PENNSYLVANIA	
Revenue	
Units sold	12,000,000
Price per unit	\$400
Annual price increase	2%
PP&E	
Factory square footage	3,000,000
Price per square foot	\$125
Equipment	\$300,000,000
Salvage value	\$1
Useful life (years)	15
Land	\$0
Тах	
Property tax	0.0%
State tax	3%
Federal tax	21%
Effective tax rate	24%
Labor	
Employees	5,000
Cost per employee	\$90,000
Wage inflation	3%
Operations	
Overhead (% of sales)	10%
COGS (% of sales)	60%
Working capital (% of next year's sales)	10%
Cost of Capital	
D/E ratio	0.8
Interest rate	3.0%
Return on equity	35%
% Equity	55.56%
% Debt	44.44%
IWACC	20 46%

Year	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Revenue		4,800,000,000	4,896,000,000	4,993,920,000	5,093,798,400	5,195,674,368	5,299,587,855	5,405,579,612	5,513,691,205	5,623,965,029	5,736,444,329
COGS		(2,880,000,000)	(2,937,600,000)	(2,996,352,000)	(3,056,279,040)	(3,117,404,621)	(3,179,752,713)	(3,243,347,767)	(3,308,214,723)	(3,374,379,017)	(3,441,866,598)
Overhead		(480,000,000)	(489,600,000)	(499,392,000)	(509,379,840)	(519,567,437)	(529,958,786)	(540,557,961)	(551,369,120)	(562,396,503)	(573,644,433)
Labor		(450,000,000)	(463,500,000)	(477,405,000)	(491,727,150)	(506,478,965)	(521,673,333)	(537,323,533)	(553,443,239)	(570,046,537)	(587,147,933)
Depreciaton (Plant)		(25,000,000)	(25,000,000)	(25,000,000)	(25,000,000)	(25,000,000)	(25,000,000)	(25,000,000)	(25,000,000)	(25,000,000)	(25,000,000)
Depreciation (Equipment)		(300,000,000)									
Property Tax		0	0	0	0	0	0	0	0	0	0
Operating Income		665,000,000	980,300,000	995,771,000	1,011,412,370	1,027,223,346	1,043,203,023	1,059,350,350	1,075,664,122	1,092,142,972	1,108,785,366
State & Federal Taxes		(159,600,000)	(235,272,000)	(238,985,040)	(242,738,969)	(246,533,603)	(250,368,726)	(254,244,084)	(258,159,389)	(262,114,313)	(266,108,488)
Operating Income After Tax		505,400,000	745,028,000	756,785,960	768,673,401	780,689,743	792,834,298	805,106,266	817,504,733	830,028,659	842,676,878
Add Depreciation		325,000,000	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000
After Tax Operating Cash Flow	re .	830,400,000	770,028,000	781,785,960	793,673,401	805,689,743	817,834,298	830,106,266	842,504,733	855,028,659	867,676,878
Arter lax operating cash flow	•	030,400,000	770,020,000	701,703,300	753,073,401	003,003,743	017,034,230	030,100,200	042,304,733	033,020,033	007,070,070
Land	0										
Factory	(375,000,000)										
PP&E	(300,000,000)										
Working Capital Reserved	(480,000,000)	(9,600,000)	(9,792,000)	(9,987,840)	(10,187,597)	(10,391,349)	(10,599,176)	(10,811,159)	(11,027,382)	(11,247,930)	
Working Capital Returned											573,644,433
Salvage Value											1
Tax on Salvage Value											(0)
Total After Tax Cash Flows	(1,155,000,000)	820,800,000	760,236,000	771,798,120	783,485,804	795,298,394	807,235,122	819,295,107	831,477,350	843,780,729	1,441,321,312
Present Values NPV	(1,155,000,000) 2,234,171,381	681,400,583	523,936,600	441,569,609	372,127,482	313,585,426	264,235,380	222,636,534	187,573,571	158,021,427	224,084,769
IRR	68.61%										
SL	JMMARY:										
State	NPV I	RR									
Pennsylvania	\$2,234,171,381	68.61%									
North Carolina	\$3,840,758,502	65.98%									
Texas	\$3,774,050,649	66.09%									

CONCLUSION: Orange Computers should locate its factory in **North Carolina**. As demonstrated by comparing the forecasted NPV and IRR for each of the three possible sites (and their respective incentives), this site option provides highest NPV between the 3 mutually exclusive option. This is the site option that allows Orange Computers to accrue the most wealth for its shareholders.

