Economic Impact of Union Workforce Reduction at GE Transportation Erie Plant

OF AMERICA

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This study was commissioned by the United Electrical, Radio and Machine Workers of America, Local 506 (UE Local 506) to assess the economic impact of job transfers at the General Electric Transportation (GE) plant located in Lawrence Park, Pennsylvania.



INTRODUCTION

In 2013, GE Transportation commissioned an economic impact study showing its Lawrence Park plant supports one-in-11 jobs in Erie County. The study estimated GE Transportation's operations had a total economic impact of more than \$2.7 billion on Erie County and of \$4.6 billion on all of Pennsylvania. According to the study, every GE Transportation job supported close to three additional jobs in Pennsylvania.¹ The study illustrated the enormous role GE plays in the Erie County and Pennsylvania economies.

In the study, Lorenzo Simonelli, then President and CEO of GE Transportation, commented: "This report puts the numbers behind what we know as a community, that GE Transportation is a vital part of Northwestern Pennsylvania, and that the community counts on our leadership. We stay committed to both Erie and the region as we grow our business right here."

Since 2013, GE has transferred 1,687 jobs (including the most recent 572 proposed job transfers) from the Lawrence Park plant to a plant in Fort Worth, Texas, and other third-party suppliers. Forty-one other employers, in addition to GE, are now covered under the trade petition to obtain Trade Adjustment Assistance (TAA) funding as a result, and the ripple effect is hitting the local economy like a tsunami.

In comments to the Erie Times News, Ken Louie, Director of Economic Research Institute of Erie (E.R.I.E.) and a Penn State Behrend economics professor, discussed the effect of GE's work transfers on the local economy.



BY THE NUMBERS

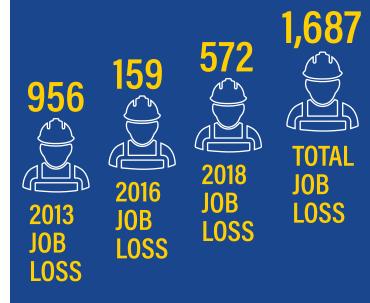
Erie County Economic Losses Since 2013

- **\$1.6** billion in total economic output lost (\$1.1 billion direct)
- 4,095 total jobs lost

Pennsylvania Economic Losses Since 2013

- **\$2.7** billion in total economic output lost (\$1.4 billion direct)
- 8,124 total jobs lost

GE TRANSPORTATION ERIE PLANT UE LOCAL 506 JOB LOSSES



¹http://www.businesswire.com/news/home/20110420006666/en/ GE-Transportation-Supports-1-11-Jobs-Erie

The loss of jobs will result in less disposable income to be spent in other sectors of the economy. It could also accelerate the population decline of the Erie region as laid-off workers leave the area in search of new employment.

"As GE and other employers cut back expenditures, the impact will show up in other areas. That multiplier effect, that ripple will be felt across the economy.

"Any time workers lose their jobs it is a traumatic event. It's not just the impact on the economy, but the impact on the workers themselves."²

Ken Louie,
 associate professor of
 economics at Penn State
 Behrend and director of
 the Economic Research
 Institute of Erie



This study looks at the economic impact of the job losses sustained during three distinct periods (2013, 2016, and 2018), and the cumulative effect on the Erie County and Pennsylvania economies. The numbers were provided by UE Local 506, the local bargaining agent representing hourly workers at the Lawrence Park plant. Each job loss is calculated at the mean average hourly wage for a member, a 40-hour work week, 52 weeks per year with a 53% benefit rate. This is a conservative analysis.³

Key takeaways:

- Losses to the state and Erie County economy since 2013 have been significant from an economic and employment perspective.
- Job and economic losses are in multiple sectors beyond manufacturing and include local suppliers, retail and service industry, healthcare, real estate, and banking.
- The gradual reduction of jobs has diminished the "catastrophic" feel of the cuts, but the outcome is the same.
- It will be difficult to replace the quality and salary of jobs lost at GE. These cuts have and will continue to have negative effects on the local and statewide economies.
- The economic effect is compounded by the emotional toll on workers who have lost their jobs as well as residents across the region.

² http://www.goerie.com/news/20170801/ges-plans-fit-themes-of-manufacturing-conference

³ The analysis was deliberately conservative and based upon publicly available data for wage and benefit rates. No overtime was calculated or included in the analysis.



HISTORY OF A COMPANY TOWN

In 1907, General Electric Company built a factory outside of Erie, Pennsylvania. Three years later, in 1910, the company planned, developed, and built Lawrence Park. From its neatly lined row houses built to house GE workers to the iconic factory once surrounded by a black iron fence, GE has long been an integral part of the tightknit community.

Lawrence Park Township is Erie County's only First Class Township, with a population of 3,741 in an area of 1.84 square miles, including a Main Street that begins at the gates of the GE plant and ends at the local high school. The Lawrence Park Historical Society is currently pursuing the



creation of a National Register Historic District designation as a corporate residential community project that provided housing for GE employees—"a company town."

Established more than a century ago, GE Transportation is a division of the General Electric Company that, according to its website, began as a pioneer in passenger and freight locomotives.⁴ Over the course of GE's history, workers at the Lawrence Park plant have built refrigerators, air conditioners, appliances, direct current motors, military equipment, diesel engines, locomotives, and more. Today, workers at the Lawrence Park plant make locomotives for foreign markets, including Pakistan, Angola, Kazakhstan, Mexico, and South America. Major railroads such as BNSF Railway, CN, UP, NS, CSX, and Amtrak use GE locomotives. Most trains traveling across North America are being pulled by a GE locomotive.

In 1936, UE Local 506 was formed and over the 80 years since then has served as the bargaining agent for workers at the Lawrence Park plant. At its height, GE employed nearly 21,000 workers at the facility.⁵

Today, about 1,600 unionized employees remain and in July 2017, GE announced the transfer of 572 more jobs to its Fort Worth, Texas, plant and third-party suppliers. Since 2013, GE's factory near Fort Worth, has become the primary production facility for locomotives in North America and Mexico.

⁴ https://www.ge.com/news/company-information/ge-transportation

⁵ "Union Power, The United Electrical Workers in Erie, PA", James Young, 2017, page 30

GE MIGRATES SOUTH

In 1955, GE closed its Refrigeration and Room Air Conditioner divisions, resulting in thousands of jobs being transferred to Lousiville, Kentucky. In 1981, it transferred its Diesel Engine production to Grove City, PA. Following the transfer of those jobs and others, UE Local 506 secured Article 23, Section 5b and 5c during contract negotiations with GE, which gave the union the opportunity to influence GE's decision once notified of an intent to transfer work—the so-called decision bargaining tool.⁶

UE Local 506 describes its intent in establishing decision bargaining as an effort to engage GE in meaningful discussions regarding several aspects of the work, including ways to retain work and increase quality, safety, and efficiency — not just to negotiate reductions in benefits and wages. "Never just to deal with the emotions of hurt and despair in the aftermath of the GE announcement of its intent to transfer work," as stated in the UE Local 506 Union News.⁷

Shortly after decision bargaining was established, in January 1992, GE transferred Drive Systems operations to Salem, VA. In 1995, decision bargaining resulted in a transfer of DCM & G operations to Dothan, AL.

"At the conclusion of the 45-day bargaining period (in 1995), the company requested an extension based on the progress that was made at the bargaining table. The trouble was, when the extension was exhausted, the company reverted back to their original proposal as their final offer."⁸

"The decision bargaining tool has been utilized to show GE the workers' commitment to improving efficiencies and to compromise since its inception," said Scott Slawson, President of UE Local 506. "Unfortunately, over the course of what amounts to years of decision bargaining, GE has retained less than a handful of the jobs that it has initially intended to transfer."

In the face of the transfers and subsequent negotiations, the UE Local 506 workforce credits working hand-in-hand with GE management team members at the plant in meeting, and oftentimes exceeding, efficiency and production goals. In 2012, General Electric awarded GE Transportation the GE Business of the Year Award. From 2002-2009, times were good and work at the GE plant was steady. A thousand new employees were brought on to handle a robust workload.

