\$2.81	\$2.78
\$18.92	\$19.28	\$19.64	\$20.02	\$20.40	\$20.80	\$21.19
\$201,762,397	\$207,589,073	\$213,578,472	\$219,772,503	\$226,159,124	\$232,810,955	\$239,500,410
\$40,352,479	\$41,517,815	\$42,715,694	\$43,954,501	\$45,231,825	\$46,562,191	\$47,900,082
\$16,221,697	\$16,690,161	\$17,171,709	\$17,669,709	\$18,183,194	\$18,718,001	\$19,255,833
\$24,130,783	\$24,827,653	\$25,543,985	\$26,284,791	\$27,048,631	\$27,844,190	\$28,644,249

Year 15 2029	Year 16 2030	Year 17 2031	Year 18 2032	Year 19 2033	Year 20 2034	Year 21 2035
\$510,322,556	\$522,321,972	\$534,154,835	\$545,810,390	\$557,278,822	\$568,501,068	\$579,419,836
\$8,080,660	\$8,080,660	\$8,080,660	\$8,080,660	\$8,080,660	\$8,080,660	\$8,080,660
\$502,241,896	\$514,241,312	\$526,074,175	\$537,729,730	\$549,198,162	\$560,420,408	\$571,339,176
\$20,080,077	\$19,913,522	\$19,736,215	\$19,549,092	\$19,302,906	\$18,999,428	\$24,868,307
\$522,321,972	\$534,154,835	\$545,810,390	\$557,278,822	\$568,501,068	\$579,419,836	\$596,207,483
\$133,549,570	\$116,904,737	\$99,261,215	\$80,559,081	\$60,734,819	\$39,721,102	\$17,446,561
\$8,012,974	\$7,014,284	\$5,955,673	\$4,833,545	\$3,644,089	\$2,383,266	\$1,046,794
\$16,644,832	\$17,643,522	\$18,702,134	\$19,824,262	\$21,013,718	\$22,274,541	\$17,446,561
\$24,657,807	\$24,657,807	\$24,657,807	\$24,657,807	\$24,657,807	\$24,657,807	\$18,493,355
\$116,904,737	\$99,261,215	\$80,559,081	\$60,734,819	\$39,721,102	\$17,446,561	\$0
\$405,417,235	\$434,893,620	\$465,251,308	\$496,544,003	\$528,779,966	\$561,973,274	\$596,207,483
\$522,321,972	\$534,154,835	\$545,810,390	\$557,278,822	\$568,501,068	\$579,419,836	\$596,207,483
11,414,553	11,526,180	11,638,928	11,752,808	11,867,832	11,984,011	12,101,357
\$21.59	\$22.02	\$22.48	\$22.93	\$23.39	\$23.89	\$23.93
\$4.32	\$4.40	\$4.50	\$4.59	\$4.68	\$4.78	\$4.79
\$25.91	\$26.43	\$26.98	\$27.52	\$28.06	\$28.66	\$28.71
\$295,749,681	\$304,592,191	\$313,973,521	\$323,437,758	\$333,043,229	\$343,487,041	\$347,446,161
\$13.97	\$14.33	\$14.71	\$15.09	\$15.46	\$15.88	\$16.30
\$0.69	\$0.71	\$0.73	\$0.74	\$0.76	\$0.78	\$0.80
\$3.47	\$3.55	\$3.64	\$3.73	\$3.83	\$3.92	\$4.02
\$0.71	\$0.70	\$0.69	\$0.69	\$0.68	\$0.67	\$0.67
\$18.83	\$19.29	\$19.78	\$20.26	\$20.73	\$21.26	\$21.79
\$2.76	\$2.73	\$2.70	\$2.68	\$2.65	\$2.63	\$2.14
\$21.59	\$22.02	\$22.48	\$22.93	\$23.39	\$23.89	\$23.93
\$246,458,067	\$253,826,826	\$261,644,601	\$269,531,465	\$277,536,024	\$286,239,201	\$289,538,467
\$49,291,613	\$50,765,365	\$52,328,920	\$53,906,293	\$55,507,205	\$57,247,840	\$57,907,693
\$19,815,229	\$20,407,677	\$21,036,226	\$21,670,330	\$22,313,896	\$23,013,632	\$23,278,893
\$29,476,385	\$30,357,688	\$31,292,694	\$32,235,963	\$33,193,308	\$34,234,208	\$34,628,801

Variable	NPV	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
STATUS QUO												
FUEL COST (\$)												
Residential												
Fuel Oil		172,997,044	186,108,015	198,221,005	200,927,247	211,669,439	221,178,667	230,774,332	240,615,769	250,891,420	262,172,781	274,068,763
Wood		20,155,268	20,879,661	21,630,089	22,393,484	23,183,821	24,002,052	24,849,161	25,726,166	26,634,124	27,574,127	28,547,306
Commercial		166,582,962	179,208,277	190,872,672	193,479,076	203,823,578	212,980,867	222,221,436	231,698,714	241,594,164	252,458,106	263,913,953
Industrial		7,100,960	7,563,172	7,975,337	8,003,846	8,347,926	8,636,229	8,921,317	9,209,288	9,507,105	9,835,820	10,179,889
Subtotal		366,836,234	393,759,125	418,699,104	424,803,653	447,024,764	466,797,815	486,766,245	507,249,938	528,626,814	552,040,835	576,709,911
BOILER/FURNACE REPLACEMENT COST (\$)												
Residential		5,084,345	5,135,403	5,186,973	5,239,061	5,291,673	5,344,812	5,398,486	5,452,698	5,507,455	5,562,761	5,618,623
Commercial		4,895,837	4,945,014	4,994,685	5,044,855	5,095,529	5,146,711	5,198,408	5,250,625	5,303,365	5,356,636	5,410,442
Industrial	not modeled because it would be the same under the status quo and the project, so they net out to zero											
Subtotal		9,980,182	10,080,417	10,181,658	10,283,916	10,387,201	10,491,524	10,596,894	10,703,323	10,810,820	10,919,397	11,029,065
Status Quo Total Cost	\$10,617,526,597	376,816,416	403,839,542	428,880,762	435,087,569	457,411,966	477,289,339	497,363,139	517,953,260	539,437,633	562,960,232	587,738,976
High Density	\$7,103,631,156	252,057,522	270,213,793	287,022,648	291,088,120	306,049,528	319,349,849	332,776,850	346,546,668	360,914,596	376,653,656	393,234,742
Medium Density	\$2,654,941,565	94,269,687	100,967,917	107,187,026	108,806,049	114,368,675	119,337,807	124,359,683	129,512,666	134,889,377	140,769,972	146,963,401
Low Density	\$858,953,877	30,489,208	32,657,832	34,671,089	35,193,400	36,993,762	38,601,683	40,226,606	41,893,927	43,633,661	45,536,604	47,540,833
check		376,816,416	403,839,542	428,880,762	435,087,569	457,411,966	477,289,339	497,363,139	517,953,260	539,437,633	562,960,232	587,738,976
HIGH DENSITY AREA												
FUEL COST (\$)												
Residential												
Natural Gas		172,997,044		5,370,383	12,192,398	23,733,162	35,924,645	45,080,004	60,459,091	62,124,565	63,912,298	65,776,339
Fuel Oil		92,931,078	99,974,069	100,047,599	80,838,249	56,733,804	29,579,207	9,607,331	3,877,641	4,043,238	4,225,043	4,416,753
Wood		10,827,068	11,216,200	11,619,317	12,029,400	12,453,956	12,893,495	13,348,548	414,590	429,222	444,371	460,054
Commercial												
Natural Gas				9,906,934	31,449,770	54,670,278	67,675,396	70,734,200	72,578,808	74,578,333	76,724,636	78,962,555
Fuel Oil		134,513,859	144,708,658	131,008,397	78,116,084	24,687,785	0	0	0	0	0	0
Industrial												
Natural Gas				2,965,343	4,583,551	4,402,727	4,410,598	4,480,633	4,575,060	4,678,743	4,790,773	4,906,825
Fuel Oil	0.75	7,100,960	7,563,172	3,987,669	0	0	0	0	0	0	0	0
Subtotal Fuel Cost		245,372,965	263,462,099	264,905,642	219,209,452	176,681,712	150,483,342	143,250,716	141,905,189	145,854,101	150,097,121	154,522,526
Total Natural Gas Sales (\$)				18,242,660	48,225,719	82,806,167	108,010,640	120,294,837	137,612,958	141,381,641	145,427,708	149,645,719
Total Natural Gas Sold (MMBtu)				1,041,876	3,357,442	5,566,419	7,040,227	7,513,469	7,585,917	7,659,094	7,733,005	7,807,658
BOILER/FURNACE REPLACEMENT OR CONVERSION COST												
Residential		2,734,611	2,762,072	10,390,855	26,238,004	26,501,489	26,767,620	12,977,484	0	0	0	0
Commercial		3,953,333	3,993,043	21,361,047	50,343,094	50,848,774	22,011,228	0	0	0	0	0
Industrial		0	0	2,750,000								
Subtotal Conversion Cost		6,687,944	6,755,115	34,501,903	76,581,098	77,350,263	48,778,849	12,977,484	0	0	0	0
Subtotal Fuel and Conversion Cost		252,060,908	270,217,214	299,407,544	295,790,550	254,031,975	199,262,191	156,228,199	141,905,189	145,854,101	150,097,121	154,522,526
DISTRIBUTION SYSTEM												
Capital Expenditures		1,255,385	10,288,963	109,696,298	109,584,353							
Operating Expenditures	this expenditure is already captured in the cost of energy (gas)											
Subtotal Distribution Costs		1,255,385	10,288,963	109,696,298	109,584,353	0	0	0	0	0	0	0
High Density Area NPV & Annual Cost	\$3,384,770,287	253,316,294	280,506,177	409,103,843	405,374,904	254,031,975	199,262,191	156,228,199	141,905,189	145,854,101	150,097,121	154,522,526

MEDIUM DENSITY AREA

FUEL COST (\$)

Residential												
Natural Gas			0	7,987,689	15,548,469	23,535,559	29,533,572	39,608,978	40,700,092	41,871,302	43,092,504	
Fuel Oil	60,882,574	65,496,697	65,544,869	52,960,116	37,168,406	19,378,429	6,294,117	2,540,386	2,648,875	2,767,981	2,893,577	
Wood	7,093,211	7,348,146	7,612,243	7,880,903	8,159,045	8,447,004	8,745,125	271,613	281,199	291,124	301,398	
Commercial												
Natural Gas	0	0	0	5,565,674	9,675,014	11,976,533	12,517,850	12,844,291	13,198,148	13,577,980	13,974,025	
Fuel Oil	23,804,954	25,609,130	27,275,990	23,501,181	14,563,347	4,565,293	0	0	0	0	0	
Subtotal Fuel Cost	91,780,739	98,453,973	100,433,101	97,895,564	85,114,281	67,902,817	57,090,664	55,265,268	56,828,313	58,508,386	60,261,504	
Total Natural Gas Sales (\$)	0	0	0	13,553,363	25,223,483	35,512,092	42,051,422	52,453,269	53,898,239	55,449,281	57,066,528	
Total Natural Gas Sold (MMBtu)	0	0	0	316,248	1,100,916	1,901,314	2,578,391	2,872,642	2,901,491	2,930,630	2,960,061	

BOILER/FURNACE CONVERSION COST

Residential	1,791,544	1,809,535	1,827,707	6,875,793	17,362,102	17,536,454	17,712,558	8,587,406	0	0	0	
Commercial	699,622	3,993,043	0	21,575,612	50,848,774	51,359,533	22,232,324	0	0	0	0	
Subtotal Conversion Cost	2,491,167	5,802,578	1,827,707	28,451,405	68,210,876	68,895,987	39,944,881	8,587,406	0	0	0	
Subtotal Fuel and Conversion Cost	94,271,905	104,256,551	102,260,808	126,346,969	153,325,156	136,798,804	97,035,546	63,852,674	56,828,313	58,508,386	60,261,504	

DISTRIBUTION SYSTEM

Capital Expenditures	0	0	7,373,594	83,516,426	82,317,980	0	0	0	0	0	0	
Operating Expenditures	0	0	0									
Subtotal Distribution Costs	0	0	7,373,594	83,516,426	82,317,980	0	0	0	0	0	0	
			0.04257	0.48217	0.47526							
Medium Density Area Total Cost	\$1,500,114,595	94,271,905	104,256,551	109,634,402	209,863,395	235,643,136	136,798,804	97,035,546	63,852,674	56,828,313	58,508,386	60,261,504

LOW DENSITY AREA

FUEL COST (\$)

Residential												
Propane			129,092	1,601,544	4,907,115	10,204,857	13,194,017	13,649,138	14,120,576	14,632,226	15,166,910	
Fuel Oil	19,183,393	20,637,249	19,782,397	14,482,346	9,388,688	3,678,927	1,279,512	1,334,077	1,391,049	1,453,598	1,519,554	
Wood	2,234,989	2,315,315	2,398,529	2,483,181	2,570,820	2,661,553	2,755,488	2,852,737	2,953,420	3,057,655	3,165,570	
Commercial												
Propane			125,129	1,408,052	4,242,664	6,084,813	6,298,094	6,515,360	6,740,416	6,984,668	7,239,916	
Fuel Oil	8,264,149	8,890,489	8,048,784	4,799,230	1,516,747	0	0	0	0	0	0	
Subtotal Fuel Cost	29,682,530	31,843,053	30,483,931	24,774,353	22,626,034	22,630,150	23,527,110	24,351,312	25,205,461	26,128,148	27,091,950	
Total Propane Sales (\$)	0	0	254,221	3,009,596	9,149,779	16,289,670	19,492,111	20,164,498	20,860,992	21,616,894	22,406,826	
Total Propane Sold (MMBtu)			88,768	307,941	531,508	711,660	774,929	782,711	790,572	798,512	806,531	
Total Propane Sold (gallons)			958,613	3,325,496	5,739,824	7,685,315	8,368,563	8,452,607	8,537,496	8,623,238	8,709,840	

BOILER/FURNACE CONVERSION COST

Residential	220,943	223,162	2,144,943	5,416,207	5,470,597	5,525,533	2,232,409	0	0	0	0	
Commercial	96,137	97,103	1,115,034	2,627,880	2,654,276	1,148,973	0	0	0	0	0	
Subtotal Conversion Cost	317,081	320,265	3,259,977	8,044,087	8,124,873	6,674,507	2,232,409	0	0	0	0	
Subtotal Fuel and Conversion Cost	29,999,611	32,163,318	33,743,908	32,818,440	30,750,907	29,304,657	25,759,519	24,351,312	25,205,461	26,128,148	27,091,950	

DISTRIBUTION SYSTEM

Capital Expenditures			1,426,966	3,389,724	3,422,358	3,455,320	1,479,445	0	0	0	0	
Operating Expenditures (Included in fuel cost to consumer)												
Subtotal Distribution Costs	0	0	1,426,966	3,389,724	3,422,358	3,455,320	1,479,445	0	0	0	0	

