

Elizabethtown-Fort Knox MSA Transformation Project: Measuring the Impact of the BlueOval SK Battery Park on the Elizabethtown Metro Area

Hardin County Chamber of Commerce Membership Briefing
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Project Funded By:



The Land Store, Inc.
Tim Aulbach



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Project Components	Project Methodology
Project Research <ul style="list-style-type: none"> MSA Baseline Peer MSA Analysis BOSK Plant Impact Overview – Competitive Communities Parkway Conversions/MSA Expansion 	<ul style="list-style-type: none"> Online Research Dr. Paul Coomes, Ph. D. Collaboration
“Boomtown” Analysis <ul style="list-style-type: none"> Georgetown, KY Meridian, ID Reno, NV Round Rock, TX 	<ul style="list-style-type: none"> Online Research Site Visits
Key Stakeholder Engagement <ul style="list-style-type: none"> Pre-/Post-SWOT Analysis Online Surveys/Interviews Project Recommendations 	<ul style="list-style-type: none"> Pre-Project SWOT Conference Online Surveys (141 Sent/90 Returned) 34 Individual Interviews Post-Project SWOT Compilation

Disclaimer:

The information as presented is accurate as of the date of publication; however, like all data, going forward, it is subject to periodic changes in the business environment.

Significant backup data will be presented in the written report which will be released soon.



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Physical/Site Impact

BlueOval SK Battery Park represents the single largest new economic development project in Kentucky's history, and will be the 10th largest manufacturing site in the world in terms of square footage.

Rank	Company Name	Location	Total Facility Footprint (Square Feet)	Description
1	Volkswagen	Wolfsburg, Germany	69,965,417	Auto Assembly
2	AVTOVAZ	Tolyatti, Russia	64,583,462	Auto Assembly
3	Hyundai	Ulsan, South Korea	54,357,747	Auto Assembly
4	Kia	Hwaseong, South Korea	35,585,487	Auto Assembly
4	Kia	Yancheng, China	35,585,487	Auto Assembly
5	Foxconn	Longhua, China	32,292,731	Electronics
6	Kia	West Point, GA	28,115,334	Auto Assembly
7	Kia	Teplicka and Vahom, Slovakia	17,792,743	Auto Assembly
8	Kia	Seo-gu, China	12,809,053	Auto Assembly
9	Tesla	Shanghai, China	9,309,544	Auto Assembly
10	BlueOval SK Battery Park	Hardin County, KY	8,400,000	EV Electric Batteries

Sources: R List 4/7/23;

BlueOval SK Hardin County, KY town hall 4/4/23;



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MSA Impact – Announced EV Electric Battery Manufacturing Site Projects

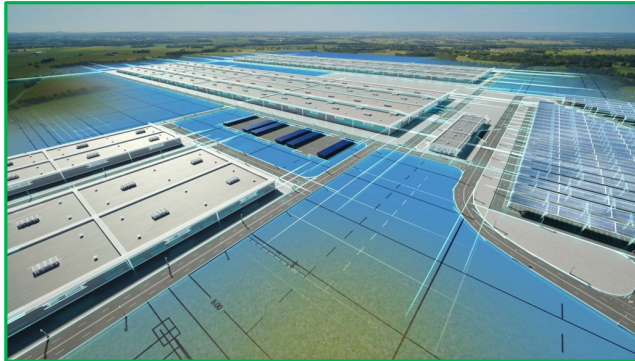
As a stand-alone battery plant, BlueOval SK Battery Park will be the largest EV electric battery plant in the world in terms of investment, physical size, jobs created, and manufacturing capacity.