A message in January 2013 from Supply Chain Manager Joel Berdine lauded the team's accomplishments: "During 2012 this team also demonstrated its ability to improve productivity. Our hourly workforce was 12% more productive in 2012 than in 2011 largely driven by overtime reduction. This was a significant improvement and great first step. In 2013 we need to focus on being more efficient in order to stay ahead of the competition. Our experienced and skilled employees are a competitive advantage."¹⁰



Job transfers from the Lawrence Park plant following decision bargaining include:

- 1992 transfer Drive Systems Operations to Salem, VA
- 1993 transfer Fuel Tanks to Mexico
- 1995 transfer DCM & G to Dothan, AL
- 2008 transfer Brush Holders to third-party suppliers
- 2013 transfer EVO Locomotive and AC Wheel Machining assembly to Fort Worth, TX and third-party suppliers⁹
- 2014 transfer Truck Axle
 Machining to third-party suppliers
- 2016 transfer of production (Tool Grinders, Rad Fans, DC TM's, and UX Alts/Rotor Coils) and non-production jobs to Fort Worth, TX

¹⁰ Global Supply Chain, The Way Forward: A Message from Joel Berdine, January 2, 2013

⁶ 1991-1994 National Agreement between General Electric Company and United Electrical, Radio and Steelworkers of America (UE), pages 86, 87

⁷ UE Local 506 Union News, June 17, 2016 The History Behind the Future

 $^{^{\}rm 8}$ UE Local 506 Union News, June 17, 2016, The History Behind the Future

⁹ Though the 2014 transfer of Truck Axle Machining to third-party suppliers did not cause direct job loss to members, it did result in a net sum loss as the positions were absorbed in other areas.

AN EMOTIONAL TOLL ON A REGION



In June 2015, UE Local 506 members ratified a four-year national contract with GE, Prior to the creation of the Fort Worth, Texas, facility. This contract meant a period of security and stability for UE Local 506 members, their families, and the region. The 60-day decision bargaining negotiating window, created to bring labor and management to the table in the spirit of job preservation and triggered when GE plans to transfer work elsewhere, has created distrust and division among UE Local 506 members, Erie's leaders, and community members and management team members living in Erie. The most recent GE notice of intent to transfer 572 jobs triggers another round of decision bargaining, but at the time of publication of this report, UE Local 506 had not decided whether to engage due to lack of confidence in the decision bargaining process and the GE negotiating team.

"In nearly 80 years of successful contract negotiations, the members of UE Local 506 have not asked to reopen a ratified contract, while GE has done so during the past three contracts, resulting in the preservation of too few jobs to note," said Scott Slawson. "Our resources may be better spent working to attract new companies to Erie County in search of an elite workforce, highly trained and capable of helping them earn record profits. Our members can build anything."

The languishing relationship is set against a backdrop of enviable profit margins at GE Transportation, as reported by GE. In the second quarter of 2016 GE earned a \$273 million profit. Throughout the transfer of jobs out of the Lawrence Park plant the GE Transportation Division has consistently maintained a spot as one of the top two most profitable divisions of GE.¹¹ It has one of the best profit margins in the company, at 22.6% (only GE Aviation, at 23.3%, is higher).

The emotional impact of the work transfers has had a devastating effect on the Erie region, often pitting blue collar workers against one another and generating disdain for UE Local 506 members and their families.

In the wake of the most recent job transfer, one Erie resident wrote on Facebook: "Oh come on. They are not closing it totally. Of course they will keep the laziest workers who try to take advantage of their union against the company. I guess being lazy does pay off for some. So the people who work hard get hurt and the ones who put their trust or money on their union president get to keep their jobs and waste more company time. If they keep it up something else in the plant will be shipped somewhere else, too."¹²

In 2012, GE moved its Transportation Division Corporate Headquarters from Erie to Chicago, Illinois. According to reports at the time, about 50 executives relocated to Chicago, leveling another major blow to Erie County. Although the data are not included in this economic impact study, a large number of white collar positions have subsequently been eliminated. GE Transportation earned more than \$300 million in the third quarter of 2016 and remains on track for annual revenues to top \$4 billion.¹³

Erie County is in a difficult position in its relationship to one of the area's largest employers. Over the past century, GE has played a large role in the region's identity. GE not only has provided the county and the state with family-sustaining jobs, it has positioned itself as a strong corporate citizen.

¹¹ Source: http://www.ge.com/ar2016/

¹² http://www.goerie.com/opinion/20170730/ge-deals-erie-body-blow-your-view-from-facebook

¹³ Source: http://www.ge.com/ar2016/

"I was always so proud to work at GE. I was good at my job and I worked hard. I always felt proud when GE would get a big sale. Their pull out of Erie and attack on the workers is too much for me and my family. People I thought were my friends blast us for "making too much money." "Must be nice," they say. My nerves are shot now, and when I used to brag about being a GE worker, now I just stay quiet."



– UE Member

"After a contract is negotiated and signed there should always be a feeling of relief. The contract is a pact, an agreement to live up to our end of the bargain and GE to theirs.

"Despite record profits in good years, we never went back and asked for more. We always work hard to grow GE—our members always assumed that if GE Erie won we should all win. Sadly, that has not been the case over the past decade." — Mike Ferritto, UE Local 506 Business Agent

"Once again, GE has turned its back on Northwestern Pennsylvania and the workers who have made its company a success. GE's actions are insulting. Instead of supporting the workers who have made GE what it is today, its corporate executives are pursuing more cheap labor in Texas. The skilled, experienced workers in Erie have done everything that has been asked of them, only to get slapped in the face by GE over and over again."

– U.S. Senator Bob Casey, Jr.

"The General Electric plant in Lawrence Park has long stood as a symbol of Erie County's strong middle class and GE has long been a contributing partner in Erie County's economic and community development efforts," said Kathy Dahlkemper, Erie County Executive. "My dad worked at GE, he gave me GE stock. It's almost inconceivable to me that GE would not be a part of Erie's fabric. I'm mystified at the company's decision-making process and genuinely saddened by its apparent disregard for the workforce and community that built its Transportation division, instrumental in ensuring GE is the corporate powerhouse it is today."

- Kathy Dahlkemper, Erie County Executive

UE LOCAL 506 MEMBERS IN THE COMMUNITY

Established in 1949, the Employees Community Service Fund of Erie General Electric (ECSF of GE) was created in partnership with GE as a way to collectively help needy area residents through employee paycheck deductions.



In 2016, the CSF reported that over the past decade, the GE workforce had contributed \$5,677,500 to United Way of Erie County's Annual Community Campaign. According to the United Way of Erie County, this is by far the single largest contribution the organization received during this period. During that same time period, Community Service Fund has given more than \$500,000 to local non-profits including Second Harvest Food Bank, Erie City Mission, and The Salvation Army. Employee contributions to the CSF Fund have diminished dramatically as former contributors are now unemployed.

Twice each year, the UE Local 506 Sports Committee hosts local events including a bowling and golf tournament and is particularly proud that its members enthusiastically participate and have raised \$236,325 to support local veterans groups. UE Local 506 estimates it has supported hundreds of local youth sports leagues, local volunteer fire departments, state police-sponsored community programs, food banks, private fundraisers for families in crisis, and scholarship funds from Meadville to Erie. Conservative estimates of UE Local 506 member donations are valued at \$40,000.

In 2013, Scott Park, located just east of Presque Isle State Park, was vandalized. A UE Local 506 member brought the incident up at a union meeting and nearly \$4,200 was raised through spontaneous donations made by members in attendance. UE Local 506 members also stepped up to help repair a damaged BMX track and make improvements.¹⁴

UE Local 506 hosts "coffee can collections" in the GE plant twice each year to support its Holiday Toy Drive and Trail of Treats. These efforts have contributed \$38,594 and \$5,231 respectively to benefit local families during the holiday seasons. The Trail of Treats proceeds are donated directly to Sarah Reed Children's Center, which provides mental health services to families.



¹⁴ https://www.google.com/url?sa=t&source=web&rct=j&url=http://www.thepapertrailnews.com/tag/stx-bmx/&ved=0ahUKEwjriPfttr7VAhXEeCYKHXc TAuA4ChAWCCQwAA&usg=AFQjCNGjf92G_gmZY1izKk-dDcYLktYM1A

METHODOLOGY AND KEY ASSUMPTIONS

An economic impact analysis (EIA) quantifies the effect of an event on the economy in a specified geography. The economic event analyzed can include the implementation or elimination of a new policy or project, or may simply be the presence of a business or

organization. An economic impact analysis is commonly conducted when there is public concern about the potential impacts of a proposed change of policy, to demonstrate the value of a new project, or to show the contribution of an existing organization in the market.