Low Density Area Total Cost	\$527,022,730	29,999,611	32,163,318	35,170,874	36,208,164	34,173,265	32,759,977	27,238,964	24,351,312	25,205,461	26,128,148	27,091,950
Conversion Total Cost	\$5,411,907,612	377,587,810	416,926,046	553,909,119	651,446,463	523,848,377	368,820,972	280,502,709	230,109,176	227,887,875	234,733,655	241,875,979
B/C Ratio	1.962											
High Density	2.099											
Medium Density	1.770											
Low Density	1.630											
		366,836,234	393,759,125	418,699,104	424,803,653	447,024,764	466,797,815	486,766,245	507,249,938	528,626,814	552,040,835	576,709,911
Check of total fuel cost by area		366,836,234	393,759,125	395,822,675	341,879,369	284,422,027	241,016,310	223,868,490	221,521,770	227,887,875	234,733,655	241,875,979
		0	0									
Net Annual Benefits/Costs		-771,394	-13,086,504	-125,028,357	-216,358,894	-66,436,411	108,468,367	216,860,430	287,844,084	311,549,758	328,226,577	345,862,996
Net Annual Benefits/Costs		(1)	(13)	(125)	(216)	(66)	108	217	288	312	328	346
				-125,028,357	-341,387,251	-407,823,662	-299,355,295	-82,494,864	205,349,220			
CHECK												
Fuel cost												
Residential		172,997,044										
Fuel oil		172,997,044										
		20,155,268										
Wood		20,155,268										
		166,582,962										
Commercial		166,582,962										
Industrial												
	Status Quo Annual C	0.38	0.40	0.43	0.44	0.46	0.48	0.50	0.52	0.54	0.56	0.59
	Natural Gas/Propan	0.38	0.42	0.55	0.65	0.52	0.37	0.28	0.23	0.23	0.23	0.24

2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
286,371,424	299,199,653	312,520,922	326,546,536	340,616,605	355,399,492	371,324,878	388,521,739	405,858,848	423,472,261	443,140,872	463,238,146	482,935,938	504,279,895
29,554,831	30,597,915	31,677,812	32,795,823	33,953,292	35,151,611	36,392,223	37,676,621	39,006,348	40,383,006	41,808,251	43,283,797	44,811,419	46,392,957
275,761,467	288,115,140	300,943,648	314,450,477	328,000,182	342,236,371	357,572,819	374,133,732	390,829,784	407,791,992	426,733,390	446,087,674	465,057,363	485,612,374
10,531,099	10,893,454	11,265,336	11,653,883	12,035,161	12,432,641	12,860,598	13,322,414	13,778,538	14,233,562	14,746,568	15,262,089	15,752,871	16,285,547
602,218,821	628,806,162	656,407,718	685,446,719	714,605,240	745,220,115	778,150,518	813,654,506	849,473,518	885,880,821	926,429,081	967,871,705	1,008,557,590	1,052,570,773
5,675,046	5,732,035	5,789,597	5,847,737	5,906,461	5,965,774	6,025,683	6,086,194	6,147,312	6,209,044	6,271,396	6,334,374	6,397,985	6,462,234
5,464,788	5,519,680	5,575,123	5,631,123	5,687,686	5,744,817	5,802,521	5,860,806	5,919,676	5,979,137	6,039,195	6,099,857	6,161,128	6,223,014
11,139,834	11,251,715	11,364,720	11,478,860	11,594,147	11,710,591	11,828,205	11,947,000	12,066,988	12,188,181	12,310,591	12,434,231	12,559,113	12,685,249
613,358,655	640,057,877	667,772,438	696,925,579	726,199,386	756,930,706	789,978,723	825,601,505	861,540,506	898,069,002	938,739,672	980,305,936	1,021,116,703	1,065,256,021
410,376,885	428,241,064	446,783,575	466,290,083	485,869,788	506,425,658	528,537,684	552,379,639	576,425,512	600,859,647	628,080,870	655,896,124	683,190,294	712,720,582
153,368,284	160,043,252	166,972,825	174,260,906	181,584,932	189,272,583	197,534,716	206,434,999	215,420,202	224,557,494	234,718,301	245,106,978	255,318,743	266,355,672
49,613,486	51,773,561	54,016,039	56,374,590	58,744,666	61,232,465	63,906,322	66,786,867	69,694,792	72,651,861	75,940,501	79,302,835	82,607,666	86,179,766
613,358,655	640,057,877	667,772,438	696,925,579	726,199,386	756,930,706	789,978,723	825,601,505	861,540,506	898,069,002	938,739,672	980,305,936	1,021,116,703	1,065,256,021
67,692,805	69,675,013	71,719,182	73,848,384	75,990,462	78,218,590	80,578,183	83,081,368	85,607,567	88,172,222	90,959,949	92,031,178	89,531,591	92,518,735
4,615,016	4,821,749	5,036,428	5,262,458	5,489,204	5,727,437	5,984,083	6,261,219	6,540,615	6,824,463	7,141,433	7,465,310	7,782,750	8,126,718
476,291	493,100	510,504	528,521	547,174	566,485	586,479	607,177	628,606	650,792	673,760	697,540	722,158	747,645
81,263,420	83,643,218	86,097,412	88,653,698	91,225,455	93,900,526	96,733,434	99,738,737	102,771,684	105,850,812	109,197,754	110,484,047	107,483,545	111,069,920
0	0	0	0	0	0	0	0	0	0	0	0	0	0
5,024,661	5,145,337	5,268,407	5,395,706	5,521,032	5,650,461	5,787,551	5,933,014	6,076,864	6,220,329	6,377,915	6,535,883	6,687,736	6,849,563
0	0	0	0	0	0	0	0	0	0	0	0	0	0
159,072,193	163,778,418	168,631,932	173,688,768	178,773,327	184,063,500	189,669,730	195,621,515	201,625,336	207,718,618	214,350,811	217,213,957	212,207,779	219,312,582
153,980,887	158,463,568	163,085,001	167,897,789	172,736,949	177,769,577	183,099,169	188,753,119	194,456,115	200,243,363	206,535,618	209,051,107	203,702,871	210,438,218
7,883,061	7,959,222	8,036,147	8,113,846	8,192,324	8,271,591	8,351,653	8,432,520	8,514,199	8,596,699	8,680,027	8,764,191	8,849,202	8,935,066
0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
159,072,193	163,778,418	168,631,932	173,688,768	178,773,327	184,063,500	189,669,730	195,621,515	201,625,336	207,718,618	214,350,811	217,213,957	212,207,779	219,312,582
0	0	0	0	0	0	0	0	0	0	0	0	0	0
159,072,193	163,778,418	168,631,932	173,688,768	178,773,327	184,063,500	189,669,730	195,621,515	201,625,336	207,718,618	214,350,811	217,213,957	212,207,779	219,312,582

44,348,051	45,646,669	46,985,879	48,380,798	49,784,152	51,243,881	52,789,737	54,429,666	56,084,672	57,764,872	59,591,214	60,293,016	58,655,444	60,612,433
3,023,467	3,158,906	3,299,550	3,447,630	3,596,180	3,752,255	3,920,393	4,101,955	4,284,998	4,470,958	4,678,616	4,890,800	5,098,766	5,324,113
312,036	323,048	334,450	346,253	358,474	371,126	384,224	397,784	411,823	426,358	441,405	456,984	473,112	489,810
14,381,209	14,802,363	15,236,682	15,689,069	16,144,193	16,617,601	17,118,942	17,650,791	18,187,532	18,732,447	19,324,756	19,552,391	19,021,392	19,656,074
0	0	0	0	0	0	0	0	0	0	0	0	0	0
62,064,763	63,930,985	65,856,561	67,863,750	69,882,999	71,984,863	74,213,296	76,580,196	78,969,025	81,394,634	84,035,992	85,193,191	83,248,715	86,082,429
58,729,261	60,449,031	62,222,561	64,069,867	65,928,345	67,861,482	69,908,679	72,080,457	74,272,204	76,497,319	78,915,970	79,845,408	77,676,836	80,268,506
2,989,788	3,019,814	3,050,141	3,080,773	3,111,712	3,142,963	3,174,527	3,206,408	3,238,609	3,271,133	3,303,984	3,337,165	3,370,680	3,404,531
0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
62,064,763	63,930,985	65,856,561	67,863,750	69,882,999	71,984,863	74,213,296	76,580,196	78,969,025	81,394,634	84,035,992	85,193,191	83,248,715	86,082,429
0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
62,064,763	63,930,985	65,856,561	67,863,750	69,882,999	71,984,863	74,213,296	76,580,196	78,969,025	81,394,634	84,035,992	85,193,191	83,248,715	86,082,429
15,715,607	16,283,056	16,867,663	17,477,762	18,086,445	18,720,570	19,396,718	20,119,142	20,842,988	21,573,721	22,379,393	23,196,788	23,994,804	24,850,404
1,587,766	1,658,891	1,732,750	1,810,514	1,888,524	1,970,487	2,058,784	2,154,131	2,250,255	2,347,911	2,456,963	2,568,390	2,677,603	2,795,944
3,277,293	3,392,959	3,512,707	3,636,682	3,765,032	3,897,911	4,035,481	4,177,906	4,325,358	4,478,013	4,636,057	4,799,678	4,969,074	5,144,448
7,501,855	7,772,747	8,051,830	8,343,084	8,633,663	8,936,389	9,259,176	9,604,055	9,949,614	10,298,463	10,683,087	11,073,308	11,454,281	11,862,744
0	0	0	0	0	0	0	0	0	0	0	0	0	0
28,082,520	29,107,652	30,164,950	31,268,041	32,373,664	33,525,358	34,750,159	36,055,234	37,368,215	38,698,109	40,155,499	41,638,165	43,095,762	44,653,540
23,217,462	24,055,803	24,919,493	25,820,846	26,720,108	27,656,959	28,655,894	29,723,197	30,792,602	31,872,184	33,062,480	34,270,096	35,449,085	36,713,148
814,631	822,812	831,076	839,422	847,852	856,367	864,968	873,655	882,429	891,291	900,242	909,283	918,415	927,638
8,797,312	8,885,663	8,974,901	9,065,035	9,156,074	9,248,028	9,340,905	9,434,715	9,529,467	9,625,171	9,721,836	9,819,471	9,918,087	10,017,694
0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
28,082,520	29,107,652	30,164,950	31,268,041	32,373,664	33,525,358	34,750,159	36,055,234	37,368,215	38,698,109	40,155,499	41,638,165	43,095,762	44,653,540
0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0

28,082,520	29,107,652	30,164,950	31,268,041	32,373,664	33,525,358	34,750,159	36,055,234	37,368,215	38,698,109	40,155,499	41,638,165	43,095,762	44,653,540
249,219,477	256,817,056	264,653,443	272,820,559	281,029,990	289,573,720	298,633,185	308,256,945	317,962,576	327,811,361	338,542,302	344,045,313	338,552,256	350,048,550

602,218,821	628,806,162	656,407,718	685,446,719	714,605,240	745,220,115	778,150,518	813,654,506	849,473,518	885,880,821	926,429,081	967,871,705	1,008,557,590	1,052,570,773
249,219,477	256,817,056	264,653,443	272,820,559	281,029,990	289,573,720	298,633,185	308,256,945	317,962,576	327,811,361	338,542,302	344,045,313	338,552,256	350,048,550

364,139,178	383,240,822	403,118,996	424,105,020	445,169,396	467,356,986	491,345,538	517,344,560	543,577,930	570,257,641	600,197,371	636,260,623	682,564,447	715,207,471
364	383	403	424	445	467	491	517	544	570	600	636	683	715

0.61	0.64	0.67	0.70	0.73	0.76	0.79	0.83	0.86	0.90	0.94	0.98	1.02	1.07
0.25	0.26	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.33	0.34	0.34	0.34	0.35

2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
526,528,895	549,720,235	573,892,720	599,086,715	625,344,217	652,708,913	681,226,250	710,943,501	741,909,844	774,176,431	807,796,469	842,825,303	879,320,496
48,030,312	49,725,454	51,480,423	53,297,331	55,178,363	57,125,782	59,141,933	61,229,240	63,390,214	65,627,456	67,943,657	70,341,605	72,824,183
507,039,031	529,373,257	552,652,426	576,915,419	602,202,684	628,556,300	656,020,039	684,639,436	714,461,857	745,536,570	777,914,824	811,649,927	846,797,323
16,835,012	17,401,771	17,986,346	18,589,275	19,211,108	19,852,414	20,513,779	21,195,804	21,899,109	22,624,333	23,372,130	24,143,178	24,938,170
1,098,433,249	1,146,220,718	1,196,011,915	1,247,888,739	1,301,936,371	1,358,243,410	1,416,902,000	1,478,007,981	1,541,661,024	1,607,964,789	1,677,027,081	1,748,960,012	1,823,880,172
6,527,129	6,592,675	6,658,880	6,725,749	6,793,290	6,861,509	6,930,413	7,000,009	7,070,304	7,141,305	7,213,019	7,285,453	7,358,614
6,285,522	6,348,658	6,412,428	6,476,839	6,541,897	6,607,608	6,673,979	6,741,017	6,808,728	6,877,120	6,946,198	7,015,970	7,086,443
12,812,651	12,941,333	13,071,308	13,202,588	13,335,186	13,469,117	13,604,392	13,741,026	13,879,032	14,018,424	14,159,216	14,301,423	14,445,057
1,111,245,900	1,159,162,051	1,209,083,223	1,261,091,327	1,315,271,558	1,371,712,526	1,430,506,392	1,491,749,007	1,555,540,056	1,621,983,213	1,691,186,298	1,763,261,435	1,838,325,230
743,488,510	775,544,693	808,941,780	843,734,531	879,979,903	917,737,135	957,067,839	998,036,091	1,040,708,534	1,085,154,474	1,131,445,988	1,179,658,032	1,229,868,555
277,855,631	289,837,575	302,321,223	315,327,082	328,876,486	342,991,622	357,695,566	373,012,321	388,966,848	405,585,108	422,894,102	440,921,908	459,697,727
89,901,759	93,779,783	97,820,221	102,029,714	106,415,169	110,983,769	115,742,988	120,700,595	125,864,675	131,243,631	136,846,207	142,681,494	148,758,948
1,111,245,900	1,159,162,051	1,209,083,223	1,261,091,327	1,315,271,558	1,371,712,526	1,430,506,392	1,491,749,007	1,555,540,056	1,621,983,213	1,691,186,298	1,763,261,435	1,838,325,230
95,608,095	98,803,095	102,107,270	105,524,274	109,057,881	112,711,988	116,490,622	120,397,941	124,438,241	128,615,960	132,935,680	137,402,136	142,020,217
8,485,272	8,859,012	9,248,563	9,654,577	10,077,729	10,518,725	10,978,296	11,457,204	11,956,242	12,476,233	13,018,037	13,582,544	14,170,682
774,032	801,350	829,632	858,913	889,226	920,610	953,101	986,739	1,021,564	1,057,619	1,094,945	1,133,590	1,173,597
114,779,025	118,614,970	122,582,003	126,684,509	130,927,021	135,314,218	139,850,936	144,542,168	149,393,073	154,408,979	159,595,390	164,957,990	170,502,650
0	0	0	0	0	0	0	0	0	0	0	0	0
7,015,250	7,184,881	7,358,546	7,536,336	7,718,344	7,904,664	8,095,394	8,290,633	8,490,481	8,695,043	8,904,425	9,118,735	9,338,083
0	0	0	0	0	0	0	0	0	0	0	0	0
226,661,673	234,263,307	242,126,014	250,258,609	258,670,202	267,370,205	276,368,349	285,674,685	295,299,601	305,253,835	315,548,478	326,194,994	337,205,229
217,402,369	224,602,946	232,047,819	239,745,120	247,703,246	255,930,871	264,436,952	273,230,742	282,321,795	291,719,983	301,435,495	311,478,861	321,860,950
9,021,792	9,109,389	9,197,866	9,287,232	9,377,496	9,468,665	9,560,751	9,653,761	9,747,706	9,842,594	9,938,435	10,035,239	10,133,015
0	0	0	0	0	0	0	21,795,521	55,035,986	55,588,664	56,146,893	27,221,149	0
0	0	0	0	0	0	0	44,806,240	105,598,043	106,658,739	46,170,039	0	0
0	0	0	0	0	0	0	66,601,762	160,634,029	162,247,404	102,316,931	27,221,149	0
226,661,673	234,263,307	242,126,014	250,258,609	258,670,202	267,370,205	276,368,349	352,276,446	455,933,630	467,501,238	417,865,409	353,416,143	337,205,229
0	0	0	0	0	0	0	0	0	0	0	0	0
226,661,673	234,263,307	242,126,014	250,258,609	258,670,202	267,370,205	276,368,349	352,276,446	455,933,630	467,501,238	417,865,409	353,416,143	337,205,229