Rank	Company	Location	Investment (B)	Jobs	GW Hour Capacity
1	BlueOval SK	Hardin County, KY	\$5.8	5,000	86
2	GM	Orion, MI	4.0	2,350	N/A
3	Panasonic	DeSoto, KS	4.0	4,000	30
4	GM/LG Energy	Lansing, MI	2.6	1,700	50
5	SK Innovation	Commerce, GA	2.6	3,000	31
6	Stellantis/Samsung	Kokomo, IN	2.5	1,400	33
7	GM/LG Energy	Spring Hill, TN	2.3	1,300	50
8	Envision AESC	Bowling Green, KY	2.0	2,000	30
9	Ford	Multiple Sites (MI)	2.0	3,200	N/A
10	LG Energy	Holland, MI	1.7	1,200	N/A
11	LG Energy	Queen Creek, AZ	1.4	TBA	11
12	Toyota	Liberty, NC	3.8	2,100	N/A

BlueOval SK Tennessee battery plant will occupy 3.5 million square feet, employ 2,500 workers with 43 GW hour annual manufacturing capacity (Source: *Tennessee Town & City* 6/23)



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Issues Raised with the BlueOval SK Executive Team

- Construction phase: number of workers/payroll/local materials sourced
 - Equipment installation phase: number of workers/payroll
 - Full-time employment: number of workers/payroll/related issues
 - Supply chain issues: number of potential suppliers/location
 - Additional miscellaneous issues
 - Data confirmed March 16, 2023
 - Data reconfirmed May 29, 2023
-
- Projections which follow are based in part on BOSK data

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Source: WHAS-TV



Source: Business First of Louisville



Source: Google Image/BlueOval SK

Construction Phase Estimates

- Local: Up to 720 workers
- Travelers: Up to 2,880 workers
- Peak (10/23): Up to 3,500 workers

Housing Requirements:

- Traveling workers: 2,800 units
- Management personnel: 300 units

Construction Payroll: \$1.6 billion

Local materials/services: \$75 million

Sources: BlueOval SK/Barton Malow/Ford Land

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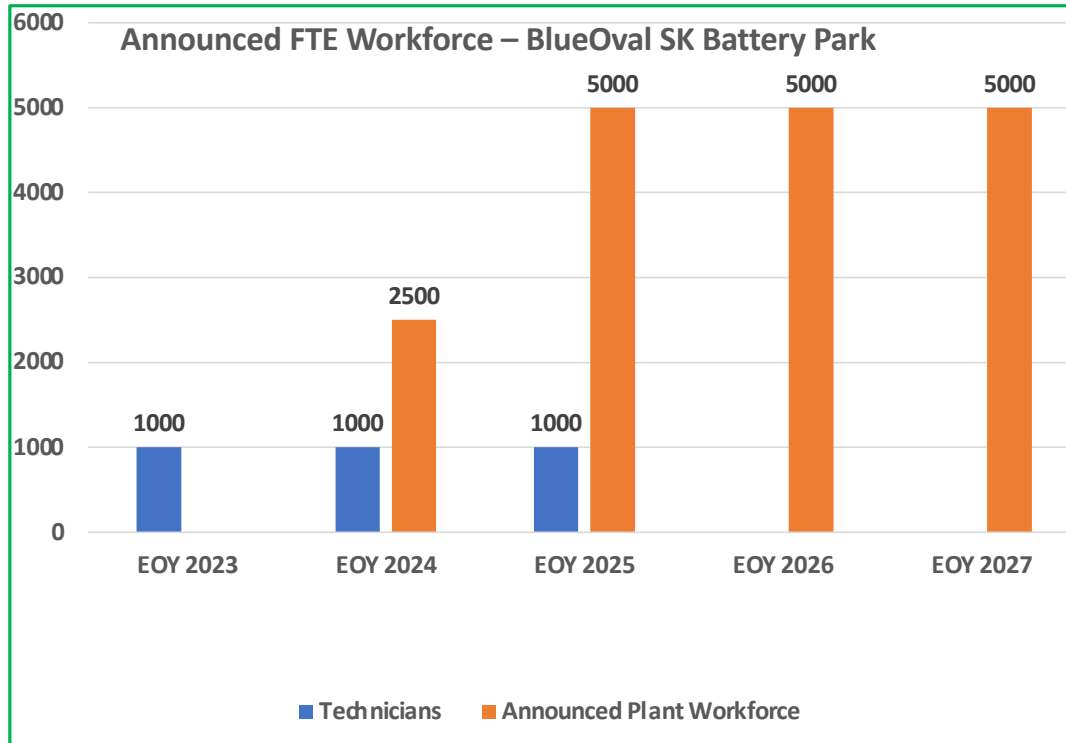
Source: Atlanta Journal-Constitution