This EIA shows the economic, employment, and local and state tax impact of job losses caused by the transfer of work from the GE Transportation Erie Plant and a snapshot of current employment losses due to volume reduction and attrition.

What do the terms direct, indirect, and induced mean for the UE Local 506 study?

- Direct impact refers to the economic, tax, and job loss generated by the transfer of 1,687 total jobs from the GE Transportation Erie Plant.
- Indirect impact represents the additional negative impact to area suppliers and businesses created because these GE employees need to purchase local goods and supplies.
- Induced impact represents the third wave of impact created because employees of GE and its suppliers purchase household goods, pay mortgages, and spend money in the local community.

The combination of indirect and induced impact are commonly referred to as the multiplier effect.



The Study

In July 2017, Parker Philips was retained to complete a comprehensive economic impact study for the United Electric, Radio and Machine Workers of America Local 506 (UE Local 506) to demonstrate the economic, employment, and tax revenue impacts associated with the transfer of jobs from the General Electric Lawrence Park plant. The goal of this analysis is to exhibit the aggregate financial loss to Erie County and the Commonwealth of Pennsylvania as a result of the job losses.

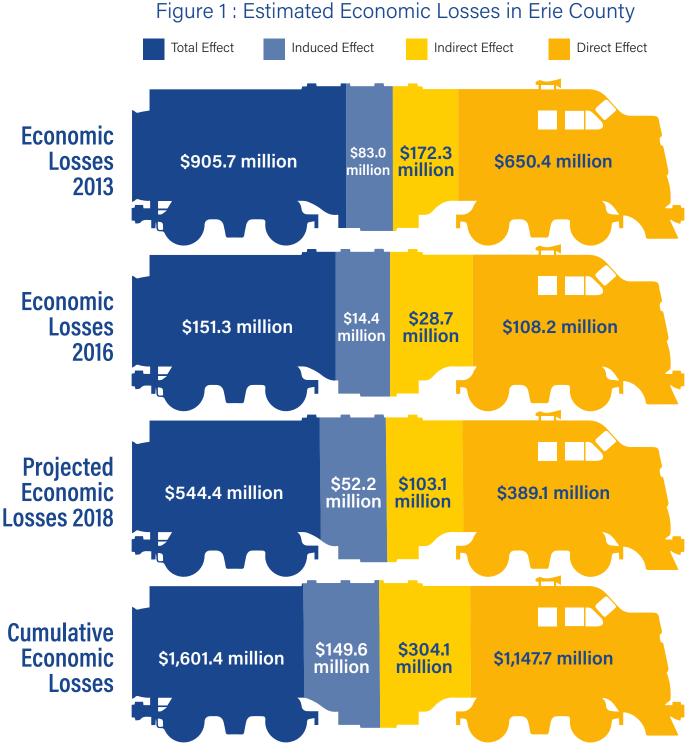


SIGNIFICANT NEGATIVE IMPACTS FOR ERIE COUNTY

Economic Losses Have Been Felt Throughout the Community



The total transfer of work since 2013 will result in **\$1.6 billion** in total economic output lost (**\$1.1 billion direct**) in the Erie County economy. The economic losses will be felt across sectors and the jobs are not easily replaced since they are relatively high-paying with a competitive benefits package.

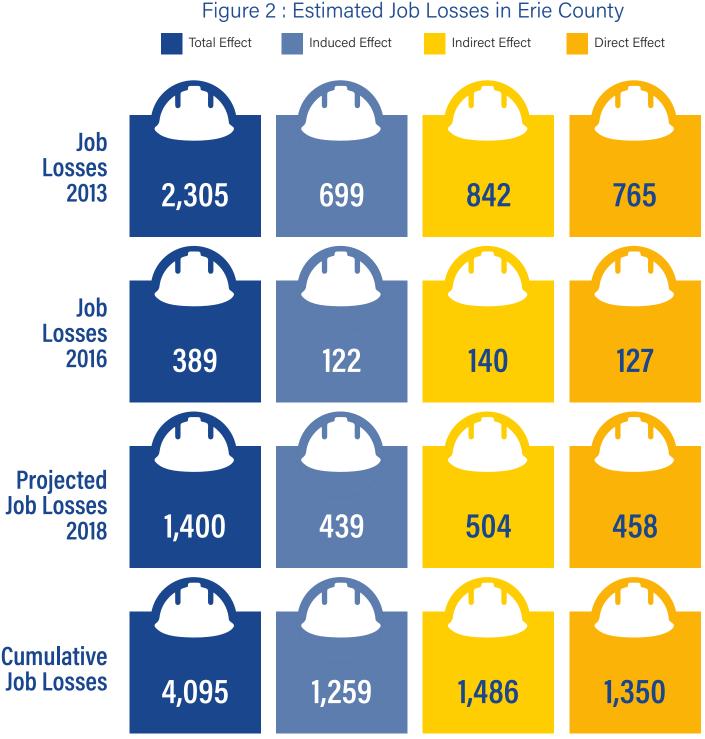


Source: Parker Philips using IMPLAN data

Job Losses in Erie County Go Beyond UE Local 506

The loss of **1,350 direct jobs**¹⁵ in Erie County will result in a total loss of nearly **4,095 jobs** across all sectors in the local economy. Sectors impacted include the service and retail sector, healthcare, wholesale trade, and transportation. While the majority of job losses occur in the railroad manufacturing sector, the loss of wages and spending power of job transfers will ripple throughout the entire economy.





Source: Parker Philips using IMPLAN data

¹⁵ For the purposes of analysis, it was assumed that only 80% of the 1,687 employees lived in Erie County even though their job was in Erie County.



TABLE 1 : ESTIMATED JOB AND ECONOMIC IMPACT LOSSES BY SECTORSIN ERIE COUNTY, TOP SECTORS (sorted by employment)

IMPLAN Sector	Description	Employment (jobs)	Output (\$)
362	Railroad rolling stock manufacturing	1,476	\$1,240,540,838
395	Wholesale trade	233	\$52,545,250
502	Limited-service restaurants	158	\$11,700,779
501	Full-service restaurants	153	\$6,570,119
482	Hospitals	83	\$11,359,438
411	Truck transportation	78	\$12,503,558
464	Employment services	76	\$3,908,368
449	Architectural, engineering, and related services 68		\$10,087,720
468	Services to buildings	Services to buildings 66	
440	Real estate	61	\$10,136,854
405	Retail - General merchandise stores	54	\$3,302,004
503	All other food and drinking places	51	\$1,810,187
461	Management of companies and enterprises	51	\$8,895,603
Total jobs and econor	nic output all sectors	4,095	\$1,601,352,922

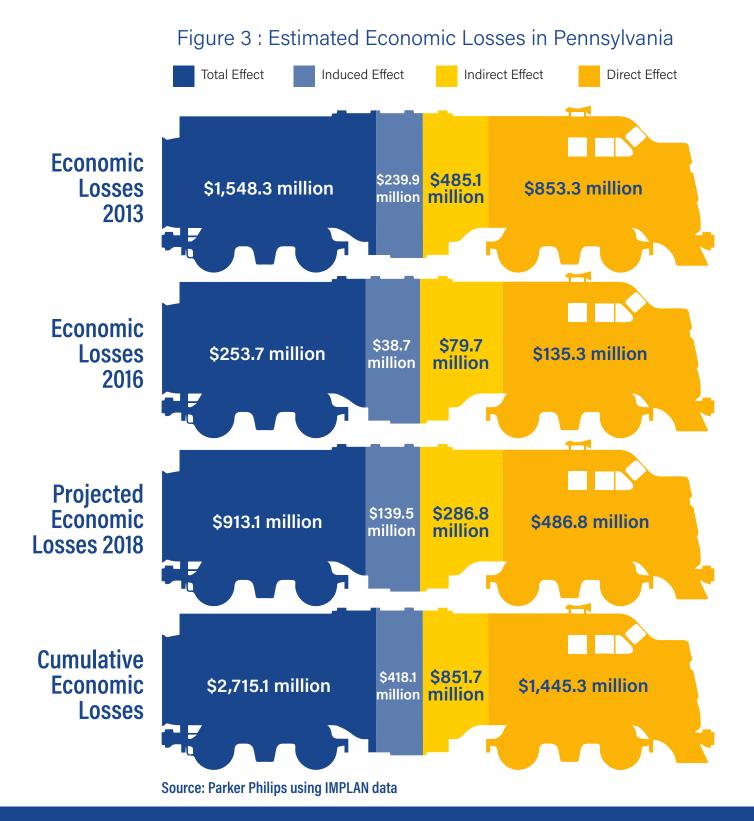
Source: Parker Philips using IMPLAN data