62,636,386	64,729,548	66,894,235	69,132,841	71,447,837	73,841,777	76,317,299	78,877,128	81,524,077	84,261,055	87,091,063	90,017,203	93,042,678
5,559,014	5,803,865	6,059,074	6,325,069	6,602,292	6,891,204	7,192,286	7,506,036	7,832,974	8,173,640	8,528,596	8,898,425	9,283,736
507,097	524,994	543,523	562,705	582,565	603,126	624,412	646,449	669,265	692,885	717,339	742,656	768,867
20,312,475	20,991,323	21,693,370	22,419,392	23,170,190	23,946,594	24,749,458	25,579,666	26,438,132	27,325,799	28,243,639	29,192,660	30,173,900
0	0	0	0	0	0	0	0	0	0	0	0	0
89,014,972	92,049,730	95,190,202	98,440,007	101,802,884	105,282,700	108,883,455	112,609,280	116,464,449	120,453,379	124,580,637	128,850,944	133,269,180
82,948,861	85,720,871	88,587,605	91,552,232	94,618,027	97,788,370	101,066,757	104,456,794	107,962,210	111,586,854	115,334,702	119,209,863	123,216,578
3,438,721	3,473,256	3,508,137	3,543,368	3,578,953	3,614,896	3,651,199	3,687,867	3,724,904	3,762,312	3,800,096	3,838,259	3,876,806
0	0	0	0	0	0	0	3,833,738	14,422,441	36,418,182	36,783,898	37,153,287	18,012,665
0	0	0	0	0	0	0	0	45,256,304	106,658,739	107,730,090	46,633,801	0
0	0	0	0	0	0	0	3,833,738	59,678,745	143,076,922	144,513,989	83,787,088	18,012,665
89,014,972	92,049,730	95,190,202	98,440,007	101,802,884	105,282,700	108,883,455	116,443,018	176,143,194	263,530,301	269,094,625	212,638,032	151,281,845
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
89,014,972	92,049,730	95,190,202	98,440,007	101,802,884	105,282,700	108,883,455	116,443,018	176,143,194	263,530,301	269,094,625	212,638,032	151,281,845
25,735,098	26,649,847	27,595,644	28,573,515	29,584,515	30,629,739	31,710,313	32,827,401	33,982,205	35,175,965	36,409,961	37,685,515	39,003,991
2,919,301	3,047,884	3,181,907	3,321,593	3,467,176	3,618,897	3,777,010	3,941,775	4,113,466	4,292,365	4,478,769	4,672,984	4,875,329
5,326,012	5,513,984	5,708,590	5,910,064	6,118,649	6,334,596	6,558,164	6,789,622	7,029,249	7,277,334	7,534,174	7,800,079	8,075,369
12,285,098	12,721,802	13,173,329	13,640,169	14,122,827	14,621,824	15,137,700	15,671,009	16,222,325	16,792,240	17,381,367	17,990,336	18,619,798
0	0	0	0	0	0	0	0	0	0	0	0	0
46,265,509	47,933,517	49,659,470	51,445,341	53,293,167	55,205,056	57,183,186	59,229,807	61,347,245	63,537,904	65,804,271	68,148,914	70,5

46,265,509	47,933,517	49,659,470	51,445,341	53,293,167	55,205,056	57,183,186	66,067,829	78,220,260	80,580,375	79,804,500	72,831,542	70,574,487
361,942,155	374,246,555	386,975,687	400,143,956	413,766,252	427,857,962	442,434,989	534,787,293	710,297,084	811,611,914	766,764,534	638,885,716	559,061,561

1,098,433,249	1,146,220,718	1,196,011,915	1,247,888,739	1,301,936,371	1,358,243,410	1,416,902,000	1,478,007,981	1,541,661,024	1,607,964,789	1,677,027,081	1,748,960,012	1,823,880,172
361,942,155	374,246,555	386,975,687	400,143,956	413,766,252	427,857,962	442,434,989	457,513,771	473,111,295	489,245,118	505,933,386	523,194,851	541,048,896

749,303,745	784,915,497	822,107,537	860,947,371	901,505,306	943,854,564	988,071,403	956,961,714	845,242,972	810,371,300	924,421,764	1,124,375,719	1,279,263,668
749	785	822	861	902	944	988	957	845	810	924	1,124	1,279

1.11	1.16	1.21	1.26	1.32	1.37	1.43	1.49	1.56	1.62	1.69	1.76	1.84
0.36	0.37	0.39	0.40	0.41	0.43	0.44	0.53	0.71	0.81	0.77	0.64	0.56

2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063
917,341,922	956,951,853	998,215,055	1,041,198,890	1,085,973,411	1,132,611,477	1,181,188,856	1,231,784,345	1,284,479,886	1,339,360,693	1,396,515,376	1,456,036,082	1,518,018,626
75,394,380	78,055,287	80,810,106	83,662,152	86,614,855	89,671,768	92,836,570	96,113,067	99,505,203	103,017,057	106,652,857	110,416,975	114,313,940
883,414,681	921,561,983	961,301,611	1,002,698,447	1,045,819,967	1,090,736,350	1,137,520,576	1,186,248,542	1,236,999,178	1,289,854,561	1,344,900,044	1,402,224,383	1,461,919,870
25,757,822	26,602,870	27,474,072	28,372,207	29,298,078	30,252,510	31,236,352	32,250,479	33,295,789	34,373,208	35,483,688	36,628,209	37,807,778
1,901,908,806	1,983,171,993	2,067,800,845	2,155,931,696	2,247,706,312	2,343,272,105	2,442,782,354	2,546,396,433	2,654,280,055	2,766,605,518	2,883,551,964	3,005,305,647	3,132,060,214
7,432,510	7,507,148	7,582,536	7,658,681	7,735,590	7,813,272	7,891,734	7,970,984	8,051,029	8,131,879	8,213,540	8,296,021	8,379,331
7,157,624	7,229,520	7,302,138	7,375,486	7,449,570	7,524,398	7,599,978	7,676,317	7,753,423	7,831,304	7,909,967	7,989,420	8,069,671
14,590,134	14,736,668	14,884,674	15,034,166	15,185,160	15,337,670	15,491,712	15,647,301	15,804,453	15,963,183	16,123,507	16,285,441	16,449,002
1,916,498,940	1,997,908,661	2,082,685,519	2,170,965,862	2,262,891,472	2,358,609,775	2,458,274,066	2,562,043,734	2,670,084,508	2,782,568,701	2,899,675,471	3,021,591,089	3,148,509,216
1,282,158,614	1,336,612,504	1,393,317,877	1,452,365,877	1,513,851,281	1,577,872,636	1,644,532,412	1,713,937,152	1,786,197,637	1,861,429,046	1,939,751,134	2,021,288,410	2,106,170,320
479,251,925	499,616,081	520,823,034	542,906,930	565,903,279	589,849,004	614,782,496	640,743,676	667,774,053	695,916,785	725,216,744	755,720,586	787,476,818
155,088,400	161,680,076	168,544,609	175,693,055	183,136,912	190,888,136	198,959,158	207,362,905	216,112,818	225,222,870	234,707,593	244,582,093	254,862,078
1,916,498,940	1,997,908,661	2,082,685,519	2,170,965,862	2,262,891,472	2,358,609,775	2,458,274,066	2,562,043,734	2,670,084,508	2,782,568,701	2,899,675,471	3,021,591,089	3,148,509,216
146,794,973	151,731,621	156,835,547	162,112,318	167,567,679	173,207,567	179,038,112	185,065,646	191,296,708	197,738,051	204,396,652	211,279,713	218,394,674
14,783,416	15,421,749	16,086,726	16,779,432	17,500,995	18,252,590	19,035,439	19,850,810	20,700,024	21,584,455	22,505,531	23,464,737	24,463,616
1,215,017	1,257,899	1,302,295	1,348,257	1,395,841	1,445,105	1,496,107	1,548,909	1,603,575	1,660,170	1,718,763	1,779,424	1,842,225
176,235,436	182,162,611	188,290,644	194,626,218	201,176,234	207,947,820	214,948,338	222,185,391	229,666,833	237,400,772	245,395,586	253,659,924	262,202,720
0	0	0	0	0	0	0	0	0	0	0	0	0
9,562,583	9,792,350	10,027,502	10,268,160	10,514,448	10,766,492	11,024,420	11,288,365	11,558,462	11,834,847	12,117,663	12,407,052	12,703,162
0	0	0	0	0	0	0	0	0	0	0	0	0
348,591,425	360,366,229	372,542,714	385,134,384	398,155,197	411,619,573	425,542,415	439,939,121	454,825,601	470,218,297	486,134,195	502,590,849	519,606,397
332,592,992	343,686,581	355,153,693	367,006,696	379,258,361	391,921,879	405,010,870	418,539,402	432,522,002	446,973,671	461,909,900	477,346,689	493,300,556
10,231,773	10,331,523	10,432,274	10,534,038	10,636,824	10,740,642	10,845,502	10,951,416	11,058,394	11,166,446	11,275,583	11,385,816	11,497,157
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
348,591,425	360,366,229	372,542,714	385,134,384	398,155,197	411,619,573	425,542,415	439,939,121	454,825,601	470,218,297	486,134,195	502,590,849	519,606,397
0	0	0	0	0	0	0	0	0	0	0	0	0
348,591,425	360,366,229	372,542,714	385,134,384	398,155,197	411,619,573	425,542,415	439,939,121	454,825,601	470,218,297	486,134,195	502,590,849	519,606,397

[illegible]

73,083,734 559,515,551	75,679,492 578,615,516	78,364,691 598,370,185	81,142,361 618,801,669	84,015,632 639,932,816	86,987,742 661,787,242	90,062,033 684,389,350	93,241,963 707,764,361	96,531,103 731,938,338	99,933,146 756,938,216	103,451,908 782,791,832	107,091,331 809,527,950	110,855,491 837,176,298
1,901,908,806 559,515,551	1,983,171,993 578,615,516	2,067,800,845 598,370,185	2,155,931,696 618,801,669	2,247,706,312 639,932,816	2,343,272,105 661,787,242	2,442,782,354 684,389,350	2,546,396,433 707,764,361	2,654,280,055 731,938,338	2,766,605,518 756,938,216	2,883,551,964 782,791,832	3,005,305,647 809,527,950	3,132,060,214 837,176,298
1,356,983,389 1,357	1,419,293,145 1,419	1,484,315,334 1,484	1,552,164,193 1,552	1,622,958,655 1,623	1,696,822,533 1,697	1,773,884,716 1,774	1,854,279,373 1,854	1,938,146,170 1,938	2,025,630,484 2,026	2,116,883,639 2,117	2,212,063,139 2,212	2,311,332,918 2,311
1.92 0.56	2.00 0.58	2.08 0.60	2.17 0.62	2.26 0.64	2.36 0.66	2.46 0.68	2.56 0.71	2.67 0.73	2.78 0.76	2.90 0.78	3.02 0.81	3.15 0.84

2064	2065
1,582,562,641	1,649,771,726
118,348,443	122,525,335
1,524,082,475	1,588,811,987
39,023,433	40,276,242
3,264,016,992	3,401,385,290
8,463,477	8,548,469
8,150,728	8,232,599
16,614,205	16,781,068
3,280,631,197	3,418,166,358
2,194,531,447	2,286,511,707
820,535,872	854,950,179
265,563,878	276,704,471
3,280,631,197	3,418,166,358
225,749,217	233,351,278
25,503,774	26,586,882
1,907,243	1,974,556
271,033,202	280,160,896
0	0
13,006,142	13,316,148
0	0
537,199,579	555,389,759
509,788,561	526,828,322
11,609,616	11,723,204
0	0
0	0
0	0
537,199,579	555,389,759
0	0
537,199,579	555,389,759

147,896,631	152,877,021
16,708,462	17,418,046
1,249,505	1,293,604
47,964,819	49,580,149
0	0
213,819,417	221,168,821
195,861,450	202,457,170
4,458,929	4,503,709
0	0
0	0
0	0
213,819,417	221,168,821
0	0
0	0
213,819,417	221,168,821
62,847,430	65,006,988
8,774,404	9,147,040
13,123,488	13,586,658
30,003,278	31,034,326
0	0
114,748,601	118,775,013
92,850,708	96,041,315
1,214,938	1,227,139
13,120,279	13,252,045
0	0
0	0
0	0
114,748,601	118,775,013
0	0
0	0

114,748,601	118,775,013
865,767,597	895,333,593

3,264,016,992	3,401,385,290
865,767,597	895,333,593

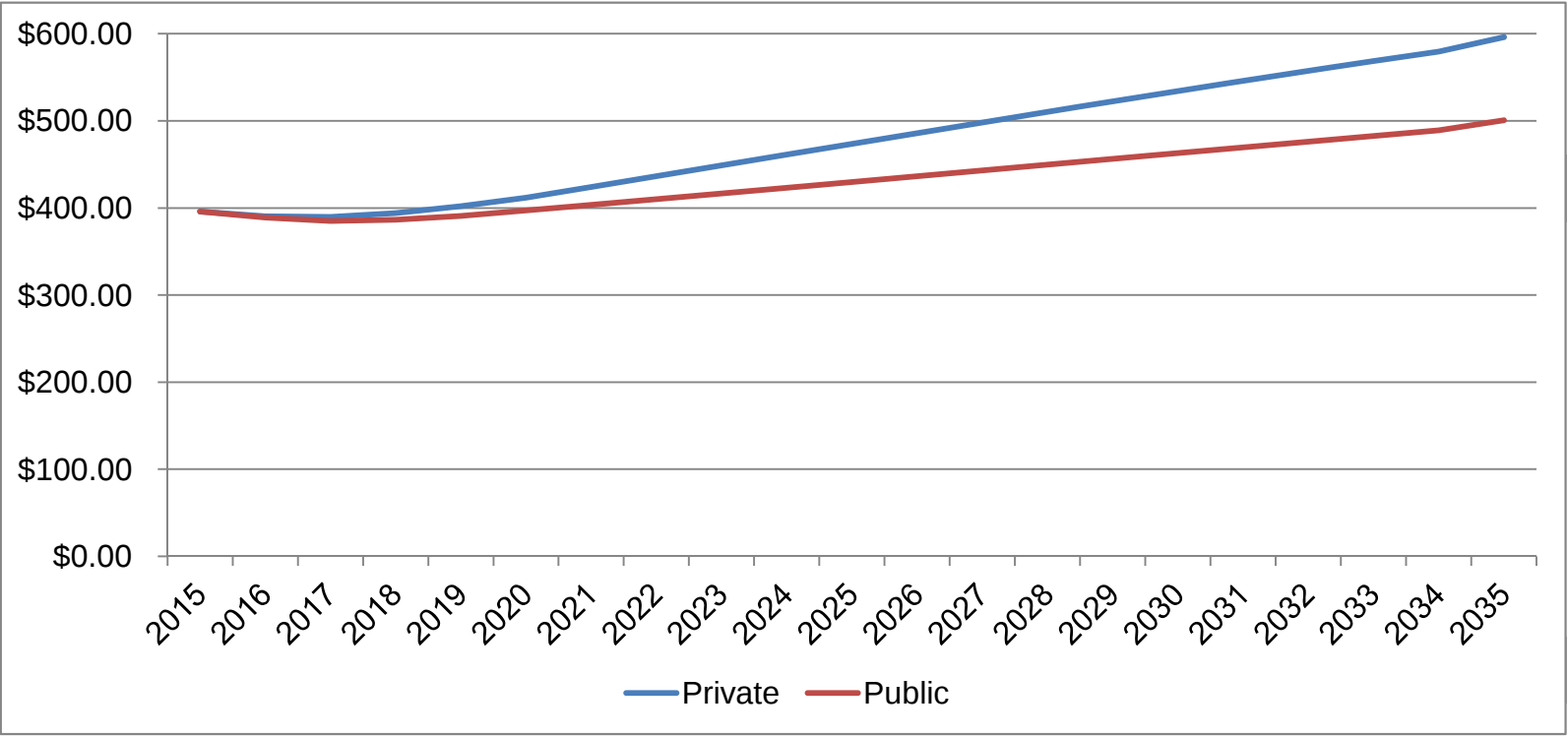
2,414,863,600	2,522,832,765
2,415	2,523

3.28	3.42
0.87	0.90

FUEL COSTS AND SAVINGS
(Millions of Nominal \$)