Source: BlueOval SK

Equipment Installation Estimates

- Q3 2023 – Q4 2025 (EOY)
- 500 – 1,000 South Korean technicians on site
- Technicians are temporary workers who are on a two-year visa; technicians will install, calibrate, and train BOSK workers on how to run and maintain the equipment
- Some technicians may shuttle to/from Tennessee
- Payroll: unknown and NOT included in \$1.6 B figure

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Announced Workforce

- EOY 23 workforce: 1,000 FTE
- EOY 24 workforce: 2,500 FTE
- EOY 25 workforce: 5,000 FTE
- EOY 26 workforce: 5,000 FTE
- EOY 27 workforce: 5,000 FTE
- BOSK plans to run two 12-hour shifts (patterns to be determined)

Source: BlueOval SK

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Company	Number of Employees	Location
Toyota Motor Manufacturing, KY	8,200	Georgetown
Ford Motor Co., Kentucky Truck	8,000	Louisville
Haier US Appliance Solutions, Inc.	6,000	Louisville
BlueOval SK Battery Park	5,000	Hardin County
Louisville Graphite, Inc.	5,000	Louisville
Ford Motor Co., Louisville Assembly	4,000	Louisville
Metalsa Structural Products	2,000	Elizabethtown
Rev-A-Shelf, LLC	2,000	Louisville
Bowling Green Metalforming, LLC	1,800	Bowling Green
Dart Container Corp. Of Kentucky	1,650	Horse Cave

In terms of employment, by 2026, BOSK will be one of the five largest manufacturing sites in Kentucky based on current employment numbers and the announced BOSK employment number

Hardin County will be home to two of the 10 largest manufacturers in Kentucky

All but one of the Top-10 manufacturers are located along the I-65 Corridor

Source: IndustrySelect.com 10/5/22



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Projections – Compiled by Dr. Paul Coomes, Ph.D.

Key Assumptions used in Modeling Projections:

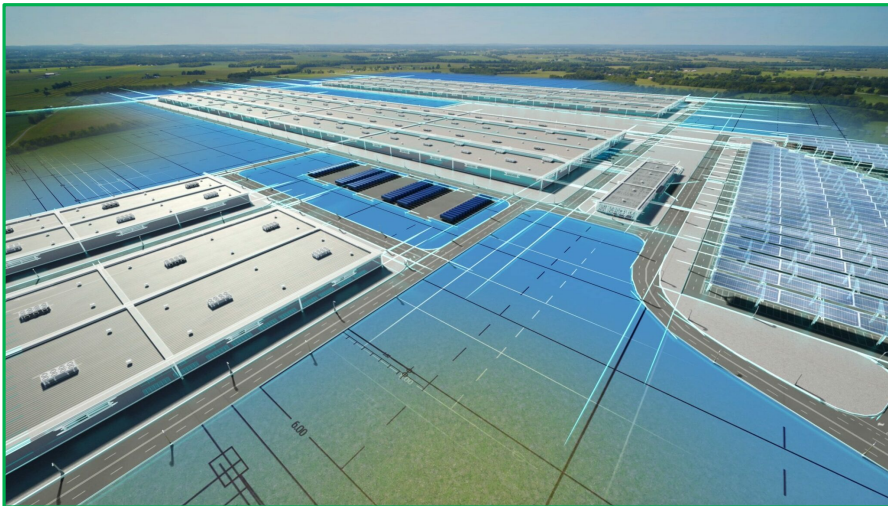
- 1. Battery plant construction period: 2022 through 2024; investment of \$5.8 billion with average of 4,500 construction jobs over three years with average annual pay of \$50,000**
- 2. Plant will begin battery production by EOY 2024 with 2,500 full time employees; EOY 2025 with 5,000 full time employees with average annual pay of \$53,000; with fringe benefits: \$73,000***
- 3. Battery plant will attract several new supplier/support businesses to Hardin County**