GREATER ECONOMIC AND JOB LOSSES AT THE STATE LEVEL

Output Levels Show Further Decline at the State Level



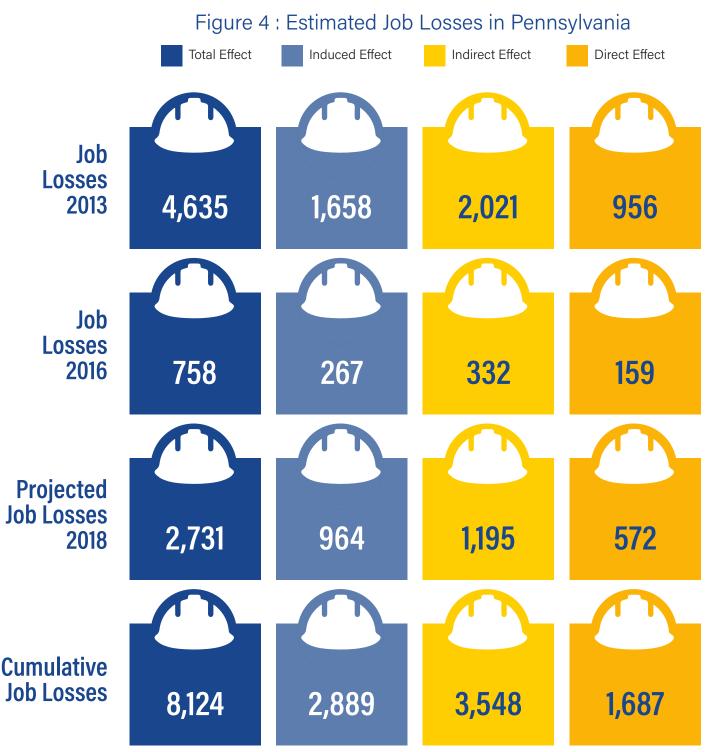
The total transfer of work since 2013 will result in **\$2.7 billion in total economic output lost** (\$1.4 billion direct) in the commonwealth. The economic loss is in multiple industry segments beyond manufacturing.



Job Losses in the Commonwealth Nearly Double

The loss of **1,687 direct jobs** in Pennsylvania will result in a total loss of **8,124 jobs** across multiple areas of the economy. Sectors impacted include the service and retail sector, healthcare, wholesale trade, and transportation. While the majority of job losses occur in the railroad manufacturing sector, the loss of wages and spending power of employees that were laid off will ripple throughout the entire economy.





Source: Parker Philips using IMPLAN data



TABLE 2 : ESTIMATED JOB AND ECONOMIC IMPACT LOSSES BY SECTORSIN PENNSYLVANIA, TOP SECTORS (sorted by employment)

IMPLAN Sector	Description	Employment (jobs)	Output (\$)
362	Railroad rolling stock manufacturing	1,861	\$1,593,618,486
395	Wholesale trade	474	\$122,416,661
501	Full-service restaurants	241	\$11,328,273
449	Architectural, engineering, and related services	228	\$38,378,243
461	Management of companies and enterprises	215	\$58,317,648
502	Limited-service restaurants	210	\$17,203,931
482	Hospitals	165	\$25,397,757
440	Real estate	160	\$39,243,995
411	Truck transportation	156	\$27,145,197
464	Employment services	135	\$9,540,234
468	Services to buildings	133	\$5,905,647
239	Plate work manufacturing	131	\$28,328,195
448	Accounting, tax preparation, book keeping, and payroll services	121	\$12,901,348
Total jobs and econor	nic output all sectors	8,124	\$2,715,085,125

Source: Parker Philips using IMPLAN data

Tax Revenue Lost at the Local and State Levels

OF AMERICA.

Without primary data from GE, a full calculation and quantification of direct taxes paid is not possible.

The estimated loss of indirect and induced tax revenue at the state and local levels as a result of the layoffs will total **\$55.3 million**, since 2013. The table below highlights the breakdown of indirect and induced taxes lost by type.

TABLE 3 : ESTI	TABLE 3 : ESTIMATED COMBINED STATE AND LOCAL TAXES LOST (Indirect and Induced Only)											
Description	Employee Compensation	Tax on Production and Imports	Households	Corporations								
Dividends				\$144,561								
Social Ins Tax - Employee Contrib.	\$193,715											
Social Ins Tax - Employer Contrib.	\$391,395											
Production & Imports: Sales Tax		\$19,920,926										
Production & Imports: Property Tax		\$17,445,793										
Production & Imports: Motor Vehicle Licenses		\$353,381										
Production & Imports: Severance Tax												
Production & Imports: Other Tax		\$3,487,587										
Production & Imports: S/L Non-Taxes		\$101,761										
Corporate Profits Tax				\$2,490,549								
Personal Tax: Income Tax			\$ 8,978,365									
Personal Tax: Non-Taxes (Fines/Fees)			\$ 1,113,041									
Personal Tax: Motor Vehicle Lincense			\$336,801									
Personal Tax: Property Taxes			\$162,532									
Personal Tax: Other (Fish/Hunt)			\$207,421									
Total	\$585,110	\$41,309,447	\$10,798,160	\$2,635,110								
Grand Total Indirect and Induced State and Local Tax Lost				\$55,327,827								

Source: Parker Philips using IMPLAN data



Impact of Displaced Workers and Layoffs

Beyond the loss of 1,687 jobs transferred detailed and described above, there are 1,707 displaced UE Local 506 Members through layoffs and attrition. A snapshot at the time of this report of how greatly the combination of displaced workers and job transfers could affect the local economy is extraordinary: 8,244 jobs impacted with a loss of \$3.2 billion to the Erie County economy. In Pennsylvania, the total job losses are 16,189 and \$5.4 billion.

TABLE 4 : COMBINED POTENTIAL IMPACT OF JOB TRANSFERS AND OF TOTAL DISPLACED WORKERS IN ERIE COUNTY

Impact Type	Employment	Labor Income (\$)	Value Added (\$)	Output (\$)
Direct Effect	2,715	\$278,478,007	\$363,522,670	\$2,322,745,032
Indirect Effect	3,007	\$157,733,963	\$236,998,940	\$615,463,790
Induced Effect	2,522	\$97,930,614	\$167,413,000	\$299,596,610
Total Effect	8,244	\$534,142,583	\$767,934,611	\$3,237,805,432

Source: Parker Philips using IMPLAN data with data from UE Local 506

TABLE 5 : CCOMBINED POTENTIAL IMPACT OF JOB TRANSFERS AND OF TOTAL DISPLACED WORKERS IN PENNSYLVANIA

Impact Type	Employment	Labor Income (\$)	Value Added (\$)	Output (\$)
Direct Effect	3,394	\$364,089,216	\$469,896,107	\$2,898,058,587
Indirect Effect	7,114	\$538,973,621	\$774,719,148	\$1,707,669,290
Induced Effect	5,680	\$286,097,687	\$479,946,325	\$821,882,337
Total Effect	16,189	\$1,189,160,524	\$1,724,561,581	\$5,427,610,214

Source: Parker Philips using IMPLAN data with data from UE Local 506

CONCLUSION



Over the course of its century-long history in Erie County and during each transfer of work out of the county, GE has consistently stated its commitment to Erie and the workers at the Lawrence Park plant. Most recently GE Transportation CEO Jamie Miller stated in a letter to employees, "I realize this is difficult news to hear, but not a surprise given the challenging market and the need for cost competitiveness. These actions are not a reflection on our hardworking teams at these sites, but rather imperative for GE Transportation's future."¹⁷

The sharp reduction in American manufactured locomotives is set against a backdrop of GE's explosive growth overseas. India's Ministry of Railways awarded GE a \$2.6 billion contract in 2015 to build 1,000 locomotives for the country. As operations are being shuttered in Lawrence Park, GE announced they would be building a company town in Bihar, India.