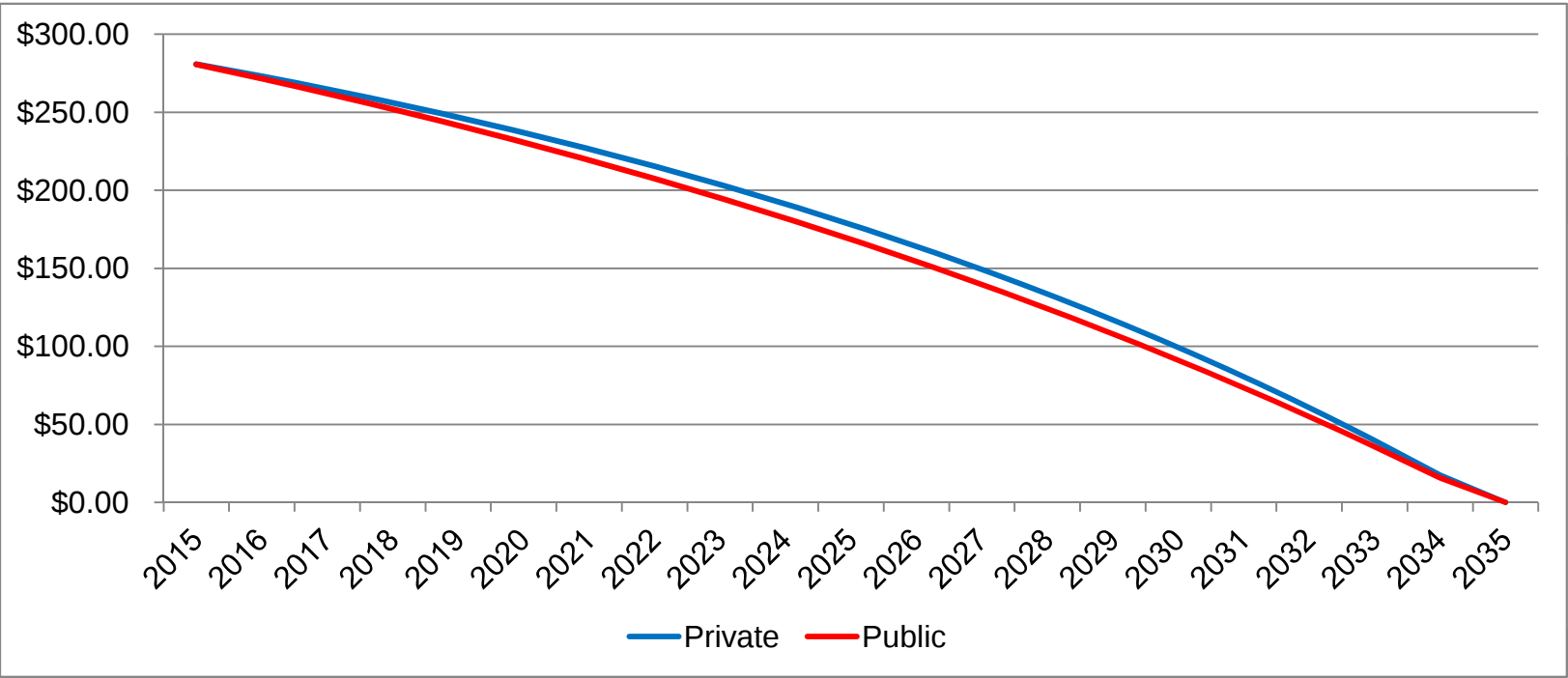
Alternative/Sector									Total	Total
	2015	2016	2017	2018	2019	2020	2021	2022	2015-2021	2015-2022
Status Quo	(Millions of Nominal \$)									
Residential	219.9	223.3	234.9	245.2	255.6	266.3	277.5	289.7	1,722.7	2,012.4
Commercial	187.3	189.8	200.0	209.0	218.0	227.3	237.1	247.7	1,468.5	1,716.2
Industrial	8.0	8.0	8.3	8.6	8.9	9.2	9.5	9.8	60.6	70.4
Total	415.1	421.2	443.2	462.8	482.6	502.9	524.1	547.3	3,251.8	3,799.1
Natural Gas/Propane										
Residential	213.6	195.4	173.9	148.1	130.5	125.7	129.4	133.4	1,116.5	1,249.8
Commercial	178.7	145.6	108.7	88.5	87.6	89.9	92.4	95.0	791.3	886.3
Industrial	7.1	5.5	5.3	5.3	5.4	5.5	5.6	5.7	39.7	45.4
Total	399.4	346.5	287.9	241.9	223.5	221.0	227.3	234.1	1,947.5	2,181.5
Savings										
Residential	6.2	27.9	61.0	97.1	125.1	140.7	148.1	156.4	606.2	762.6
Commercial	8.6	44.2	91.3	120.5	130.4	137.5	144.7	152.7	677.2	829.9
Industrial	0.9	2.5	3.0	3.3	3.5	3.7	3.9	4.2	20.9	25.1
Total	15.7	74.7	155.3	220.9	259.1	281.9	296.8	313.2	1,304.4	1,617.6
Savings as a % of Status Quo	4%	18%	35%	48%	54%	56%	57%	57%	40%	43%

		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Display	Private	\$395,952,340	\$390,554,272	\$389,783,340	\$394,046,572	\$402,027,602	\$411,701,197	\$424,097,921	\$436,490,562	\$448,887,394	\$461,277,060	\$473,636,779	\$485,946,248
Display	Public	\$395,952,340	\$388,817,994	\$385,162,023	\$386,280,415	\$390,734,856	\$396,849,495	\$403,402,102	\$409,963,982	\$416,550,483	\$423,161,386	\$429,787,839	\$436,424,052
Display	Private	\$395.95	\$390.55	\$389.78	\$394.05	\$402.03	\$411.70	\$424.10	\$436.49	\$448.89	\$461.28	\$473.64	\$485.95
Display	Public	\$395.95	\$388.82	\$385.16	\$386.28	\$390.73	\$396.85	\$403.40	\$409.96	\$416.55	\$423.16	\$429.79	\$436.42



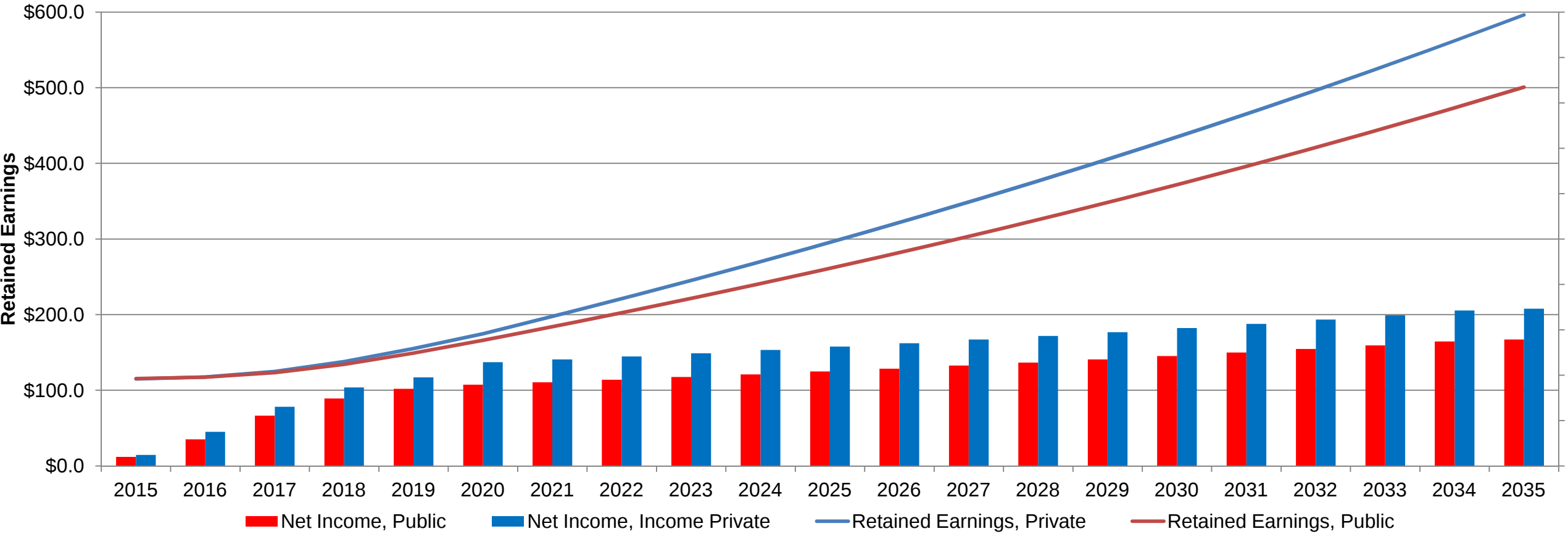
2027	2028	2029	2030	2031	2032	2033	2034	2035
\$498,181,038	\$510,322,556	\$522,321,972	\$534,154,835	\$545,810,390	\$557,278,822	\$568,501,068	\$579,419,836	\$596,207,483
\$443,061,848	\$449,699,077	\$456,309,542	\$462,888,754	\$469,445,106	\$475,989,310	\$482,492,546	\$488,929,248	\$500,765,849
\$498.18	\$510.32	\$522.32	\$534.15	\$545.81	\$557.28	\$568.50	\$579.42	\$596.21
\$443.06	\$449.70	\$456.31	\$462.89	\$469.45	\$475.99	\$482.49	\$488.93	\$500.77

		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Display	Private	\$280,900,995	\$273,097,248	\$264,825,276	\$256,056,986	\$246,762,598	\$236,910,548	\$226,467,374	\$215,397,610	\$203,663,659	\$191,225,672	\$178,041,406	\$164,066,084
Display	Public	\$280,569,273	\$271,452,540	\$261,925,555	\$251,969,856	\$241,566,150	\$230,694,277	\$219,333,170	\$207,460,813	\$195,054,200	\$182,089,290	\$168,540,959	\$154,382,952
Display	Private	\$280.90	\$273.10	\$264.83	\$256.06	\$246.76	\$236.91	\$226.47	\$215.40	\$203.66	\$191.23	\$178.04	\$164.07
Display	Public	\$280.57	\$271.45	\$261.93	\$251.97	\$241.57	\$230.69	\$219.33	\$207.46	\$195.05	\$182.09	\$168.54	\$154.38



2027	2028	2029	2030	2031	2032	2033	2034	2035
\$149,252,242	\$133,549,570	\$116,904,737	\$99,261,215	\$80,559,081	\$60,734,819	\$39,721,102	\$17,446,561	(\$0)
\$139,587,836	\$124,126,939	\$107,970,302	\$91,086,616	\$73,443,164	\$55,005,757	\$35,738,666	\$15,604,557	\$0
\$149.25	\$133.55	\$116.90	\$99.26	\$80.56	\$60.73	\$39.72	\$17.45	(\$0.00)
\$139.59	\$124.13	\$107.97	\$91.09	\$73.44	\$55.01	\$35.74	\$15.60	\$0.00

		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
RETAINED EARNINGS	Private	\$115,051,345	\$117,457,024	\$124,958,064	\$137,989,586	\$155,265,004	\$174,790,650	\$197,630,548	\$221,092,952	\$245,223,735	\$270,051,388	\$295,595,373	\$321,880,165
	Public	\$115,383,067	\$117,365,454	\$123,236,467	\$134,310,559	\$149,168,706	\$166,155,218	\$184,068,932	\$202,503,169	\$221,496,283	\$241,072,096	\$261,246,881	\$282,041,100
		Retained Earnings, Private	\$115.1	\$117.5	\$125.0	\$138.0	\$155.3	\$174.8	\$197.6	\$221.1	\$245.2	\$270.1	\$321.9
		Retained Earnings, Public	\$115.4	\$117.4	\$123.2	\$134.3	\$149.2	\$166.2	\$184.1	\$202.5	\$221.5	\$241.1	\$282.0
NET INCOME	Private	\$2,405,679	\$7,501,040	\$13,031,522	\$17,275,418	\$19,525,646	\$22,839,898	\$23,462,405	\$24,130,783	\$24,827,653	\$25,543,985	\$26,284,791	\$27,048,631
	Public	\$1,982,386	\$5,871,013	\$11,074,092	\$14,858,148	\$16,986,512	\$17,913,714	\$18,434,237	\$18,993,114	\$19,575,813	\$20,174,785	\$20,794,219	\$21,432,912
		Net Income, Private	\$2.0	\$5.9	\$11.1	\$14.9	\$17.0	\$17.9	\$18.4	\$19.0	\$19.6	\$20.2	\$21.4
		Net Income, Public	\$2.4	\$7.5	\$13.0	\$17.3	\$19.5	\$22.8	\$23.5	\$24.1	\$24.8	\$25.5	\$27.0



2027	2028	2029	2030	2031	2032	2033	2034	2035
\$348,928,796	\$376,772,986	\$405,417,235	\$434,893,620	\$465,251,308	\$496,544,003	\$528,779,966	\$561,973,274	\$596,207,483
\$303,474,012	\$325,572,138	\$348,339,240	\$371,802,138	\$396,001,942	\$420,983,553	\$446,753,879	\$473,324,691	\$500,765,849
\$348.9	\$376.8	\$405.4	\$434.9	\$465.3	\$496.5	\$528.8	\$562.0	\$596.2
\$303.5	\$325.6	\$348.3	\$371.8	\$396.0	\$421.0	\$446.8	\$473.3	\$500.8
\$27,844,190	\$28,644,249	\$29,476,385	\$30,357,688	\$31,292,694	\$32,235,963	\$33,193,308	\$34,234,208	\$34,628,801
\$22,098,126	\$22,767,102	\$23,462,898	\$24,199,804	\$24,981,611	\$25,770,327	\$26,570,811	\$27,441,158	\$27,836,933
\$22.1	\$22.8	\$23.5	\$24.2	\$25.0	\$25.8	\$26.6	\$27.4	\$27.8
\$27.8	\$28.6	\$29.5	\$30.4	\$31.3	\$32.2	\$33.2	\$34.2	\$34.6