Source: Custom regional input-output models were built for Hardin County, the Elizabethtown – Fort Knox MSA, and the 10-county Elizabethtown region which provides significant information over 500 industries on such things as local employment, pay, etc. This is the standard method used by regional economists to analyze potential multiplier effects of new developments. In addition, modeling based on Tesla's "real-world" experience to date in Reno was also factored in.

* Projected average annual pay figure was generated by Dr. Coomes based on data provided by BOSK.



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Once BOSK reaches full employment, workers will be subject to a 1% Hardin County Occupational Tax. Tax proceeds collected over the first 10 years will be rebated to BOSK. Initial annual Occupational Tax proceeds, based upon the \$265 million annual payroll will total \$2.65 million. First 10 years, assuming no wage increase, proceeds will total \$26.5 million.

Source: Dr. Paul Coomes, Ph.D.

Key Findings to Date:

- Each billion dollars of construction expenditures will support around 11,600 total job years in the region
- Each billion dollars of equipment expenditures will support around 823 total job-years in the region
- This plant will support 8,016 total jobs in the region; this represents an employment multiplier of 1.603
 - Incremental supply chain development: 1,397 jobs
 - Incremental household spending development: 1,619 jobs
- By EOY 2026, expected direct plant payroll: \$265 million
 - \$265 million
 - \$363 million (including fringe benefits)
 - 2026 – 2035 expected direct payroll impact: \$2.65 billion
 - 2026 – 2035 expected direct payroll (including FB): \$ 3.63 billion



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Community Impact

BOSK will catalyze regional growth in employment, population, housing, schools, etc.

- Will BOSK suppliers move to Hardin County?
- What will remaining acreage on BOSK site be used for?
- Will local governments work to accommodate growth?
- Will Hardin County absorb the bulk of new workers, residents?
- How many jobs will be filled by workers moving to the area?
- Will the pay scale at BOSK draw workers from existing manufacturers?
- What will be needed in terms of new housing, schools, etc.?

Projections which follow, in part, use Georgetown/Scott County and Reno/Washoe County and their respective boomtown growth as a guide

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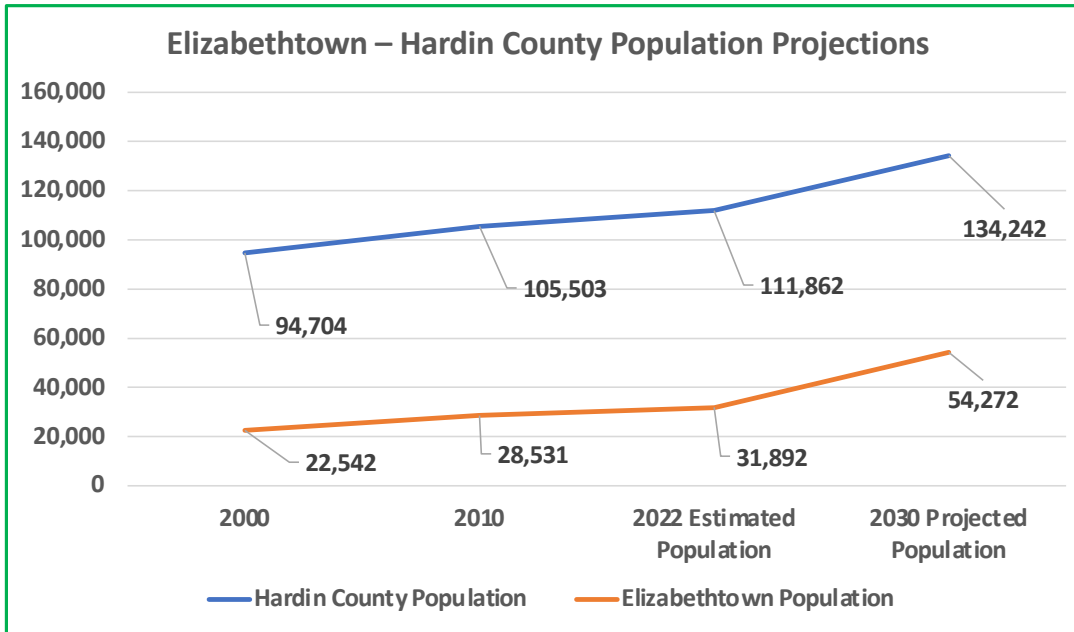
Scott County Job and Population Growth							
	1980	1990	2000	2010	2020	Growth 1980 to 2020	Growth rate
Manufacturing jobs	2,616	5,089	11,401	7,994	10,579	7,963	304.4%
All wage and salary jobs	7,079	11,997	24,418	22,724	28,932	21,853	308.7%
Population	21,834	23,943	33,422	47,271	58,470	36,636	167.8%