After the announcement of the intent to transfer locomotive production away from the plant, the front of the *Erie Times News* read: "End of an Era". An institutional and social era does appear to be ending across the country as family-supporting union jobs dwindle and major manufacturers continue to flow work to foreign workers. As negotiations between UE Local 506 and GE in Erie County have played out publicly over the last generation, a cultural phenomenon appears to have also emerged. The long migration away from the Lawrence Park plant has resulted in a devaluing of, and shift in long-term stability for, a highly-skilled union workforce.

As this former rust belt town evolves into an identity yet to be defined, community divisions have arisen, pitting neighbors against each other. Many voice a strong opposition to what, by any standard, is considered a living wage and benefits package earned by UE Local 506 workers, while passively accepting record-setting salaries and benefits awarded to GE corporate executives.¹⁸ It has left a mark on these men and women.

Erie's heritage as a "maker city" is directly connected to the pioneering and evolution of transportation and manufacturing. Union members, community leaders, and elected officials share the emotional struggle over the uncertain future of GE Transportation in the region. There is no denying that the region needs these jobs and right now there are not others to replace them. There is no question that Erie County would love to remain a part of GE Transportation's national and global future for the next 100 years—her people still blindly hope these jobs will return despite evidence to the contrary.

If what we have learned in this work is true, it would seem that GE and UE Local 506 both still want to work together to mitigate these losses and meaningfully continue their work together. To quote the Rolling Stones, "You can't always get what you want."¹⁹

It is impossible to quantify the emotional toll that GE's prior and current intentions to transfer work have taken on the region, but the economic impacts in this report are measurable and will be felt for at least a generation if these good, family-supporting jobs are not retained or replaced.

¹⁷ Excerpt from letter to employees from GE Transportation CEO, Jamie Miller, July 27, 2017

¹⁸ https://www.bloomberg.com/news/articles/2017-03-08/ge-ceo-s-pay-falls-to-21-3-million-in-16-amid-oil-market-slump

¹⁹ Source: Rolling Stones, Album: Let It Bleed (1969). Written by Mick Jagger and Keith Richards

APPENDIX A: METHODOLOGY



Primary data used in this study was collected from UE Local 506 since 2013.

This data was utilized to complete the input-output models as developed by IMPLAN. This model and its economic findings are a conservative estimate of impact and based on actual financial information. It is a snapshot of three major transfers of work and the cumulative economic impact on the economies of Erie County and Pennsylvania.

- 1. Impacts are based upon actual or projected job losses in IMPLAN Sector 362 Railroad Rolling Stock Manufacturing.
- 2. Job losses total 1,687 in direct jobs. For the analysis, it was assumed that 100% of employees lived in Pennsylvania and 80% lived in Erie County.
- 3. All economic impact numbers are reported in 2017 dollars.
- 4. Wage calculations and benefit rates are based upon data assumptions at specific times since 2013.

INDUSTRY PROFILE OF RAILROAD ROLLING STOCK MANUFACTURING BY IMPLAN FOR PENNSYLVANIA AND ERIE COUNTY

Industry Code	Description	Employment (jobs)	Output (\$)	Employee Compensation (\$)	Geography	
362	Railroad rolling stock manufacturing	7,600	\$6,391,540,000	\$856,964,700	PA	
362	Railroad rolling stock manufacturing	4,650	\$3,908,057,000	\$527,237,700	Erie County	

Source: IMPLAN Data Year 2015

	OVERVIEW OF WAGE, BENEFIT, AND SALARY ASSUMPTIONS											
Description	Jobs	Avg. Hourly Rate	Hours worked per week	Weeks worked per year	Total Pay	Benefit Rate	Benefit Amount	Total Pay and Benefits	Pay & Benefits Per Worker			
2013 Job Loss*	956	\$31.50	40	52	\$62,637,120	0.53	\$33,197,674	\$95,834,794	\$100,246			
2016 Job Loss	159	\$33.80	40	52	\$11,178,336	0.53	\$5,924,518	\$17,102,854	\$107,565			
2018 Job Loss	572	\$34.00	40	52	\$40,451,840	0.53	\$21,439,475	\$61,891,315	\$108,202			
Total All Jobs Lost	1,687				\$114,267,296		\$60,561,667	\$174,828,963	\$103,633			
Total Displaced Workers	1,707	\$31.50	40	52	\$111,842,640	0.53	\$59,276,599	\$171,119,239	\$100,246			
Total Jobs lost and Displaced Workers	3,394				\$226,109,936		\$119,838,266	\$345,948,202	\$101,929			

* 2013 transfer of Truck Axle Machining to third-party suppliers did not result in a direct loss as employees were absorbed into other positions.

OVERVIEW AND THE IMPLAN MODEL



The most common and widely accepted methodology for measuring the economic impacts of economic sectors is input-output (I-O) analysis. At its core, an I-O analysis is a table that records the flow of resources to and from companies/organizations and individuals within a region at a given time. For a specified region like a state or the nation, the input-output table accounts for all dollar flows between different sectors of the economy in a given time period. With this information, a model can then follow how a dollar added into one sector is spent and re-spent in other sectors of the economy, generating outgoing ripples of subsequent economic activity. This chain of economic activity generated by one event is called the "economic multiplier" effect.

The primary tool used in the performance of this study is the I-O model and dataset developed and maintained by IMPLAN Group LLC (formerly Minnesota IMPLAN Group, Inc.). IMPLAN is a widely accepted and used software model first developed by the U.S. Forest Service in 1972. The data used in the baseline IMPLAN model and dataset come largely from federal government databases. The input-output tables themselves come from the Bureau of Economic Analysis. Much of the annual data on labor, wages, seasonal demand, and other market data comes from the Bureau of Labor Statistics, the Census Bureau, and other government sources.

Government agencies, companies, and researchers use IMPLAN to estimate the economic activities associated with spending in a particular industry or on a particular project. The IMPLAN model extends conventional I-O modeling to include the economic relationships between government, industry, and household sectors, allowing IMPLAN to model transfer payments such as taxes.

The model works by tracking the flow of resources to and from companies/organizations and individuals within a region. Producers of goods and services must secure labor, raw materials, and other services to produce their product. The resources transferred to the owners of that labor or those raw materials and services are then spent to secure additional goods and services or inputs to the products they sell. For example, an organization in a region may develop a company that produces trains with a value of \$1 million. However, to produce that product, they may be required to spend \$500,000 in wages and benefits, \$200,000 to suppliers of parts, \$100,000 for electricity, \$50,000 for transportation of goods and raw materials to and from the plant, and \$50,000 in various professional services associated with operating a business (e.g. attorneys and accountants). The suppliers will, in turn, spend those resources on labor and raw materials necessary to produce the trains. Workers and the owners of the company will buy goods and services from other companies in the area (e.g. restaurants, gas stations, and taxes). The suppliers, employees, and owners of this second tier will, in turn, spend those resources on other goods and services either within the study region or elsewhere. The cycle continues until all of the money leaves the region.

IMPLAN METHODOLOGY

The model uses national production functions for over 536 industries to determine how an industry spends its operating receipts to produce its commodities. These production functions are derived from U.S. Census Department data. IMPLAN couples the national production functions with a variety of county-level economic data to determine the impacts at a state and congressional district level.

To estimate these regional impacts, IMPLAN combines national industry production functions with county-level economic data. IMPLAN collects data from a variety of economic data sources to generate average output, employment, and productivity for each industry in a given county.

IMPLAN combines this data to generate a series of economic multipliers for the study area. The multiplier measures the amount of total economic activity generated by a specific industry's spending an additional dollar in the study area. Based on these multipliers, IMPLAN generates a series of tables to show the economic event's direct, indirect, and induced impacts to gross receipts, or output, within each of the model's more than 536 industries.