\$100.0

\$90.0

\$80.0

\$70.0

\$60.0

\$50.0

\$40.0

\$30.0

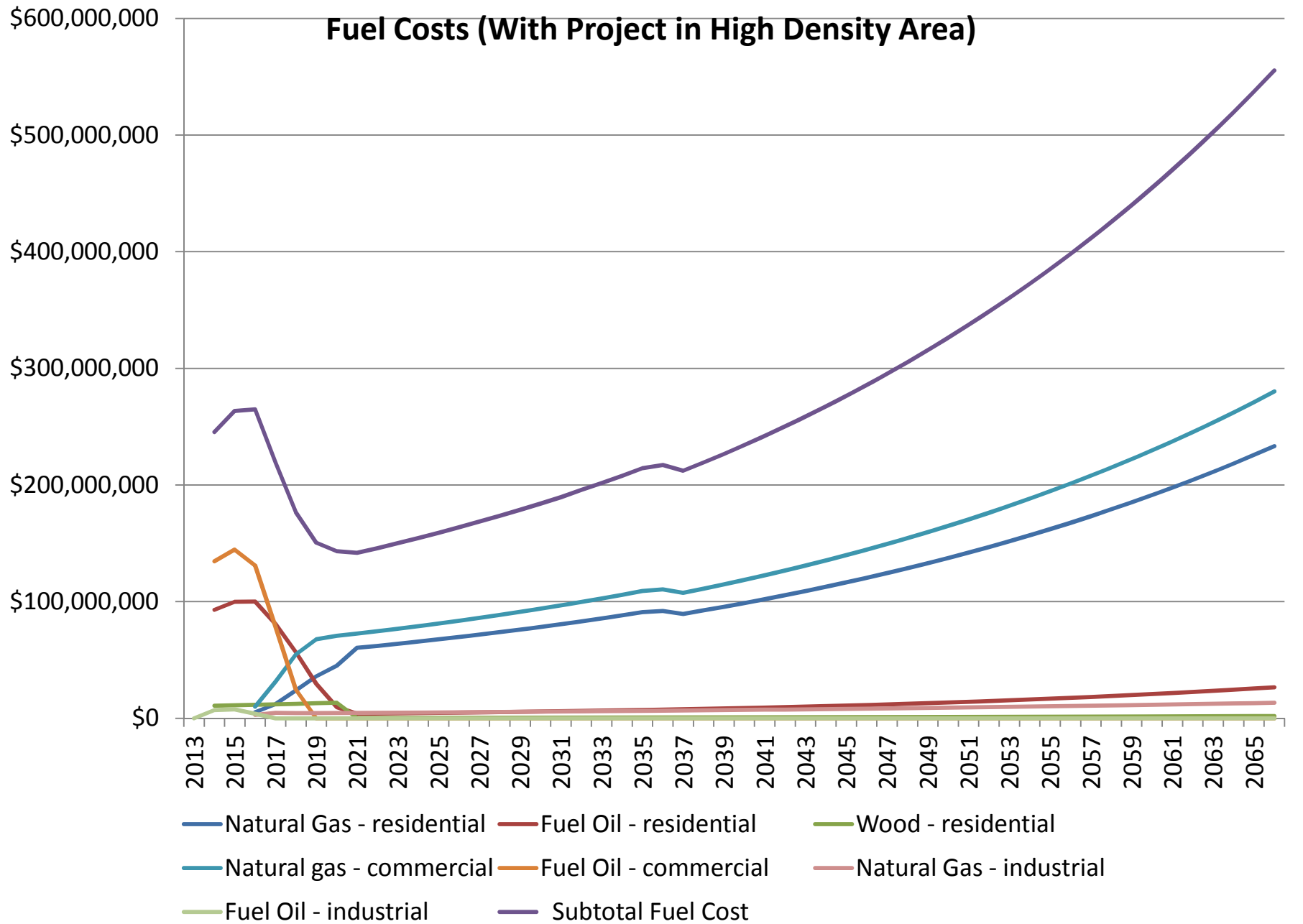
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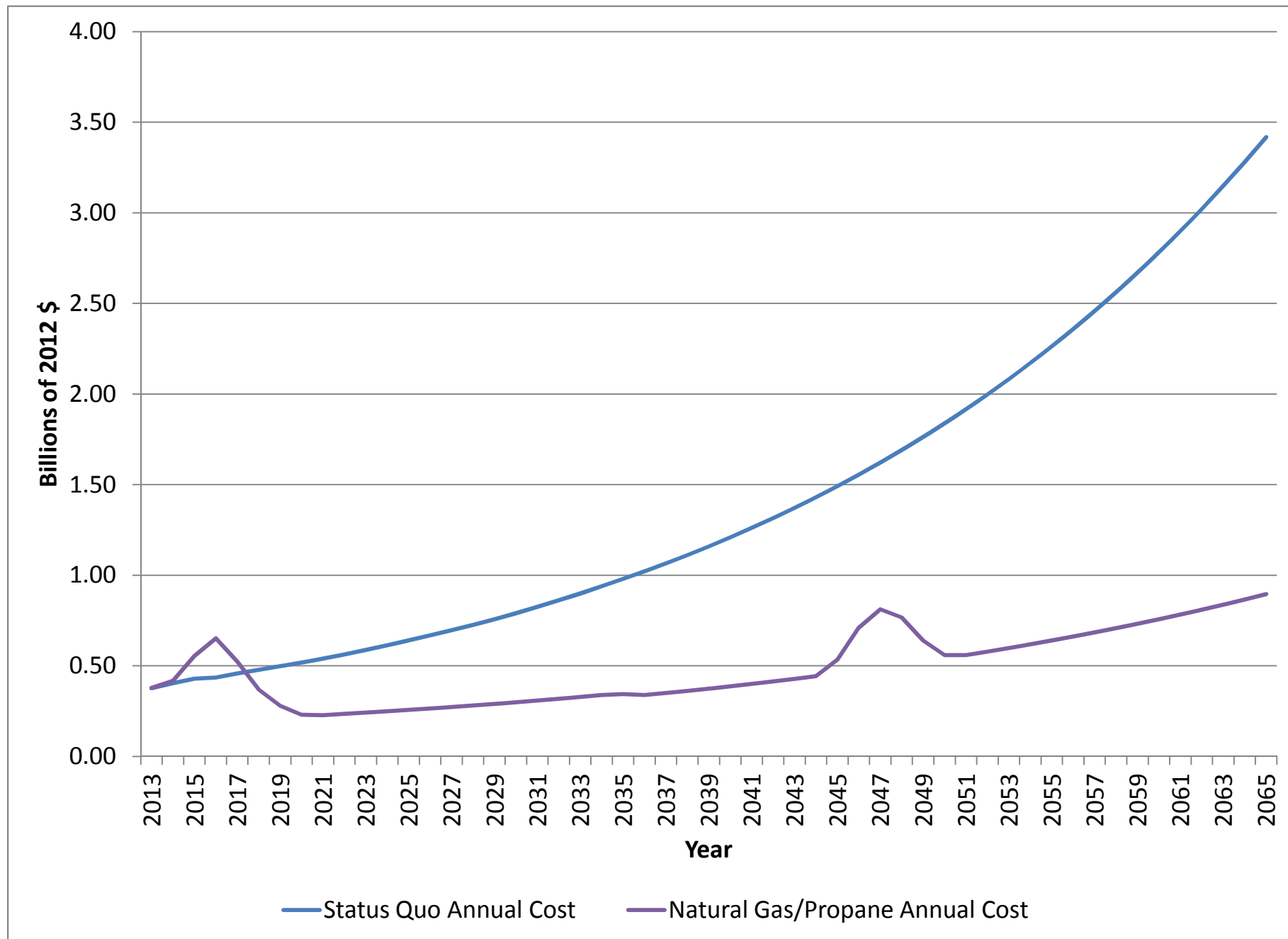
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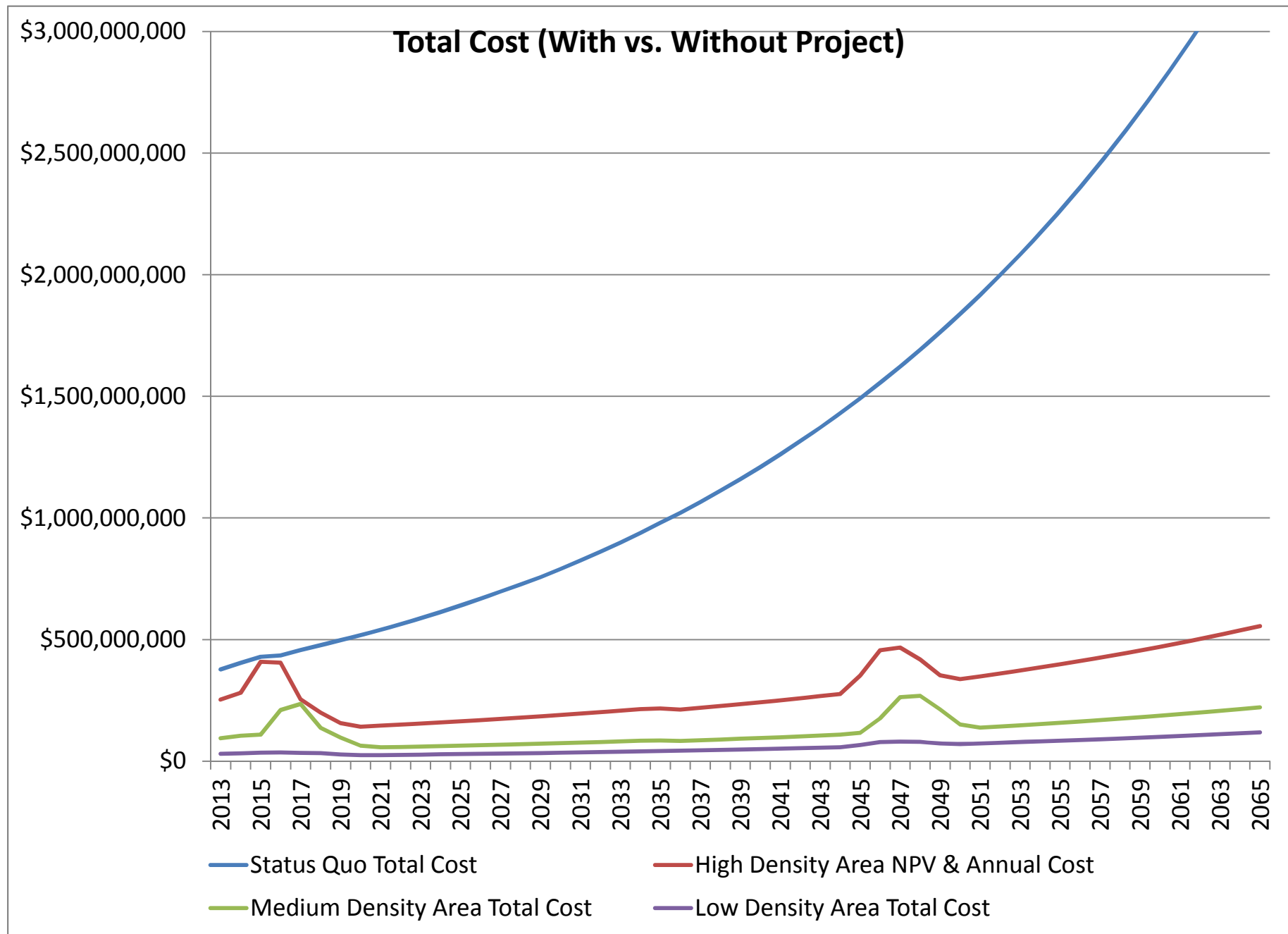
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Net Income

Fuel Costs (With Project in High Density Area)

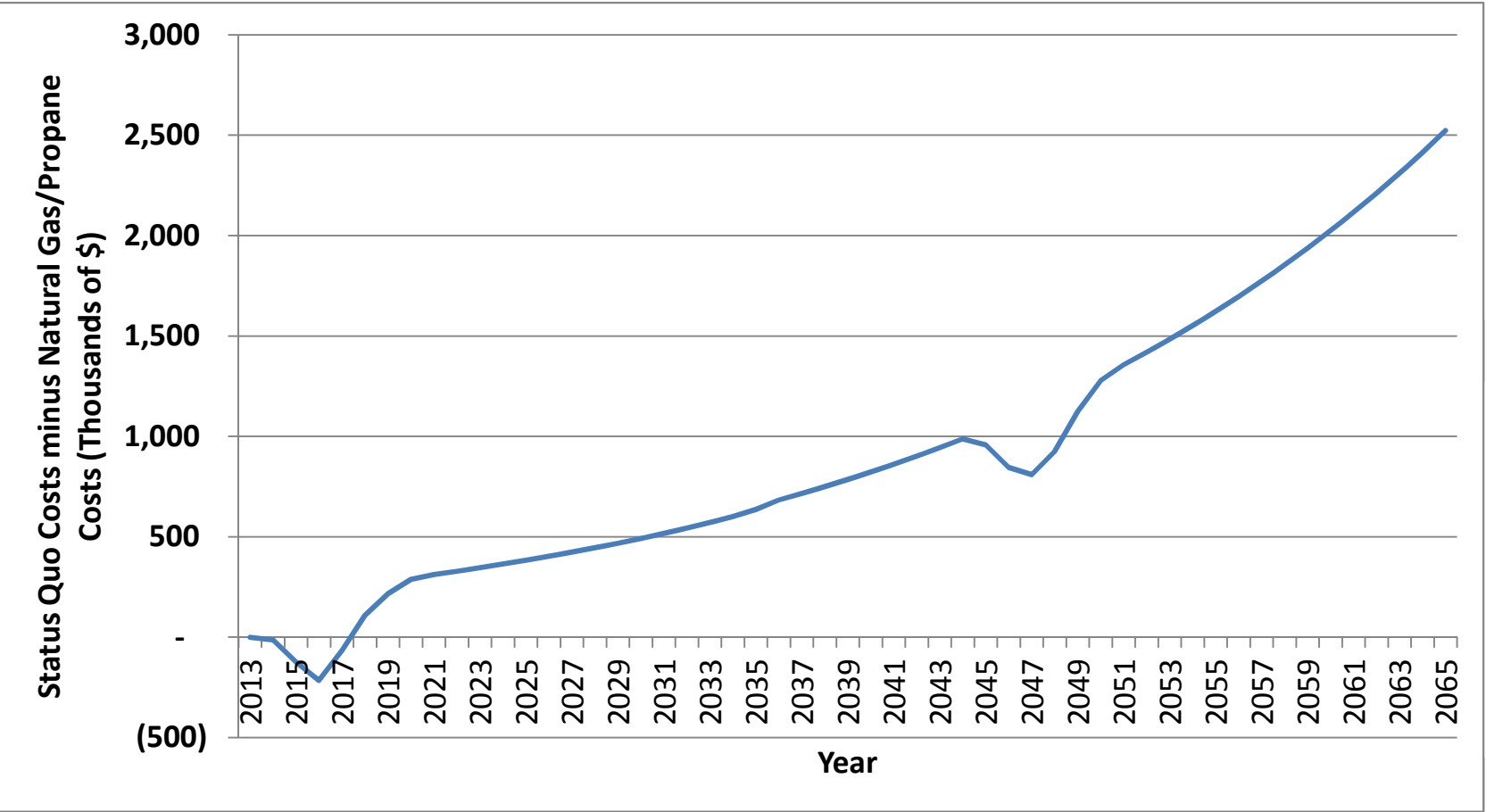






This is now Table ES-6 and Table 19 in the BCA section

Alternative	Net Present Value		
Status Quo	\$10,617,526,597		
High Density Area	\$7,103,631,156		
Medium Density Area	\$2,654,941,565		
Low Density Area	\$858,953,877		
		Cost Savings	Benefit-Cost Ratio
With Natural Gas/Propane Conversion	\$5,411,907,612	\$5,205,618,986	1.96
High Density Area	\$3,384,770,287	\$3,718,860,869	2.10
Medium Density Area	\$1,500,114,595	\$1,154,826,969	1.77
Low Density Area	\$527,022,730	\$331,931,147	1.63
	\$10.62		
	\$7.10		
	\$2.65		
	\$0.86		
	\$5.41	\$5.21	1.96
	\$3.38	\$3.72	2.10
	\$1.50	\$1.15	1.77
	\$0.53	\$0.33	1.63



Total Energy Supply, Disposition, and Price Summary, Reference case
(quadrillion Btu, unless otherwise noted)