Source: US Bureau of Economic Analysis. Jobs are on a place of work basis, not place of residence. Population estimates are as of July 1; whereas decennial census estimates area as of April 1.

Scott County population growth factor of 4.6 serves as the guide for population growth in Hardin County



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Source: Dr. Paul Coomes, Ph.D.

Population Projection

- **Hardin County: + 22,380 people**
 - **Hardin County will remain the sixth largest county and Elizabethtown could become the fifth largest city in Kentucky**
- **Age Breakout**

• Under age 5	1,424
• Ages 5 – 14	3,128
• Ages 15 – 24	2,924
• Ages 25 – 34	2,956
• All Others	11,949



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Scott County Housing Characteristics						
	1980	1990	2000	2010	ACS 2016-2020	2020
Total population	21,813	23,867	33,061	47,173	55,961	57,155
Household population	20,817	22,866	31,593	45,857	54,648	56,054
In group quarters	996	1,001	1,468	1,316	1,313	1,101
Total housing units	7,782	9,173	12,977	19,303	22,535	22,795
Occupied housing units (households)	7,268	8,501	12,110	17,408	21,186	21,371
Owner-occupied housing units	4,878	5,628	8,450	12,336	15,326	
Renter-occupied housing units	2,390	2,873	3,660	5,072	5,358	
Vacant units	514	672	867	1,895	1,349	1,424
Share of occupied units owner-occupied	67.1%	66.2%	69.8%	70.9%	72.3%	
Overall vacancy rate	6.6%	7.3%	6.7%	9.8%	6.0%	6.2%
Persons per household	2.86	2.69	2.61	2.63	2.58	2.62
Median value, owner-occupied units *	\$44,000	\$68,200	\$107,900		\$197,900	
Median rent, renter-occupied units *	\$195	\$270	\$513		\$934	

Source: US Census Bureau, decennial census results, plus the American Community Survey 5-year average for 2016-2020. Beginning with the 2010 decennial census, only a few housing questions were included. Detailed housing characteristics are now only available from the ACS each year.

* For decennial census years, the valuations refer to the prior year, e.g., 1980 Census refers to home values in 1979.

Housing Projection

- Based on the population projection, we expect that there will be a need for 8,811 new housing units in Hardin County



Source: Dr. Paul Coomes, Ph.D.



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Summary of School Attendance Relative to Population and Jobs							
Scott County, KY							
	1988	1990	2000	2010	2020	Growth 1988 to 2020	rate
Schools: average daily attendance	3,852	4,173	5,066	7,175	8,331	4,479	116.3%
County population	22,852	23,943	33,422	47,252	57,477	34,625	151.5%
Wage and salary jobs in County	9,358	11,997	24,418	22,724	28,875	19,517	208.6%
Students per 1,000 residents	169	174	152	152	145	-24	-14.0%
Students per 1,000 wage and salary jobs	412	348	207	316	289	-123	-29.9%

Sources: school attendance from Kentucky Department of Education; population and jobs from US Bureau of Economic Analysis.