APPENDIX B: OUTCOME OF GE WAGE CUTS AND CONCESSIONS

			E Wage Cuts and Concessions
Location	Product	Union	Outcome
Fort Wayne, IN	GE Small Motors	IUE	Wage freezes. Closed in stages late 1990s.
Owensboro, KY	GE Small Motors	Steelworkers	Several rounds of wage cuts. Closed in 2010.
Decatur, IN	GE Small Motors	UE Local 924	No cuts, no freezes. Plant closed in late 1989.
Murfreesboro, TN	GE Small Motors	IUE	Cuts and freezes. Closed in early 2000s.
Jonesboro, AR	GE Small Motors	IUE	Cuts and freezes. Closed in early 2000s.
Tell City, IN	GE Small Motors	IUE	Cuts and freezes. Closed in early 2000s.
Lexington, KY	GE Lighting	IUE	Freezes and wage cuts. Closed 2010.
Providence, RI	GE Lighting	IUE	Freezes and wage cuts. Closed early 2000s.
Warwick, RI	GE Lighting	IUE	Freezes and wage cuts. Closed 2010.
Austintown, OH	GE Lighting	IUE	Freezes and wage cuts. Closed 2010.
Willoughby, OH	GE Lighting	IUE	Freezes and wage cuts. Closed 2010.
Conneaut, OH	GE Lighting	UE Local 731	No cuts, no freezes. Plant closed in 2008.
Niles and Mahoning	GE Lighting	UE Local 751	No cuts, no freezes. Closed 2010.
Warren Lamp	GE Lighting	IUE	Freezes, cuts, competitive wage. Closed late 2013.
Winchester, VA	GE Lighting	non-union	Freezes and wage cuts. Closed 2010.
Goldsboro, NC	GE Lighting	non-union	Freezes and wage cuts. Closed 2010.
Louisville, KY	GE Appliances	IUE	Massive two-tier system, rates of \$14 per hour. Plant being sold to Electrolux.
Louisville, KY	GE Appliances	IAM Toolmakers	Repeat wage concessions, all work ultimately outsourced.
Schenectady, NY	GE Turbine	IUE	Plantwide concessions, including two-tier to GETS battery plant, small number of new hires makes telecom batteries for \$15 per hour. Workforce cut to shell of its former size.
Youngstown, OH	GE Lighting	IUE	Competitive wages, several rounds of wage cuts, closed 2014
Totowa, NJ	GE Health Care	non-union	In 2013, UE found wages as low as \$9.00 per hour. In 2014, plant closed.
Canonsburg, PA	GE Energy	non-union	GE imposed competitive wage, plant closed Octoer 2014.
Bloomington, IN	GE Appliances	IBEW	Wage cuts in exchange for targeted investment. GE reneged on investment, wage cuts repaid to workers in 2013; sold to Electorlux in 2014
O'Hara/Blawnox, PA	GE Energy	non-union	400 workers. 2016. http://powersource.post- gazette.com/powersource/ companies/ 2016/05/10/General- Electric-closing-Blawnox- plant-nearly-400-workers- affected- layoff-solar- industry/stories/201605100137
Chattanooga, TN	GE Energy (Former ALSTOM)	Union	235 workers.2016. http://www.timesfreepress.com/ news/local/story/2016/jun/22/ ge-power-close- chattanoogplants/372252/
Bloomington, IL	GE Appliances	IBEW	329 workers. 2016. http://www. centralillinoisproud.com/news/ top-local-news/ge- closing- bloomington-plant
Waukesha, WI	GE Energy	IAM	350 workers. 2015. http://www.bradenton.com/news/ business/article84420047.html
Avon, MA	GE Energy	UAW	300 workers. 2015. https://www.bostonglobe.com/ business/2015/11/01/general- electric-will-close-its-avon- factory-trimming-local-jobs/ zNUTM3CEDIHLby06YIqp5J/ story. Html
Duluth, GA	GE Power & Water		250 workers. 2014. http://www.topix.com/forum/ com/ge/TD6FNGBSI8V27U2NM
Warren, OH	GE Lighting	IUE	197 workers. 2014. http://www.vindy.com/news/ 2014/jan/24/lights-out-at-ge- lamp- plant-in-warren/
Pineville, LA	GE		300 workers. 2015. http://www.dailyworld.com/ story/news/local/2015/01/22/ sources-ge-closing-pineville- plant/22186521/
Lufkin, TX	GE		187 workers. 2015. http://fuelfix.com/blog/2015/ 08/31/ges-lufkin-industries- closing- plant-making-layoffs/

APPENDIX C: UE LOCAL 506 NEWS AND COMMUNITY BENEFITS





The History behind the Future

Front page headlines in a 1955 edition of our 506 News "Erie Workers Idled While GE Profits Soar".

In that article it's stated "GE carrying out its master plan to shift profit making manufacturing southward to low wage areas, regardless of the cost to workers employed in its established plants, GE this past week laid off hundreds of experienced Erie workers and has started to dismantle refrigeration lines".

That year, 1955, GE closed the doors on Refrigeration and Room Air Conditioner. Thousands upon thousands of Erie GE Workers and their families paid the economic price as a result of that decision by GE.

Almost three decades later the company announced that they would move Diesel Engine south to Grove City. In the 1981 edition of the UE News it was said that "it makes no sense".

It made no sense to leave the skilled workforce that has proven to be highly profitable.

It made no sense to say you need room to expand, with factory space within the plant and several vacant factories in Erie.

It made no sense from a moral viewpoint to pull a major operation out of the Erie community while receiving a huge cut in local taxes. All while young people in Erie are looking for jobs.

It made no sense at all... unless you are an anti-union corporation that is willing to spend millions of dollars, and even willing to make your production less efficient, in order to weaken the bargaining power of the Union. It appeared that making UE local 506 smaller was a top priority in GE Corporate Headquarters.

Over the next decade, the Union fought to secure language that would force the company to bargain over transferring production and non-production work. In June of 1991 at contract negotiations the union secured Article 23 section 5b & 5c. The language was viewed to give the Union opportunity to influence GE's decisions once they notified the union of their intent to transfer work.

Shortly after the decision bargaining was established in January of 1992 the company transferred Bldg.63 Drive Systems Operations work to GE Salem, Virginia site.

In June of 1993, UE News headlines read WE MEANT IT! DID YOU GE? In that article generated by the company's notice of their intent to transfer Bldg. 22 Fuel Tanks, it read, "We are painfully reminded of the company's decision in January of '92 to transfer Drive Systems Work". Those are bad memories we're not interested in revisiting, or reliving again. Workers and their families harbor feelings of hopelessness and despair following such announcements of "Intent to Transfer Work". The Unions "Intent" is to engage the company in "hopeful", meaningful discussions regarding this work. Never just to deal with emotions of hurt and despair in the aftermath of the GE announcements of its intent to transfer work.

On the heels of that announcement on June 30th, GE announced their intent to transfer DM&G. The curious part was that when they handed out the GE COMMUNICATOR (a monthly news update exclusively for DM&G workers) on July 1st, the headlines read DM&G: AN IMPORTANT GE BUSINESS AT THE ERIE PLANT. Another interesting note was when they held an informative meeting the company spokesman, who flew into to address the workers, stated that they didn't want to move D.C. out of town. Why? Because according to the D.C. boss "it would cost the company a lot of money to move all the machinery out of town." Not a word was mentioned about the workers or their families.

At the conclusion of the 45 day bargaining period, the *company* requested an extension based on the progress that was made at the bargaining table. The trouble was, when the extension was exhausted the company reverted back to their original proposal as their final offer.

On April 9, 2013 the company announced intent to transfer EVO Locomotive and AC Wheel Machining Assembly.

Continued on Page 6, Column 1.

B.A. Mike Ferritto

JUNE MEMBERSHIP MEETING NOTICE

Agenda:

Officers Report

- □ Reduction in Work Force Update
- Decision Bargaining Update
- Committee Reports and General Business Matters

MEMBERSHIP MEETINGS & TIMES ARE:

Thursday, May 19, 2016 (All meetings) 7:20 a.m. (Officers reports only) 12:30 p.m. (2nd Shift) 3:20 p.m. (1st Shift)

No Food Will Be Served At Meetings

APPENDIX C: UE LOCAL 506 NEWS AND COMMUNITY BENEFITS

Page 6

UNION NEWS

June 16, 2016

Continued from Page 1

In a May 10, 2013 UE News Supplement the headline read "UE Local 506 Deeply Upset with GE's Bargaining Position". In the supplement it described while bargaining GE had told the 506 bargaining committee: "You have our proposal. Our proposal is to move the jobs to Texas and subcontract the work."

On May 30, 2013 because so much time was focused on work rules and attendance policy with no substantial discussion on jobs, UE suggested continuing bargaining until July 1, 2013. GE politely told the UE bargaining team "Thanks, but no thanks."