Supply, Disposition, and Prices	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Production																							
Crude Oil and Lease Condensate	10.51	11.34	11.87	11.76	11.58	12.02	12.4	12.51	12.82	13.07	13.12	13.17	13.07	13.05	13.09	12.97	12.78	12.64	12.5	12.44	12.53	12.48	12.49
Natural Gas Plant Liquids	2.41	2.57	2.64	2.63	2.76	2.81	2.83	2.86	2.86	2.89	2.94	2.99	3.06	3.15	3.28	3.43	3.52	3.55	3.57	3.61	3.65	3.67	3.71
Dry Natural Gas	20.83	21.5	21.83	21.61	21.83	22.3	22.59	23.01	23.06	23.24	23.51	23.8	24.04	24.15	24.32	24.47	24.48	24.6	24.7	24.92	25.21	25.47	25.75
Coal 1/	23.85	21.58	22.59	21.75	21.39	21.13	20.8	20.94	21.15	21.3	21.42	21.61	22.05	22.21	22.55	22.95	23.5	23.64	23.95	24.05	24.4	24.53	24.77
Nuclear Power	8.43	8.35	8.39	8.4	8.5	8.64	8.7	8.77	8.79	8.9	9.01	9.12	9.17	9.17	9.17	9.17	9.17	9.17	9.17	9.17	9.17	9.17	9.17
Hydropower	2.53	2.69	2.4	2.58	2.66	2.74	2.84	2.92	2.99	2.99	2.99	3	3	3.01	3.01	3.01	3.01	3.04	3.04	3.05	3.06	3.06	3.07
Biomass 2/	3.94	3.52	3.83	4.23	4.32	4.53	4.56	4.7	4.84	4.99	5.19	5.43	5.77	5.94	6.17	6.48	6.9	7.2	7.45	7.65	7.8	8.03	8.15
Other Renewable Energy 3/	1.12	1.29	1.54	1.72	2.05	2.08	2.09	2.14	2.14	2.16	2.19	2.24	2.3	2.33	2.36	2.4	2.49	2.58	2.68	2.74	2.82	2.92	2.97
Other 4/	0.19	0.34	0.55	0.93	0.65	0.68	0.7	0.78	0.86	0.94	0.96	0.96	0.96	0.97	0.97	0.96	0.94	0.88	0.82	0.78	0.78	0.78	0.81
Total	73.8	73.18	75.64	75.6	75.74	76.92	77.51	78.63	79.51	80.49	81.33	82.31	83.42	83.97	84.92	85.85	86.78	87.29	87.88	88.41	89.41	90.11	90.88
Imports																							
Crude Oil	21.39	19.7	20.19	20.16	19.79	19.71	19.37	19.25	18.97	18.68	18.54	18.44	18.46	18.57	18.31	18.25	18.26	18.35	18.44	18.41	18.32	18.28	18.3
Liquid Fuels 5/	6.32	5.4	4.53	4.72	5.21	5.35	5.34	5.33	5.38	5.36	5.36	5.35	5.34	5.24	5.24	5.19	5.16	5.18	5.2	5.21	5.2	5.2	5.26
Natural Gas	4.08	3.82	3.89	3.92	3.92	4.01	4.04	4.01	4.04	4.06	4.04	3.96	3.8	3.61	3.45	3.34	3.27	3.2	3.15	3.12	3.05	3.06	3.07
Other Imports 6/	0.96	0.61	0.55	0.68	0.82	0.86	0.86	0.82	0.81	0.8	0.9	0.94	0.98	1.27	1.29	1.34	1.3	1.39	1.38	1.51	1.38	1.39	1.3
Total	32.76	29.53	29.16	29.48	29.74	29.93	29.61	29.41	29.2	28.9	28.84	28.69	28.57	28.69	28.3	28.12	27.98	28.13	28.18	28.26	27.95	27.94	27.93
Exports																							
Petroleum 7/	3.78	4.17	4.25	4.24	3.27	3.25	3.23	3.27	3.34	3.4	3.45	3.52	3.54	3.57	3.55	3.57	3.59	3.62	3.64	3.65	3.68	3.7	3.75
Natural Gas	1.01	1.09	1.06	1.08	1.19	1.21	1.25	1.24	1.32	1.43	1.53	1.65	1.82	1.94	2.01	2.05	2.05	2.07	2.11	2.16	2.19	2.24	2.24
Coal	2.07	1.51	1.93	1.88	1.86	1.87	1.78	1.76	1.71	1.75	1.81	1.86	1.92	1.85	1.86	1.87	1.88	1.89	1.89	1.89	1.89	1.89	1.86
Total	6.86	6.77	7.23	7.19	6.33	6.32	6.26	6.27	6.37	6.58	6.79	7.04	7.28	7.36	7.42	7.49	7.52	7.58	7.64	7.7	7.76	7.82	7.85
Discrepancy 8/	-0.44	1.16	-0.2	-0.4	-0.3	-0.25	-0.24	-0.24	-0.25	-0.26	-0.22	-0.21	-0.21	-0.18	-0.17	-0.14	-0.12	-0.12	-0.12	-0.11	-0.11	-0.09	-0.07
Consumption																							
Liquid Fuels 9/	38.46	36.62	36.96	37.41	38.23	38.81	38.92	39.1	39.25	39.32	39.31	39.31	39.38	39.51	39.59	39.67	39.73	39.84	39.94	40.04	40.18	40.31	40.55
Natural Gas	23.85	23.31	24.45	24.49	24.54	25.08	25.37	25.77	25.76	25.86	26.01	26.1	26	25.8	25.75	25.75	25.68	25.73	25.73	25.88	26.07	26.29	26.58
Coal 10/	22.38	19.69	21.05	20.41	20.19	19.96	19.71	19.73	19.97	20.07	20.22	20.41	20.85	21.32	21.61	21.98	22.44	22.61	22.88	23.04	23.2	23.28	23.39
Nuclear Power	8.43	8.35	8.39	8.4	8.5	8.64	8.7	8.77	8.79	8.9	9.01	9.12	9.17	9.17	9.17	9.17	9.17	9.17	9.17	9.17	9.17	9.17	9.17
Hydropower	2.53	2.69	2.4	2.58	2.66	2.74	2.84	2.92	2.99	2.99	2.99	3	3	3.01	3.01	3.01	3.01	3.04	3.04	3.05	3.06	3.06	3.07
Biomass 11/	3.07	2.52	2.66	2.98	2.98	3.15	3.15	3.27	3.37	3.45	3.58	3.71	3.93	4.05	4.18	4.35	4.55	4.71	4.83	4.89	4.94	5.02	5.05
Other Renewable Energy 3/	1.12	1.29	1.54	1.72	2.05	2.08	2.09	2.14	2.14	2.16	2.19	2.24	2.3	2.33	2.36	2.4	2.49	2.58	2.68	2.74	2.82	2.92	2.97
Other 12/	0.31	0.32	0.32	0.3	0.31	0.31	0.31	0.31	0.31	0.31	0.3	0.3	0.29	0.3	0.3	0.29	0.28	0.27	0.27	0.27	0.27	0.26	0.24
Total	100.14	94.79	97.77	98.29	99.46	100.77	101.1	102.02	102.59	103.08	103.61	104.17	104.92	105.49	105.97	106.62	107.37	107.95	108.53	109.07	109.71	110.31	111.03
Prices (2009 dollars per unit)																							
Low Sulfur Light Price (\$ per barrel) 13/	100.51	61.66	78.03	83.21	85.73	88.03	91.38	94.58	97.62	100.5	103.15	105.71	108.1	110.3	112.36	114.21	115.96	117.54	118.99	120.25	121.34	122.3	123.09
Imported Crude Oil Price (\$ per barrel) 13/	93.44	59.04	74.86	80.32	80.65	82.87	85.07	86.83	88.96	91.56	94.04	96.42	98.65	100.74	102.49	104.25	105.88	107.4	108.8	109.98	110.93	111.74	112.38
Gas Price at Henry Hub (\$ / MMBtu)	8.94	3.95	4.43	4.48	4.5	4.56	4.57	4.66	4.74	4.76	4.81	4.87	5.05	5.24	5.39	5.58	5.8	5.97	6.1	6.24	6.31	6.35	6.4
Gas Wellhead Price (\$ / MMBtu) 14/	7.96	3.62	3.98	3.99	3.98	4.04	4.05	4.13	4.2	4.22	4.26	4.31	4.47	4.64	4.77	4.94	5.13	5.29	5.4	5.52	5.59	5.62	5.66
Gas Wellhead Price (\$ / Mcf) 14/	8.18	3.71	4.08	4.09	4.09	4.15	4.16	4.24	4.31	4.33	4.37	4.43	4.59	4.76	4.9	5.07	5.27	5.43	5.54	5.67	5.73	5.77	5.81
Coal Mine mouth Price (\$ / ton) 15/	31.54	33.26	36.64	35.37	33.72	33.31	32.71	32.36	32.36	32.55	32.42	32.44	32.85	32.6	32.7	32.77	33.13	33.22	33.5	33.32	33.1	33.17	33.25
Coal Delivered Price (\$ / million Btu) 16/	2.18	2.31	2.4	2.37	2.31	2.28	2.25	2.26	2.28	2.29	2.29	2.29	2.3	2.31	2.33	2.34	2.35	2.36	2.37	2.38	2.39	2.41	2.42
Electricity (cents per kilowatt-hour)	9.8	9.8	9.6	9	9	8.9	8.9	8.9	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.9	8.9	8.9	8.9	9	9	9	9

Prices (nominal dollars per unit)																							
Low Sulfur Light Price (\$ per barrel) 13/	99.57	61.66	78.71	85.05	88.61	92.52	97.79	103.24	108.69	114.2	119.68	125.15	130.6	135.82	140.88	145.74	150.68	155.46	160.21	164.96	169.57	174.16	178.45
Imported Crude Oil Price (\$ per barrel) 13/	92.57	59.04	75.52	82.1	83.37	87.1	91.03	94.78	99.05	104.05	109.12	114.16	119.18	124.05	128.51	133.04	137.59	142.05	146.49	150.86	155.02	159.12	162.92
Gas Price at Henry Hub (\$ / MMBtu)	8.86	3.95	4.47	4.58	4.65	4.79	4.89	5.09	5.27	5.41	5.58	5.77	6.1	6.45	6.76	7.12	7.53	7.9	8.21	8.56	8.82	9.04	9.28
Gas Wellhead Price (\$ / MMBtu) 14/	7.89	3.62	4.01	4.08	4.12	4.25	4.33	4.51	4.67	4.79	4.94	5.11	5.4	5.71	5.99	6.3	6.67	6.99	7.27	7.58	7.81	8	8.21
Gas Wellhead Price (\$ / Mcf) 14/	8.1	3.71	4.12	4.19	4.23	4.36	4.45	4.63	4.79	4.92	5.07	5.24	5.55	5.86	6.14	6.46	6.84	7.18	7.46	7.77	8.01	8.21	8.43
Coal Mine mouth Price (\$ / ton) 15/	31.25	33.26	36.96	36.15	34.86	35.01	35	35.32	36.03	36.99	37.61	38.41	39.69	40.14	41.01	41.82	43.06	43.93	45.11	45.7	46.26	47.24	48.21
Coal Delivered Price (\$ / million Btu) 16/	2.16	2.31	2.42	2.42	2.39	2.4	2.41	2.47	2.54	2.6	2.65	2.71	2.78	2.85	2.92	2.98	3.06	3.12	3.19	3.26	3.34	3.43	3.5
Electricity (cents per kilowatt-hour)	9.7	9.8	9.7	9.2	9.3	9.4	9.5	9.7	9.8	10	10.2	10.4	10.7	10.9	11.1	11.3	11.5	11.8	12	12.3	12.5	12.8	13

1/ Includes waste coal.

2/ Includes grid-connected electricity from wood and wood waste; biomass, such as corn, used for liquid fuels production; and non-electric energy demand from wood. Refer to Table 17 for details.

3/ Includes grid-connected electricity from landfill gas; biogenic municipal waste; wind; photovoltaic and solar thermal sources; and non-electric energy from renewable sources, such as active and passive solar systems. Excludes electricity imports using renewable sources and nonmarketed renewable energy. See Table 17 for selected nonmarketed residential and commercial renewable energy.

4/ Includes non-biogenic municipal waste, liquid hydrogen, methanol, and some domestic inputs to refineries.

5/ Includes imports of finished petroleum products, unfinished oils, alcohols, ethers, blending components, and renewable fuels such as ethanol.

6/ Includes coal, coal coke (net), and electricity (net).

7/ Includes crude oil and petroleum products.

8/ Balancing item. Includes unaccounted for supply, losses, gains, and net storage withdrawals.

9/ Includes petroleum-derived fuels and non-petroleum-derived fuels, such as ethanol and biodiesel, and coal-based synthetic liquids. Petroleum coke, which is a solid, is included. Also included are natural gas plant liquids and crude oil consumed as a fuel. Refer to Table 17 for detailed renewable liquid fuels consumption.

10/ Excludes coal converted to coal-based synthetic liquids and natural gas.

11/ Includes grid-connected electricity from wood and wood waste, non-electric energy from wood, and biofuels heat and coproducts used in the production of liquid fuels, but excludes the energy content of the liquid fuels.

12/ Includes non-biogenic municipal waste, liquid hydrogen, and net electricity imports.

13/ Weighted average price delivered to U.S. refiners.

14/ Represents lower 48 onshore and offshore supplies.

15/ Includes reported prices for both open market and captive mines.

16/ Prices weighted by consumption; weighted average excludes residential and commercial prices, and export free-alongside-ship (f.a.s.) prices.

Btu = British thermal unit.

Mcf = Thousand cubic feet.

- - = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2008 and 2009 are model results and may differ slightly from official EIA data reports.

Sources: 2008 natural gas supply values: U.S. Energy Information Administration (EIA), Natural Gas Annual 2008, DOE/EIA-0131(2008) (Washington, DC, March 2010).

2009 natural gas supply values and natural gas wellhead price: EIA, Natural Gas Monthly, DOE/EIA-0130(2010/07) (Washington, DC, July 2010).

2008 natural gas wellhead price: Bureau of Energy Management, Regulation and Enforcement; and EIA, Natural Gas Annual 2008, DOE/EIA-0131(2008) (Washington, DC, March 2010).

2008 and 2009 coal mine mouth and delivered coal prices: EIA, Annual Coal Report 2009, DOE/EIA-0584(2009) (Washington, DC, October 2010).

2009 petroleum supply values and 2008 crude oil and lease condensate production: EIA, Petroleum Supply Annual 2009, DOE/EIA-0340(2009)/1 (Washington, DC, July 2010).

Other 2008 petroleum supply values: EIA, Petroleum Supply Annual 2008, DOE/EIA-0340(2008)/1 (Washington, DC, June 2009).
2008 and 2009 low sulfur light crude oil price: EIA, Form EIA-856, Monthly Foreign Crude Oil Acquisition"
Report. Other 2008 and 2009 coal values: EIA
Other 2008 and 2009 values: EIA, Annual Energy Review 2009, DOE/EIA-0384(2009) (Washington, DC, August 2010).
Projections: EIA, AEO2011 National Energy Modeling System.