NORTH CAROLINA	
Revenue	
Units sold	20,000,000
Price per unit	\$400
Annual price increase	29
PP&E	
Factory square footage	5,000,000
Price per square foot	\$160
Equipment	\$500,000,000
Salvage value	\$50,000,000
Useful life (years)	1
Land	\$20,000,000
Тах	
Property tax	0.59
State tax	39
Federal tax	219
Effective tax rate	249
Labor	
Employees	8,000
Cost per employee	\$80,000
Wage inflation	49
Operations	
Overhead (% of sales)	109
COGS (% of sales)	609
Working capital (% of next year's sales)	109
Cost of Capital	
D/E ratio	0.8
Interest rate	3.09
Return on equity	359
% Equity	55.569
% Debt	44.449
WACC	20.469

	Year	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1	Revenue		8,000,000,000	8,160,000,000	8,323,200,000	8,489,664,000	8,659,457,280	8,832,646,426	9,009,299,354	9,189,485,341	9,373,275,048	9,560,740,549
ı	COGS		(4,800,000,000)	(4,896,000,000)	(4,993,920,000)	(5,093,798,400)	(5,195,674,368)	(5,299,587,855)	(5,405,579,612)	(5,513,691,205)	(5,623,965,029)	(5,736,444,329)
ı	Overhead		(800,000,000)	(816,000,000)	(832,320,000)	(848,966,400)	(865,945,728)	(883,264,643)	(900,929,935)	(918,948,534)	(937,327,505)	(956,074,055)
ı	Labor		(640,000,000)	(665,600,000)	(692,224,000)	(719,912,960)	(748,709,478)	(778,657,858)	(809,804,172)	(842,196,339)	(875,884,192)	(910,919,560)
l	Depreciaton (Plant)		(53,333,333)	(53,333,333)	(53,333,333)	(53,333,333)	(53,333,333)	(53,333,333)	(53,333,333)	(53,333,333)	(53,333,333)	(53,333,333)
ı	Depreciation (Equipment)		(500,000,000)									
l	Property Tax		(4,100,000)	(4,100,000)	(4,100,000)	(4,100,000)	(4,100,000)	(4,100,000)	(4,100,000)	(4,100,000)	(4,100,000)	(4,100,000)
ı	Operating Income		1,202,566,667	1,724,966,667	1,747,302,667	1,769,552,907	1,791,694,372	1,813,702,737	1,835,552,301	1,857,215,930	1,878,664,989	1,899,869,271
l												
ı	State & Federal Taxes		(288,616,000)	(413,992,000)	(419,352,640)	(424,692,698)	(430,006,649)	(435,288,657)	(440,532,552)	(445,731,823)	(450,879,597)	(455,968,625)
	Operating Income After Tax		913,950,667	1,310,974,667	1,327,950,027	1,344,860,209	1,361,687,723	1,378,414,080	1,395,019,749	1,411,484,107	1,427,785,391	1,443,900,646
l	Add Depreciation		553,333,333	53,333,333	53,333,333	53,333,333	53,333,333	53,333,333	53,333,333	53,333,333	53,333,333	53,333,333
1	After Tax Operating Cash Flows		1,467,284,000	1,364,308,000	1,381,283,360	1,398,193,542	1,415,021,056	1,431,747,413	1,448,353,082	1,464,817,440	1,481,118,725	1,497,233,980
1	Arter lax Operating cash riows		1,407,284,000	1,304,308,000	1,381,283,300	1,390,193,342	1,413,021,030	1,431,747,413	1,440,333,002	1,404,617,440	1,401,110,723	1,497,233,980
l	Land	(20,000,000)										
ı	Factory	(800,000,000)										
l	PP&E	(500,000,000)										
l	Working Capital Reserved	(800,000,000)	(16,000,000)	(16,320,000)	(16,646,400)	(16,979,328)	(17,318,915)	(17,665,293)	(18,018,599)	(18,378,971)	(18,746,550)	
ı	Working Capital Returned											956,074,055
ı	Salvage Value											50,000,000
ı	Tax on Salvage Value											(12,000,000)
ı	Total After Tax Cash Flows	(2,120,000,000)	1,451,284,000	1,347,988,000	1,364,636,960	1,381,214,214	1,397,702,142	1,414,082,120	1,430,334,483	1,446,438,470	1,462,372,175	2,491,308,035
ı												
ı	Present Values	(2,120,000,000)	1,204,807,217	929,001,322	780,751,071	656,026,905	551,112,670	462,876,944	388,681,330	326,303,091	273,869,893	387,328,058
ı	NPV	3,840,758,502										
l	IRR	65.98%										
ı		*****										
ı		MMARY: NPV	IRR									
	State Pennsylvania	NPV \$2,234,171,381	68.61%									
1	North Carolina		65.98%									
	Texas	\$3,840,758,502	66.09%									
	Texas	\$3,774,050,649	66.09%									