On July 28, 2014 the company issued a notice of intent to transfer Bldg. 18 Truck, Axle Machining. UE proved to GE they could be more profitable producing all axles for transportation and recover the cost of a new machining center in 1.3 years, well short of the 2 year timeline they requested.

GE replied "We just aren't interested."

On May 26, 2016 GE notified the Union of the intent to transfer 181 jobs. During that meeting a GE spokesman was asked why, when asked directly in a prior meeting, did he not tell the Union Executive Board of more possible reductions? He stated "I was restricted by a non-disclosure agreement". A week prior during a meeting regarding the company's Reinvent Erie layout UE President asked, "Where do the RAD FANS fit into the model?" GE spokesman stated "RAD FANS would remain right where it's at." Appendix A, of the transfer notice said otherwise. That raised concerns with the Union entering into decision bargaining.

At the Union's request the company will sit down to bargain for our jobs. As in the past, the Union will bargain in good faith. Which brings me to my point, the word faith. The word itself brings positive light to any situation. The word faith gives us the belief there is hope. We can have faith that the Union will do its best to keep these jobs. We can only hope, the company will bargain in good faith. We all know the old saying, you can hope in one hand and shit in the other and see which one fills up first.



On May 23, 2016 Tom Bobrowicz was sworn in as Local 506 Vice President/ Recording Secretary. Tom was elected in a special election held to fill the vacancy that was created when former VP/RS Mike Ferritto was elected to Business Agent. Tom expressed his gratitude to the Membership, Stating "I look forward to serving the members and fulfilling the duties of this office, I want to thank everyone for their support."

Important Medical Plan Numbers and Web sites

WageWorks (HRA/FSA/DCFSA/LPFSA) Wageworks.com/ge 1-888-303-3006

GE Benefits Center OneHR.ge.com 1-800-252-5259

<u>Dental Care</u> Metlife.com/dental GE Dental Benefits Claim Center 1-888-529-8474

<u>Vision Care</u> davisvision.com GE Vision Care Benefits Center 1-800-433-9375

Disability Benefits Center 1-800-392-0789

HAVING A BENEFITS ISSUE? Call Mark Kresse at 875-6620 Or Tom Smith at 875-6873

HAVING A PERSONAL PROBLEM? Call Keith Eller at 875-4EAP (Ext. 4237)

SUNDAY	MONEAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATUROA
					1	2
3	4 Independence Day	5	6	7	8	9
10	11	12 13 13 618 MEMERSHP MEERMG RAGE MEMERSHP MEETING		14	15	16
17 UE GOUF TOURNAVENT BIOWN	18	19 505 EXECUTIVE BOARD MEETING	20 21 505 NEVBERSHIP MEETINGS 22		22	23
24	25 FINAL DAY OF CECISION	26	27	28	29 STEP II GREWNICE	30
31	BARGAINING				MEETING	



APPENDIX C: UE LOCAL 506 NEWS AND COMMUNITY BENEFITS

RESULTS OF VAMC BOWLING TOURNAMENT - 2017

Number of Bowlers	212	Monetary sponsors (7 NEW SPONSORS)	40
TOURNAMENT WINNERS		Total Auction Items (25 chances for \$5)	89
Men's High Game - John Kolbas	267	Total High Auction Items (\$2 ea. 3 for \$5)	5
Men's High Series - Desmond Drake	754	Wooden Eagle Carving (\$2 ea. 3 for \$5)	1
Women's High Game - Casey Brewer	192	Total # of Monetary & Item Sponsors	135
Women's High Series - Debbie Sickles	532	Winner Wooden Eagle - Dale Mitchell	
Winner of Flag - Peggy Lucas			
BREAKDOWN OF DONATIONS	AMOUNT	BREAKDOWN DAY OF TOURNAMENT	A spatters
Monetary (sponsors) donations	\$ 14,512.00	Auction table proceeds	\$ 1,315.00
Auction table proceeds	\$ 1,315.00	Auction high end proceeds	\$ 427.00
Auction high end proceeds	\$ 427.00	1st 50/50 proceeds winner Jerry Ingali	\$ 589.00
50/50 proceeds	\$ 1,771.00	2nd 50/50 proceeds winner Bill Neal	\$ 596.00
Wooden Eagle proceeds	\$ 290.00	3rd 50/50 proceed winner - Kathy Shelly	\$ 586.00
Proceeds from T-shirt sales	\$ 155.00	Wooden Eagle proceeds	\$ 290.00
		Proceeds from T-shirt sales	\$ 155.00
Total	\$ 18,470.00	GRAND TOTAL DAY OF TOURNAMENT	\$ 3,958.00

CUMULATIVE TOTALS FOR VAMC BOWLING TOURNAMENT FOR 2003-2017

YEAR	FUND	# OF BOWLERS	# OF MONETARY Sponsors	SPONSOR PROCEEDS	AUCTION PROCEEDS	Р	50-50 ROCEEDS	TOTAL
2003	CCTV	64	37	\$ 3,965.00		\$	651.00	\$ 4,616.00
2004	Recreation Therapy	67	28	\$ 4,380.00	\$ 1,276.40	\$	344.50	\$ 6,000.90
2005	Transportation	89	35	\$ 7,675.00	\$ 1,041.00	\$	485.50	\$ 9,201.50
2006	Homeless	136	32	\$ 2,985.56	\$ 1,399.00	\$	506.00	\$ 4,890.56
2007	Library Fund	103	40	\$ 3,827.00	\$ 642.00	\$	400.00	\$ 4,869.00
2008	Recreation Therapy	139	31	\$ 3,635.00	\$ 787.00	\$	542.00	\$ 4,964.00
2009	National Games	120	40	\$ 4,815.00	\$ 1,400.00	\$	645.00	\$ 6,860.00
2010	Women Veterans	148	39	\$ 5,212.00	\$ 1,279.00	\$	763.00	\$ 7,254.00
2011	National Games	149	40	\$ 7,050.00	\$ 1,921.00	\$	696.00	\$ 9,667.00
2012	Vet Center	160	32	\$ 5,113.00	\$ 1,450.00	\$	1,044.00	\$ 7,607.00
2013	Women Veterans	200	41	\$ 10,564.28	\$ 2,084.00	\$	1,137.00	\$ 13,785.28
2014	Homeless Veterans	208	44	\$ 15,700.00	\$ 2,398.20	\$	1,105.00	\$ 19,203.20
2015	Vet Center	184	42	\$ 13,315.00	\$ 1,441.00	\$	2,076.00	\$ 16,832.00
2016	Homeless/National Games	194	45	\$ 16,490.00	\$ 2,230.00	\$	1,280.00	\$ 20,000.00
2017	Vets Treatment Court	212	40	\$ 14,512.00	\$ 2,187.00	\$	1,771.00	\$ 18,470.00
	GRAND TOTALS	2173	566	\$ 119,238.84	\$ 21,535.60	\$1	13,446.00	\$ 154,220.44

AUCTION PROCEEDS INCLUDES: sales of t-shirts, wooden carving, high and low end auctions

UE LOCAL 506 CUMULATIVE TOTALS FOR ALL FUNDRAISERS FOR THE VA MEDICAL CENTER

YEAR(S)	EVENT		TOTAL	
1996-2006	5K RUN/WALKS	\$	63,942.00	
2003-2017	BOWLING TOURNAMENTS	\$	154,058.44	
2008-2016	GOLF TOURNAMENTS	\$	62,266.50	
	GRAND TOTALS			