2031	2032	2033	2034	2035	Growth Rate (2009-2035)
12.63	12.91	13.01	13.04	12.8	0.50%
3.75	3.78	3.82	3.86	3.92	1.60%
26.02	26.22	26.42	26.67	27	0.90%
24.96	25.21	25.45	25.72	26.01	0.70%
9.17	9.16	9.16	9.15	9.14	0.30%
3.07	3.08	3.08	3.09	3.09	0.50%
8.39	8.47	8.54	8.61	8.63	3.50%
3.02	3.08	3.11	3.16	3.22	3.60%
0.8	0.79	0.79	0.78	0.78	3.20%
91.8	92.71	93.39	94.09	94.59	1.00%
18.19	18.02	17.99	18.07	18.44	-0.30%
5.28	5.3	5.34	5.34	5.33	-0.10%
3.07	3.06	3.02	2.95	2.87	-1.10%
1.33	1.36	1.31	1.29	1.27	2.90%
27.88	27.73	27.67	27.65	27.92	-0.20%
3.79	3.84	3.87	3.89	3.92	-0.20%
2.3	2.36	2.45	2.53	2.64	3.50%
1.87	1.87	1.82	1.78	1.78	0.60%
7.96	8.07	8.14	8.2	8.34	0.80%
-0.06	-0.05	-0.03	-0.03	-0.02 - -	
40.81	41.02	41.25	41.47	41.7	0.50%
26.79	26.92	27	27.09	27.24	0.60%
23.53	23.72	23.89	24.1	24.3	0.80%
9.17	9.16	9.16	9.15	9.14	0.30%
3.07	3.08	3.08	3.09	3.09	0.50%
5.15	5.19	5.21	5.25	5.25	2.90%
3.02	3.08	3.11	3.16	3.22	3.60%
0.25	0.26	0.25	0.25	0.25	-0.90%
111.78	112.42	112.95	113.56	114.19	0.70%
123.71	124.2	124.53	124.68	124.94	2.80%
112.8	113.02	113.26	113.43	113.7	2.60%
6.49	6.62	6.74	6.87	7.07	2.30%
5.75	5.86	5.96	6.09	6.26	2.10%
5.9	6.01	6.12	6.24	6.42	2.10%
33.39	33.66	33.73	33.81	33.92	0.10%
2.43	2.45	2.45	2.47	2.47	0.30%
9	9	9.1	9.1	9.2	-0.20%

182.68	186.95	191.1	195.08	199.37	4.60%
166.57	170.12	173.8	177.48	181.43	4.40%
9.59	9.96	10.34	10.76	11.28	4.10%
8.49	8.82	9.15	9.52	9.99	4.00%
8.71	9.05	9.39	9.77	10.24	4.00%
49.31	50.67	51.76	52.91	54.13	1.90%
3.59	3.68	3.76	3.86	3.95	2.10%
13.3	13.6	13.9	14.3	14.7	1.60%

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.987567
R Square	0.975289
Adjusted R	0.97117
Standard E	0.114164
Observation	8

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	3.086413	3.086413	236.8057	4.76E-06
Residual	6	0.078201	0.013034		
Total	7	3.164614			

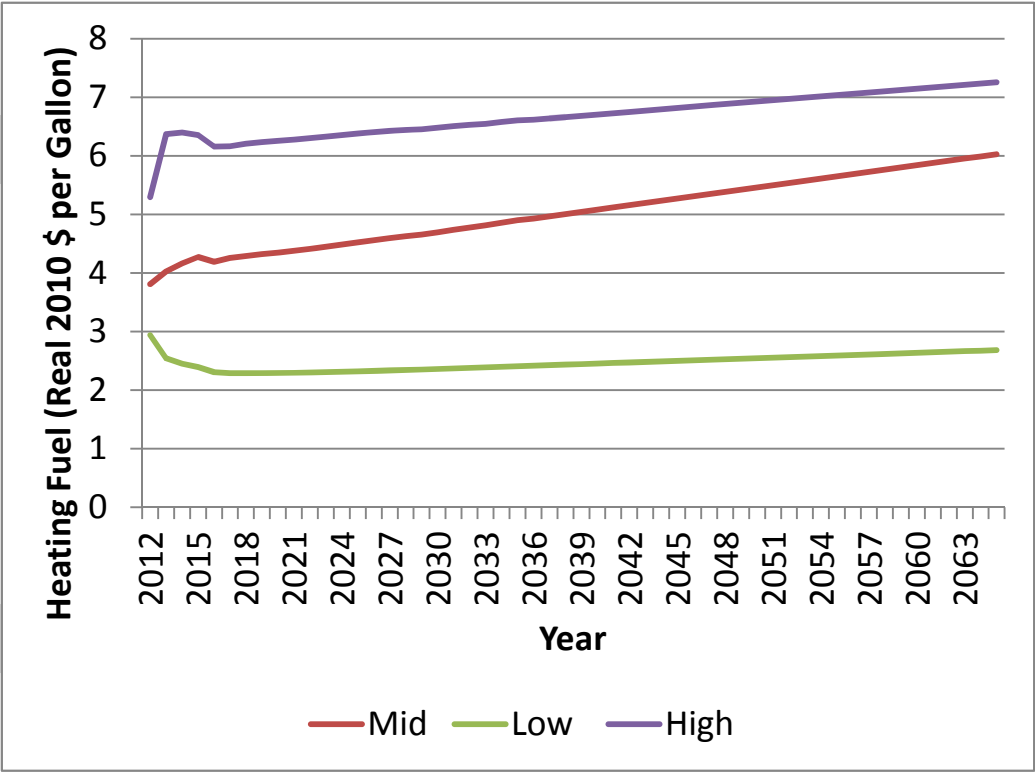
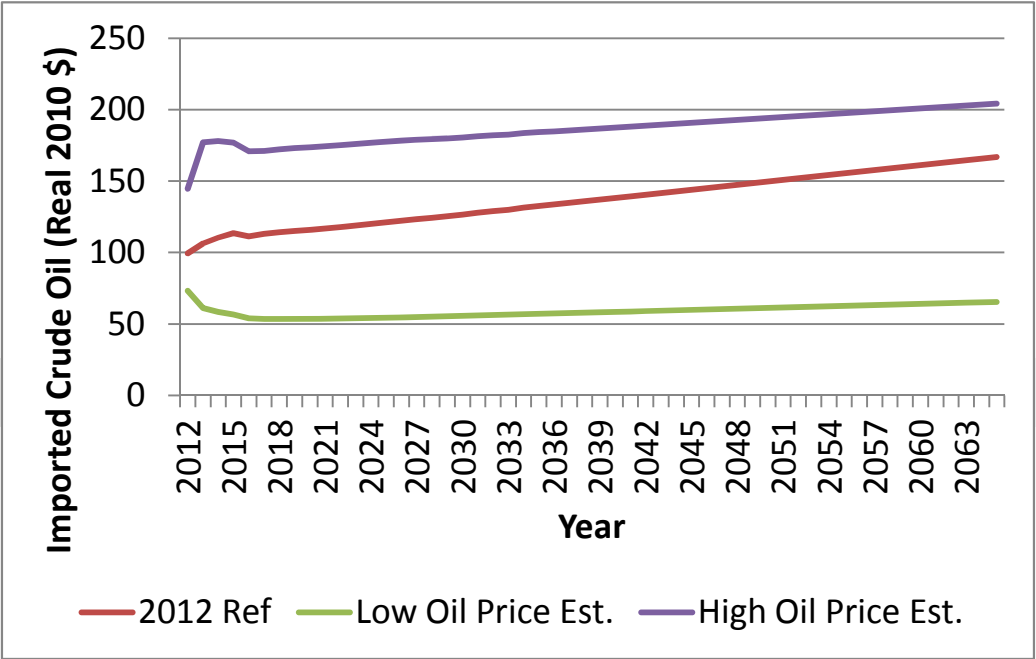
	Coefficient	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.522835	0.157212	3.325661	0.015892	0.13815	0.907519	0.13815	0.907519
Crude per (	1.385286	0.090021	15.38849	4.76E-06	1.165013	1.60556	1.165013	1.60556

					10.03											
					2011											
Nominal \$					Imported Crude Oil			2010 \$			Nominal \$					
Year	#1 Fuel Oil	Per Barrel	Per Gallon	42	Year	Reference	Low Oil	High Oil	Year	2012 Ref	Low Oil Price	High Oil Pri	Mid Escala	75% of Esc	Mid	Year
1986	0.778	12.85	0.306		2012	95.18	52.47	120.24	2012	100	73	145			104.58	2012
1987	0.918	18.57	0.442		2013	103.34	50.98	128.22	2013	106	61	177	9.4%	7.1%	114.45	2013
1988	0.088	13.84	0.330		2014	110.43	49.73	133.73	2014	110	58	178	6.5%	4.9%	121.90	2014
1989	0.957	17.62	0.420		2015	116.55	48.46	136.84	2015	114	57	177	5.4%	4.1%	128.55	2015
1990	1.179	29.88	0.711		2016	119.58	45.71	143.76	2016	111	54	171	0.4%	0.3%	129.01	2016
1991	0.927	19	0.452		2017	122.78	45.07	148.35	2017	113	54	171	4.3%	3.2%	134.55	2017
1992	0.975	19.26	0.459		2018	124.03	44.46	152.74	2018	114	54	172	3.5%	2.6%	139.20	2018
1993	0.999	15.32	0.365		2019	125.30	43.94	156.77	2019	115	54	173	3.3%	2.5%	143.79	2019
1994	0.961	15.91	0.379		2020	126.58	43.35	160.6	2020	116	54	174	3.2%	2.4%	148.43	2020
1995	0.955	16.71	0.398		2021	127.74	42.87	164.21	2021	117	54	174	3.2%	2.4%	153.23	2021
1996	10.88	22.04	0.525		2022	128.97	42.38	167.46	2022	118	54	175	3.5%	2.6%	158.53	2022
1997	1.087	17.85	0.425		2023	130.15	42.01	170.75	2023	119	54	176	3.5%	2.6%	164.08	2023
1998	0.964	12.77	0.304		2024	131.33	41.63	172.29	2024	120	54	177	3.5%	2.6%	169.74	2024
1999	1.075	21.64	0.515		2025	132.50	41.36	175.09	2025	121	54	178	3.4%	2.6%	175.58	2025
2000	1.372	30.56	0.728		2026	133.67	41.17	177.62	2026	122	55	178	3.4%	2.6%	181.57	2026
2001	1.343	22.51	0.536		2027	134.85	40.82	180.31	2027	123	55	179	3.4%	2.6%	187.84	2027
2002	1.212	27.14	0.646		2028	135.97	40.61	182.31	2028	124	55	179	3.3%	2.5%	193.98	2028
2003	1.273	25.66	0.611		2029	137.18	40.43	184.01	2029	125	55	180	3.3%	2.5%	200.39	2029
2004	1.824	40.42	0.962		2030	138.51	40.15	185.03	2030	127	56	181	3.4%	2.6%	207.29	2030
2005	2.544	58.79	1.400		2031	139.79	40.02	186.33	2031	128	56	182	3.6%	2.7%	214.73	2031
2006	2.494	57.29	1.364		2032	141.02	39.82	187.34	2032	129	56	182	3.4%	2.6%	222.08	2032
2007	2.683	72.34	1.722		2033	142.13	39.74	187.84	2033	130	56	183	3.3%	2.5%	229.42	2033
2008	3.67	96.38	2.295		2034	143.41	39.67	188.17	2034	131	57	184	3.6%	2.7%	237.68	2034
2009	2.731	67.65	1.611		2035	144.56	39.66	187.79	2035	133	57	184	3.5%	2.6%	245.99	2035
2010	3.02	73.2	1.743		2036				2036	134	57	185	3.2%	2.4%	253.90	2036
2011	3.922	101.05	2.406		2037				2037	135	58	185	3.4%	2.5%	262.49	2037
*Fuel oil prices are as of September of each year.					2038				2038	136	58	186	3.4%	2.5%	271.35	2038
					2039				2039	137	58	187	3.4%	2.5%	280.48	2039
					2040				2040	138	58	187	3.4%	2.5%	289.90	2040
					2041				2041	139	59	188	3.4%	2.5%	299.62	2041
					2042				2042	141	59	189	3.3%	2.5%	309.64	2042
					2043				2043	142	59	189	3.3%	2.5%	319.98	2043
					2044				2044	143	60	190	3.3%	2.5%	330.64	2044
					2045				2045	144	60	191	3.3%	2.5%	341.63	2045
					2046				2046	145	60	191	3.3%	2.5%	352.97	2046
					2047				2047	146	60	192	3.3%	2.5%	364.66	2047
					2048				2048	147	61	193	3.3%	2.5%	376.71	2048
					2049				2049	149	61	193	3.3%	2.5%	389.14	2049
					2050				2050	150	61	194	3.3%	2.5%	401.95	2050
					2051				2051	151	62	195	3.3%	2.5%	415.16	2051
					2052				2052	152	62	195	3.3%	2.5%	428.78	2052
					2053				2053	153	62	196	3.3%	2.5%	442.82	2053
					2054				2054	154	62	197	3.3%	2.5%	457.30	2054
					2055				2055	155	63	198	3.3%	2.4%	472.22	2055
					2056				2056	157	63	198	3.3%	2.4%	487.61	2056
					2057				2057	158	63	199	3.3%	2.4%	503.46	2057
					2058				2058	159	64	200	3.2%	2.4%	519.81	2058
					2059				2059	160	64	200	3.2%	2.4%	536.66	2059
					2060				2060	161	64	201	3.2%	2.4%	554.02	2060
					2061				2061	162	64	202	3.2%	2.4%	571.92	2061

2062	2062	163	65	202	3.2%	2.4%	590.37	180	571	2062
2063	2063	165	65	203	3.2%	2.4%	609.38	183	579	2063
2064	2064	166	65	204	3.2%	2.4%	628.98	185	588	2064
2065	2065	167	65	204	3.2%	2.4%	649.17	188	596	2065

2010 Real \$ Uses data for years 2003 - 2011 for regression equation
Regression: 0.522835 +1.385286*(Crude Price/42)
1.385286

Fairbanks Heating Fuel Estimate			
Mid	Low	High	
	3.81	2.94	5.30
	4.03	2.54	6.37
	4.17	2.45	6.40
	4.27	2.39	6.36
	4.19	2.30	6.16
	4.26	2.29	6.16
	4.29	2.29	6.21
	4.32	2.29	6.23
	4.35	2.29	6.25
4.374819132	2.29	6.27	
	4.41	2.30	6.30
	4.45	2.31	6.33
	4.49	2.31	6.36
	4.52	2.32	6.38
	4.56	2.33	6.40
	4.59	2.34	6.43
	4.63	2.34	6.44
	4.66	2.35	6.46
	4.70	2.36	6.48
	4.74	2.37	6.51
	4.78	2.38	6.53
	4.81	2.39	6.55
	4.86	2.40	6.58
	4.90	2.41	6.60
	4.93	2.42	6.62
	4.97	2.42	6.64
	5.01	2.43	6.66
	5.04	2.44	6.68
	5.08	2.45	6.71
	5.12	2.46	6.73
	5.16	2.47	6.75
	5.20	2.48	6.77
	5.23	2.49	6.79
	5.27	2.50	6.82
	5.31	2.51	6.84
	5.35	2.52	6.86
	5.38	2.53	6.88
	5.42	2.53	6.90
	5.46	2.54	6.93
	5.50	2.55	6.95
	5.54	2.56	6.97
	5.57	2.57	6.99
	5.61	2.58	7.01
	5.65	2.59	7.04
	5.69	2.60	7.06
	5.73	2.61	7.08
	5.76	2.62	7.10
	5.80	2.63	7.13
	5.84	2.64	7.15
	5.88	2.65	7.17