Revenue	
Units sold	20,000,000
Price per unit	\$400
Annual price increase	29
PP&E	
Factory square footage	5,000,000
Price per square foot	\$160
Equipment	\$500,000,000
Salvage value	\$50,000,000
Useful life (years)	15
Land	\$0
Тах	
Property tax	1.09
State tax	39
Federal tax	219
Effective tax rate	249
Labor	
Employees	8,000
Cost per employee	\$80,000
Wage inflation	59
Operations	
Overhead (% of sales)	109
COGS (% of sales)	609
Working capital (% of next year's sales)	109
Cost of Capital	
D/E ratio	0.8
Interest rate	3.09
Return on equity	359
% Equity	55.56%
% Debt	44.449
WACC	20.469

Texas

\$3,774,050,649

66.09%

TEXAS

Year	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Revenue	2010	8,000,000,000	8,160,000,000	8,323,200,000	8,489,664,000	8,659,457,280	8,832,646,426	9,009,299,354	9,189,485,341	9,373,275,048	9,560,740,549
COGS		(4,800,000,000)	(4,896,000,000)	(4,993,920,000)	(5,093,798,400)	(5,195,674,368)	(5,299,587,855)	(5,405,579,612)	(5,513,691,205)	(5,623,965,029)	(5,736,444,329)
Overhead		(800,000,000)	(816,000,000)	(832,320,000)	(848,966,400)	(865,945,728)	(883,264,643)	(900,929,935)	(918,948,534)	(937,327,505)	(956,074,055)
Labor		(640,000,000)	(672,000,000)	(705,600,000)	(740,880,000)	(777,924,000)	(816,820,200)	(857,661,210)	(900,544,271)	(945,571,484)	(992,850,058)
Depreciaton (Plant)		(53,333,333)	(53,333,333)	(53,333,333)	(53,333,333)	(53,333,333)	(53,333,333)	(53,333,333)	(53,333,333)	(53,333,333)	(53,333,333)
Depreciation (Equipment)		(500,000,000)	(,,,	(,,,	(,,,	(,,,	(,,,	(,,,	(,,,	(00,000,000)	(,,,
Property Tax		(8,000,000)	(8,000,000)	(8,000,000)	(8,000,000)	(8,000,000)	(8,000,000)	(8,000,000)	(8,000,000)	(8,000,000)	(8,000,000)
Operating Income		1,198,666,667	1,714,666,667	1,730,026,667	1,744,685,867	1,758,579,851	1,771,640,394	1,783,795,263	1,794,967,999	1,805,077,697	1,814,038,773
		, , ,	, ,,	, , ,	, ,,	,,-	, , , , , , , ,	,,	, - , - ,	,,	,- ,,
State & Federal Taxes		(287,680,000)	(411,520,000)	(415,206,400)	(418,724,608)	(422,059,164)	(425,193,695)	(428,110,863)	(430,792,320)	(433,218,647)	(435,369,306)
Operating Income After Tax		910,986,667	1,303,146,667	1,314,820,267	1,325,961,259	1,336,520,687	1,346,446,700	1,355,684,400	1,364,175,679	1,371,859,050	1,378,669,468
Add Depreciation		553,333,333	53,333,333	53,333,333	53,333,333	53,333,333	53,333,333	53,333,333	53,333,333	53,333,333	53,333,333
After Tax Operating Cash Flow	rs .	1,464,320,000	1,356,480,000	1,368,153,600	1,379,294,592	1,389,854,020	1,399,780,033	1,409,017,733	1,417,509,012	1,425,192,383	1,432,002,801
Land	0										
Factory	(800,000,000)										
PP&E	(500,000,000)										
Working Capital Reserved	(800,000,000)	(16,000,000)	(16,320,000)	(16,646,400)	(16,979,328)	(17,318,915)	(17,665,293)	(18,018,599)	(18,378,971)	(18,746,550)	
Working Capital Returned											956,074,055
Salvage Value											50,000,000
Tax on Salvage Value											(12,000,000)
Total After Tax Cash Flows	(2,100,000,000)	1,448,320,000	1,340,160,000	1,351,507,200	1,362,315,264	1,372,535,105	1,382,114,740	1,390,999,134	1,399,130,042	1,406,445,833	2,426,076,856
Present Values	(2,100,000,000)	4 202 246 604	022 505 450	772 220 420	647.050.506	541,189,331	452 442 020	277 002 204	245 620 740	262 206 420	377,186,452
NPV	3,774,050,649	1,202,346,604	923,606,450	773,239,129	647,050,586	541,189,331	452,412,939	377,992,281	315,630,749	263,396,129	3//,180,452
IRR	66.09%										
IIII	00.0376										
SI	JMMARY:										
State		IRR									
Pennsylvania	\$2,234,171,381	68.61%									
North Carolina	\$3,840,758,502	65.98%									
1	,-:-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	05.5070									