

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
Tax	
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%
WACC	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 Flows		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
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	(1,155,000,000)	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
NPV	2,234,171,381										
IRR	68.61%										

SUMMARY:		
State	NPV	IRR
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.

TEXAS		Year	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Revenue		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
Units sold	20,000,000	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)	(5,849,744,329)
Price per unit	\$400	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)	(974,929,935)
Annual price increase	2%	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)	(1,041,850,058)
PP&E		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)	(53,333,333)
Factory square footage	5,000,000	Depreciation (Equipment)	(500,000,000)										
Price per square foot	\$160	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)	(8,000,000)
Equipment	\$500,000,000	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	1,822,967,999
Salvage value	\$500,000,000												
Useful life (years)	15	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)	(437,244,608)
Land	\$0	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	1,385,723,391
Tax													
Property tax	1.0%	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	53,333,333
State tax	3%	After Tax Operating Cash Flows	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	1,438,723,391
Federal tax	21%												
Effective tax rate	24%	Land	0										
Labor		Factory	(800,000,000)										
Employees	8,000	PP&E	(500,000,000)										
Cost per employee	\$80,000	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)	(19,124,929)
Wage inflation	5%	Working Capital Returned											956,074,055
Operations		Salvage Value											50,000,000
Overhead (% of sales)	10%	Tax on Salvage Value											(12,000,000)
COGS (% of sales)	60%	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
Working capital (% of next year's sales)	10%												
Cost of Capital		Present Values	(2,100,000,000)	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	377,186,452
D/E ratio	0.8	NPV	3,774,050,649										
Interest rate	3.0%	IRR	66.09%										
Return on equity	35%												
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% Debt	44.44%												
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