Nominal \$
2.50% assumed inflation rate

Fairbanks Heating Fuel Estimate				
2011 Year	Mid	Low	High	
2012	4.00	3.09	5.56	
2013	4.34	2.73	6.86	
2014	4.60	2.70	7.06	
2015	4.83	2.71	7.19	
2016	4.86	2.67	7.14	
2017	5.06	2.72	7.33	
2018	5.23	2.79	7.56	
2019	5.40	2.86	7.78	
2020	5.57	2.93	8.01	
2021	5.74	3.01	8.23	
2022	5.93	3.09	8.47	
2023	6.13	3.18	8.73	
2024	6.34	3.27	8.98	
2025	6.55	3.36	9.24	
2026	6.76	3.45	9.51	
2027	6.99	3.55	9.78	
2028	7.21	3.65	10.05	
2029	7.45	3.75	10.32	
2030	7.69	3.86	10.62	
2031	7.96	3.98	10.93	
2032	8.23	4.09	11.24	
2033	8.49	4.21	11.55	
2034	8.79	4.34	11.90	
2035	9.08	4.47	12.24	
2036	9.37	4.59	12.58	
2037	9.68	4.72	12.93	
2038	9.99	4.86	13.30	
2039	10.32	5.00	13.68	
2040	10.66	5.14	14.07	
2041	11.01	5.29	14.47	
2042	11.37	5.44	14.88	
2043	11.73	5.60	15.30	
2044	12.12	5.76	15.73	
2045	12.51	5.93	16.18	
2046	12.91	6.10	16.64	
2047	13.33	6.27	17.11	
2048	13.76	6.45	17.59	
2049	14.20	6.64	18.09	
2050	14.66	6.83	18.60	
2051	15.13	7.03	19.12	
2052	15.62	7.23	19.66	
2053	16.12	7.44	20.22	
2054	16.63	7.65	20.79	
2055	17.16	7.87	21.38	
2056	17.71	8.09	21.98	
2057	18.27	8.32	22.60	
2058	18.86	8.56	23.24	
2059	19.45	8.81	23.89	
2060	20.07	9.06	24.57	
2061	20.71	9.32	25.26	

2012 Real \$

Fairbanks Natural Gas Estimates			
Mid	Low	High	
4.69	3.00	6.37	
4.79	3.03	6.56	
4.87	3.03	6.71	
5.05	3.09	7.00	
5.18	3.13	7.22	
5.27	3.13	7.40	
5.42	3.18	7.65	
5.60	3.22	7.99	
5.89	3.28	8.50	
6.20	3.38	9.03	
6.53	3.46	9.60	
6.88	3.58	10.18	
7.18	3.69	10.68	
7.42	3.79	11.05	
7.60	3.87	11.32	
7.81	3.96	11.66	
8.05	4.06	12.05	
8.32	4.13	12.51	
8.60	4.17	13.04	
8.85	4.21	13.50	
9.13	4.26	14.00	
9.46	4.33	14.60	
9.76	4.39	15.13	
10.05	4.48	15.63	
10.28	4.53	16.03	
10.56	4.59	16.52	
10.83	4.65	17.01	
11.11	4.72	17.50	
11.38	4.78	17.99	
11.66	4.84	18.48	
11.94	4.91	18.97	
12.21	4.97	19.46	
12.49	5.03	19.95	
12.76	5.09	20.43	
13.04	5.16	20.92	
13.32	5.22	21.41	
13.59	5.28	21.90	
13.87	5.34	22.39	
14.14	5.41	22.88	
14.42	5.47	23.37	
14.69	5.53	23.86	
14.97	5.59	24.35	
15.25	5.66	24.84	
15.52	5.72	25.32	
15.80	5.78	25.81	
16.07	5.84	26.30	
16.35	5.91	26.79	
16.63	5.97	27.28	
16.90	6.03	27.77	
17.18	6.10	28.26	

5.92 2.65 7.19
5.95 2.66 7.21
5.99 2.67 7.24
6.03 2.68 7.26

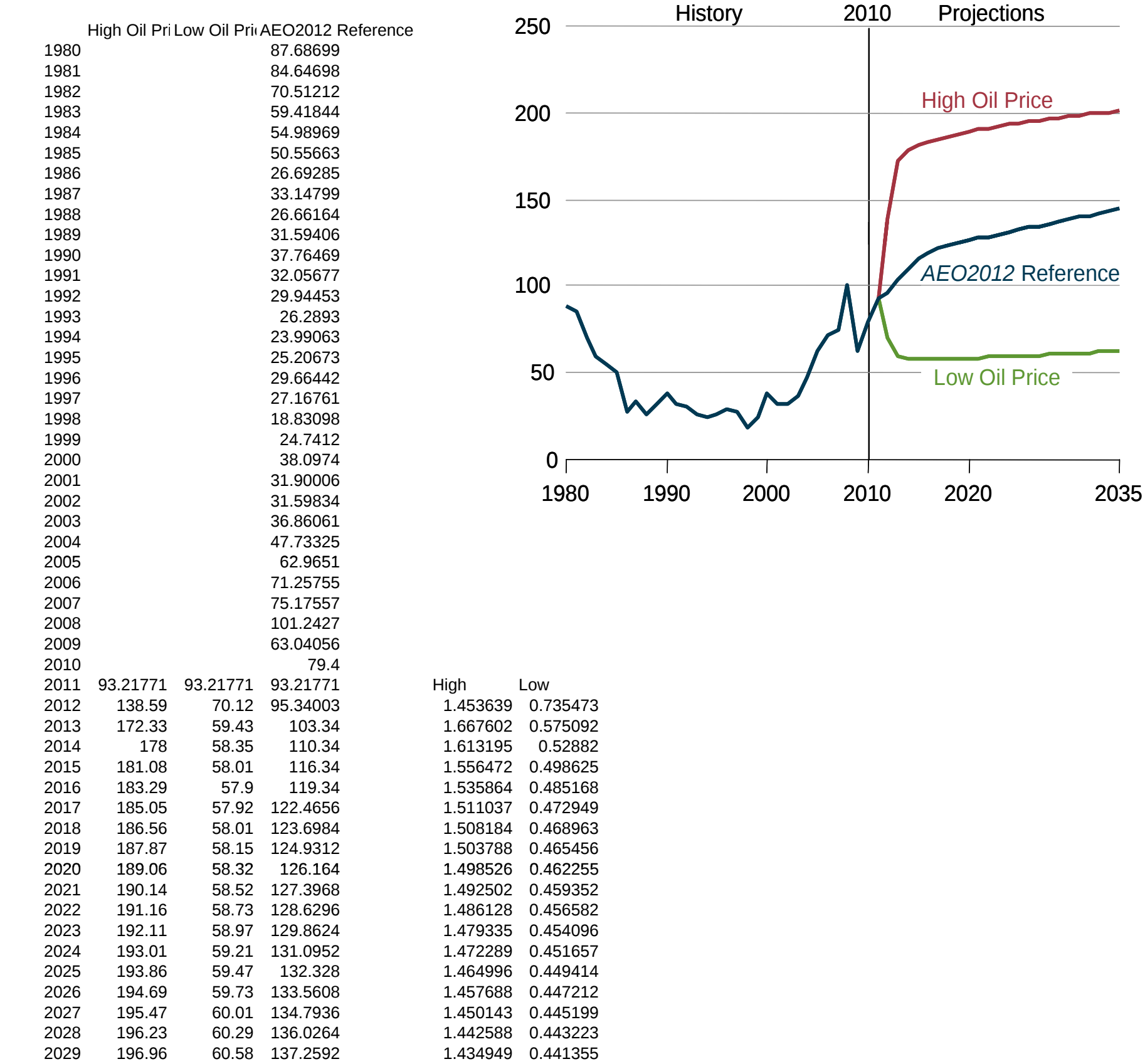
2062 2062 21.36 9.58 25.97 17.45 6.16 28.75
2063 2063 22.03 9.86 26.70 17.73 6.22 29.24
2064 2064 22.73 10.14 27.45 18.00 6.28 29.73
2065 2065 23.44 10.43 28.22 18.28 6.35 30.22

Nominal \$
2.50% assumed inflation rate

Fairbanks Natural Gas Estimates			
Mid	Low	High	
4.92	3.15	6.69	
5.16	3.26	7.06	
5.37	3.34	7.40	
5.71	3.50	7.92	
6.00	3.64	8.37	
6.26	3.73	8.79	
6.60	3.88	9.32	
7.00	4.02	9.98	
7.54	4.20	10.88	
8.14	4.43	11.85	
8.78	4.66	12.90	
9.48	4.93	14.03	
10.15	5.21	15.08	
10.75	5.48	16.01	
11.28	5.74	16.81	
11.88	6.02	17.74	
12.56	6.33	18.80	
13.30	6.60	20.00	
14.10	6.83	21.36	
14.87	7.07	22.67	
15.71	7.33	24.09	
16.70	7.63	25.77	
17.65	7.94	27.36	
18.64	8.31	28.97	
19.54	8.61	30.47	
20.56	8.94	32.18	
21.63	9.29	33.96	
22.73	9.65	35.81	
23.88	10.03	37.73	
25.07	10.41	39.73	
26.30	10.81	41.80	
27.59	11.22	43.95	
28.91	11.65	46.18	
30.29	12.09	48.49	
31.72	12.54	50.90	
33.20	13.01	53.39	
34.73	13.50	55.97	
36.33	14.00	58.65	
37.97	14.52	61.43	
39.68	15.05	64.31	
41.45	15.60	67.30	
43.29	16.18	70.40	
45.19	16.77	73.61	
47.15	17.38	76.93	
49.19	18.01	80.38	
51.30	18.66	83.95	
53.49	19.33	87.65	
55.75	20.02	91.48	
58.09	20.74	95.45	
60.52	21.48	99.56	

63.03	22.24	103.81
65.62	23.03	108.22
68.31	23.84	112.78
71.09	24.68	117.50

Figure 5. Average annual world oil prices in three cases, 1980-2035 (real 2010 dollars per barrel)



2030	197.68	60.87	138.492	1.427375	0.43952
2031	198.37	61.16	139.7248	1.419719	0.437718
2032	199.05	61.46	140.9576	1.412127	0.436018
2033	199.7	61.77	142.1904	1.404455	0.434418
2034	200.36	62.07	143.4232	1.396985	0.432775
2035	200.99	62.38	144.656	1.389434	0.43123

2010\$ Gas Price at Henry Hub (\$ / MMBtu)								2012 \$ Average 2011 city gate price for Anchorage: Prevailing value of ANS gas in 2011:					6.37	6.94	7.27	6.61	7.1	6.74	6.36
Year	2012			2011 AEO				High	Low	Mid			High	Low					
	Ref Case	High Gas	E Low Gas	E Ref Case	High Gas	Low Gas													
2012	3.60	3.65	3.45	4.65	4.72	4.46		1.015054	0.95914	4.69	6.37	3							
2013	4.11	4.17	3.87	4.79	4.86	4.5		1.014614	0.939457	4.79	6.56	3.03							
2014	4.16	4.23	3.83	4.89	4.97	4.5		1.01636	0.920245	4.87	6.71	3.03							
2015	4.27	4.36	3.86	5.09	5.19	4.6		1.019646	0.903733	5.05	7.00	3.09							
2016	4.30	4.36	3.80	5.27	5.35	4.66		1.01518	0.88425	5.18	7.22	3.13							
2017	4.42	4.48	3.81	5.41	5.48	4.66		1.012939	0.861368	5.27	7.40	3.13							
2018	4.59	4.66	3.89	5.58	5.67	4.73		1.016129	0.84767	5.42	7.65	3.18							
2019	4.72	4.85	3.91	5.77	5.92	4.78		1.025997	0.828423	5.60	7.99	3.22							
2020	4.80	4.95	3.84	6.1	6.3	4.88		1.032787	0.8	5.89	8.50	3.28							
2021	5.00	5.19	3.89	6.45	6.69	5.02		1.037209	0.778295	6.20	9.03	3.38							
2022	5.29	5.56	4.03	6.76	7.11	5.15		1.051775	0.761834	6.53	9.60	3.46							
2023	5.49	5.81	4.10	7.12	7.54	5.32		1.058989	0.747191	6.88	10.18	3.58							
2024	5.64	5.92	4.10	7.53	7.91	5.48		1.050465	0.727756	7.18	10.68	3.69							
2025	5.75	5.96	4.10	7.9	8.19	5.63		1.036709	0.712658	7.42	11.05	3.79							
2026	5.98	6.12	4.19	8.21	8.39	5.75		1.021924	0.700365	7.60	11.32	3.87							
2027	6.17	6.23	4.24	8.56	8.64	5.88		1.009346	0.686916	7.81	11.66	3.96							
2028	6.18	6.25	4.22	8.82	8.93	6.03		1.012472	0.683673	8.05	12.05	4.06							
2029	6.13	6.28	4.16	9.04	9.27	6.14		1.025442	0.679204	8.32	12.51	4.13							
2030	6.19	6.45	4.14	9.28	9.66	6.2		1.040948	0.668103	8.60	13.04	4.17							
2031	6.42	6.69	4.19	9.59	10	6.26		1.042753	0.652763	8.85	13.50	4.21							
2032	6.67	6.95	4.24	9.96	10.37	6.33		1.041165	0.635542	9.13	14.00	4.26							
2033	6.83	7.15	4.25	10.34	10.82	6.43		1.046422	0.621857	9.46	14.60	4.33							
2034	6.99	7.28	4.24	10.76	11.21	6.53		1.041822	0.606877	9.76	15.13	4.39							
2035	7.23	7.42	4.27	11.28	11.58	6.66		1.026596	0.590426	10.05	15.63	4.48							
2036										10.28	16.03	4.53							
2037										10.56	16.52	4.59							
2038										10.83	17.01	4.65							
2039										11.11	17.50	4.72							
2040										11.38	17.99	4.78							
2041										11.66	18.48	4.84							
2042										11.94	18.97	4.91							
2043										12.21	19.46	4.97							
2044										12.49	19.95	5.03							
2045										12.76	20.43	5.09							
2046										13.04	20.92	5.16							
2047										13.32	21.41	5.22							
2048										13.59	21.90	5.28							
2049										13.87	22.39	5.34							
2050										14.14	22.88	5.41							
2051										14.42	23.37	5.47							
2052										14.69	23.86	5.53							
2053										14.97	24.35	5.59							
2054										15.25	24.84	5.66							
2055										15.52	25.32	5.72							
2056										15.80	25.81	5.78							
2057										16.07	26.30	5.84							
2058										16.35	26.79	5.91							
2059										16.63	27.28	5.97							
2060										16.90	27.77	6.03							
2061										17.18	28.26	6.10							
2062										17.45	28.75	6.16							

2063	17.73	29.24	6.22
2064	18.00	29.73	6.28
2065	18.28	30.22	6.35

5.46 5.44 5.91 6.09 6.18 6.39

Fuel	Avg Price	Units	Gross Heat	AFUE Efficiency	Mid-point	\$/100,000 BTUs	Useful BTUs/\$1	Rank	Source:
Electricity	\$0.1976	kWh	3,413	95 - 100%	98%	\$5.938	16,840	11	www.energysavers.gov DOE
District Hot Water	\$27.0300	MMBtu	1,000,000	95 - 100%	98%	\$2.772	36,071	7	www.energysavers.gov DOE
District Steam	\$10.5000	MMBtu	1,000,000	95 - 100%	98%	\$1.077	92,857	1	Use hot water AFUE
Fuel oil (#2)	\$4.0500	gallon	135,000	80 - 90%	85%	\$3.529	28,333	8	DOE
Natural gas	\$23.3500	MCF	1,000,000	85 - 95%	90%	\$2.594	38,544	5	Interviews, ALTROL
Propane, small vol	\$4.3500	gallon	91,333	80 - 90%	85%	\$5.603	17,847	10	Small appliance only
Propane, heating	\$3.0500	gallon	91,333	85 - 95%	90%	\$3.710	26,951	9	DOE
Wood, pellets	\$295.000	ton	16,000,000	68%	68%	\$2.711	36,881	6	CCHRC
Wood, birch	\$250.000	cord	20,500,000	68%	68%	\$1.793	55,760	3	CCHRC
Wood, spruce	\$250.000	cord	15,000,000	68%	68%	\$2.451	40,800	4	CCHRC
Coal, stoker	\$110.000	ton	15,200,000	55%	55%	\$1.316	76,000	2	FNSB

1,470,588 MMBtus of wood required to meet 1 MMBtu of gas
22.058824