School Enrollment Increase Projection

- Based on the population projection, we expect 3,901 new K-12 students in Hardin County.

Source: Dr. Paul Coomes, Ph.D.

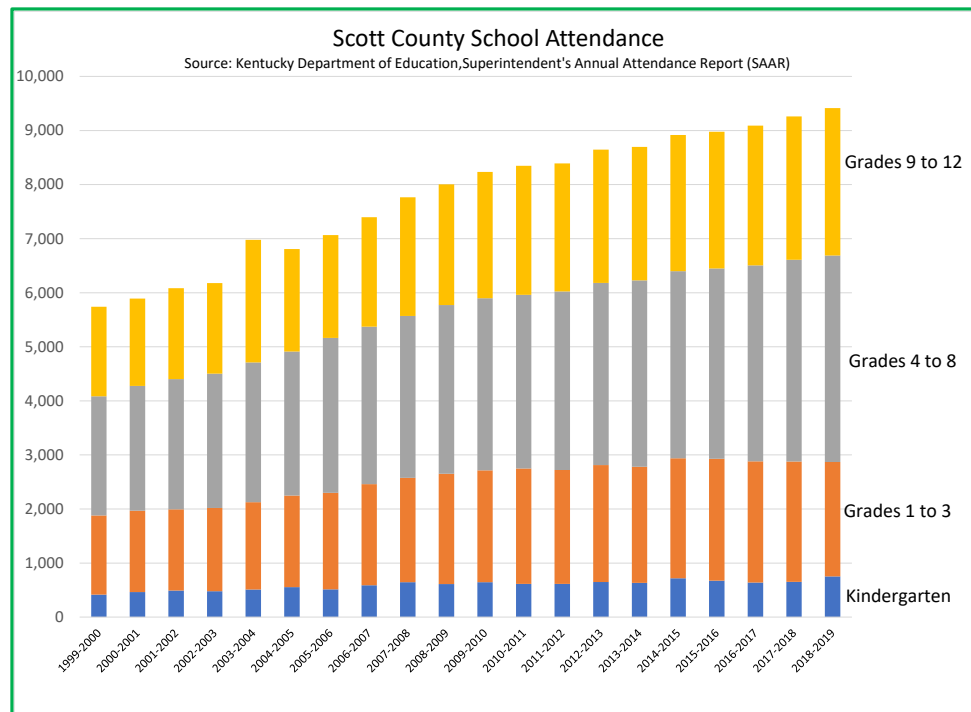


Growth in Scott County Schools did not 100% mirror the growth in jobs until the second decade of Toyota's continuing job ramp-up

Hardin County's growth in school enrollment is expected to occur much faster, given the higher number of new jobs/anticipated personnel relocation from the start



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Source: Dr. Paul Coomes, Ph.D.

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Source: News-Enterprise



Source: CMTA



Source: News-Enterprise

Healthcare Sector Projection

Using Ada County, Idaho's growth rates as a guide, we expect that the following will be needed in Hardin County:

- 75 new hospital beds
- 389 new hospital jobs
- 380 new ambulatory care jobs

Source: Dr. Paul Coomes, Ph.D.

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Summary

Category	5,000 New Jobs
Hardin County Projected Population Growth	22,380
Elizabethtown Projected Population Growth	22,380
Hardin County Projected New Housing Units	8,811
Hardin County Projected K – 12 School Enrollment Growth	3,901
Hardin County Projected New Hospital Beds Needed	75
Hardin County Projected New Hospital Jobs Growth	389
Hardin County Projected New Ambulatory Jobs Growth	380



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Thank You!