APPENDIX D: DATA



Combined Losses to Erie County of all UE Local 506 Layoff	\$			
Impact Type	Employment (jobs)	Labor Income (\$)	Value Added (\$)	Output (\$)
Direct Effect	1,350	\$ 139,863,170	\$182,134,928	\$1,147,666,616
Indirect Effect	1,486	\$ 77,936,235	\$117,101,003	\$ 304,100,207
Induced Effect	1,259	\$ 48,895,993	\$ 83,587,848	\$ 149,586,099
Total Effect	4,095	\$ 266,695,399	\$382,823,779	\$1,601,352,922
Source: Parker Philips using IMPLAN with data from UE Loca	,	200,093,399	3502,025,777	Ş1,001,332,722
Source. Parker Finitips using IMPLAN with data from OL Loca				
2018 Projected Losses in Erie County				
	Employment (ichs)	Labor Incomo (Ĉ)		O_{ij}
Impact Type	Employment (jobs) 458	Labor Income (\$)	Value Added (\$)	
Direct Effect		· · · · · · · · · · · · · · · · · · ·	\$ 63,845,859	\$ 389,131,775 \$ 102,100,258
Indirect Effect		\$ <u>26,425,327</u>	\$ 39,704,667	\$ 103,109,258
Induced Effect	439	\$ 17,047,732	\$ 29,143,004	\$ 52,153,491
Total Effect	1,400	\$ 92,986,111	\$132,693,530	\$ 544,394,524
Source: Parker Philips using IMPLAN with data from UE Loca	al 506			
2016 Losses in Erie County				
Impact Type	Employment (jobs)	Labor Income (\$)	Value Added (\$)	Output (\$)
Direct Effect	127	\$ 13,682,283	\$ 17,666,403	\$ 108,167,749
Indirect Effect	140	\$ 7,345,502	\$ 11,036,787	\$ 28,661,490
Induced Effect	122	\$ 4,720,634	\$ 8,069,903	\$ 14,441,666
Total Effect	389	\$ 25,748,419	\$ 36,773,093	\$ 151,270,904
Source: Parker Philips using IMPLAN with data from UE Loca		20,710,117	<i>\$</i> 30,773,073	<i>\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</i>
2013 Losses in Erie County				
Impact Type	Employment	Labor Income (\$)	Value Added (\$)	Output (\$)
Direct Effect	765		\$100,622,667	\$ 650,367,092
Indirect Effect	842	\$ 44,165,407	\$ 66,359,549	\$ 172,329,459
Induced Effect	699	\$ 27,127,627	\$ 46,374,941	\$ 82,990,942
Total Effect	2,305	\$ 147,960,869	\$213,357,156	\$ 905,687,494
Source: Parker Philips using IMPLAN with data from UE506	2,305	2 147,700,007	\$213,337,130	÷ 703,007,474
bource. Farker Findps daing init EAR with data from 02500				
Combined Losses to	Pennsylvania of all UE	Local 506 Lavoffs		
Impact Type		Labor Income (\$)	Value Added (\$	Output (\$)
Direct Effect	1,687	\$ 190,545,793	\$243,137,492	\$1,445,355,158
Indirect Effect	3,548	\$ 268,803,504	\$386,377,391	\$ 851,669,675
Induced Effect	2,889	\$ <u>145,527,044</u>	\$244,129,680	\$ 418,060,292
Total Effect	8,124	\$ 604,876,341	\$873,644,564	\$2,715,085,125
Source: Parker Philips using IMPLAN with data from UE Loca	· · · · · ·	\$ 004,070,341	3073,044,304	32,713,003,123
Source. Parker Philips using IMPLAN with data from DE Loca				
2018 Pro	jected Losses in Penns	vlvania		
Impact Type	Employment (jobs)	Labor Income (\$)	Value Added (\$)	Output (\$)
		(1)		• • • •
IDIRECT Effect	572	S 62.703.636	15 80.535.558	S 486.787.558
Direct Effect	572	\$ 62,703,636 \$ 90,531,521	\$ 80,535,558 \$130,129,751	\$ 486,787,558 \$ 286,837,598
Indirect Effect	1,195	\$ 90,531,521	\$130,129,751	\$ 286,837,598
Indirect Effect Induced Effect	1,195 964	\$ 90,531,521 \$ 48,546,355	\$130,129,751 \$81,439,337	\$ 286,837,598 \$ 139,460,714
Indirect Effect Induced Effect Total Effect	1,195 964 2,731	\$ 90,531,521	\$130,129,751	\$ 286,837,598
Indirect Effect Induced Effect	1,195 964 2,731	\$ 90,531,521 \$ 48,546,355	\$130,129,751 \$81,439,337	\$ 286,837,598 \$ 139,460,714
Indirect Effect Induced Effect Total Effect Source: Parker Philips using IMPLAN with data from UE Loca 201	1,195 964 2,731 al 506 6 Losses in Pennsylvan	\$ 90,531,521 \$ 48,546,355 \$ 201,781,513 ia	\$130,129,751 \$ 81,439,337 \$292,104,646	\$ 286,837,598 \$ 139,460,714 \$ 913,085,870
Indirect Effect Induced Effect Total Effect Source: Parker Philips using IMPLAN with data from UE Loca	1,195 964 2,731 al 506 6 Losses in Pennsylvan Employment (jobs)	\$ 90,531,521 \$ 48,546,355 \$ 201,781,513 ia Labor Income (\$)	\$130,129,751 \$ 81,439,337 \$292,104,646 Value Added (\$	\$ 286,837,598 \$ 139,460,714 \$ 913,085,870 Output (\$)
Indirect Effect Induced Effect Total Effect Source: Parker Philips using IMPLAN with data from UE Loca 201	1,195 964 2,731 al 506 6 Losses in Pennsylvan Employment (jobs) 159	\$ 90,531,521 \$ 48,546,355 \$ 201,781,513 ia Labor Income (\$) \$ 17,328,657	\$130,129,751 \$ 81,439,337 \$292,104,646	\$ 286,837,598 \$ 139,460,714 \$ 913,085,870 Output (\$) \$ 135,313,325
Indirect Effect Induced Effect Total Effect Source: Parker Philips using IMPLAN with data from UE Loca 2010 Impact Type	1,195 964 2,731 al 506 6 Losses in Pennsylvan Employment (jobs) 159	\$ 90,531,521 \$ 48,546,355 \$ 201,781,513 ia Labor Income (\$)	\$130,129,751 \$ 81,439,337 \$292,104,646 Value Added (\$	\$ 286,837,598 \$ 139,460,714 \$ 913,085,870 Output (\$)
Indirect Effect Induced Effect Total Effect Source: Parker Philips using IMPLAN with data from UE Loca 2011 Impact Type Direct Effect	1,195 964 2,731 al 506 6 Losses in Pennsylvan Employment (jobs) 159	\$ 90,531,521 \$ 48,546,355 \$ 201,781,513 ia Labor Income (\$) \$ 17,328,657	\$130,129,751 \$ 81,439,337 \$292,104,646 Value Added (\$ \$ 22,285,432	\$ 286,837,598 \$ 139,460,714 \$ 913,085,870 Output (\$) \$ 135,313,325

APPENDIX D: DATA



Source: Parker Philips using IMPLAN with data from UE Loc	al 506					
207	13 Los	ses in Pennsylvar	nia			
Impact Type	Employment (jobs)		Labor Income (\$)		Value Added (\$) Output (\$)	
Direct Effect		956	\$	110,513,500	\$140,316,502	\$ 823,254,275
Indirect Effect		2,021	\$	153,106,752	\$220,075,210	\$ 485,099,249
Induced Effect		1,658	\$	83,518,236	\$140,106,286	\$ 239,925,546
Total Effect		4,635	Ś	347,138,489	\$500,497,998	\$1,548,279,07
Source: Parker Philips using IMPLAN with data from UE Loc	al 506	ò	Ĺ	, ,		
Esitmated	Econo	omic Losses in Eri	ie C	County		
		Cumulative	1	Projected Economic	Economic	Economic
Impact Type	E	conomic Losses		Losses 2018	Losses 2016	Losses 2013
Direct Effect	\$	1,147,666,616	\$	389,131,775	\$ 108,167,749	\$ 650,367,092
Indirect Effect	\$	304,100,207	\$	103,109,258	\$ 28,661,490	\$ 172,329,459
Induced Effect	\$	149,586,099	\$	52,153,491	\$ 14,441,666	\$ 82,990,942
Total Effect	\$	1,601,352,922	\$	544,394,524	\$ 151,270,904	\$ 905,687,494
Source: Parker Philips using IMPLAN with data from UE Local 50	6		-			
Esitmat	ed Jo	b Losses in Erie (Cou	nty		
Impact Type	Cum	nulative Job Loss	ePr	ojected Job Losses 201	Job Losses 2016	Job Losses 201
Direct Effect		1,350		458	127	76
Indirect Effect		1,486		504	140	842
Induced Effect		1,259		439	122	699
Total Effect		4,095		1,400	389	2,305
Source: Parker Philips using IMPLAN with data from UE Loc	al 506	j				,
Esitmated	Fcono	mic Losses in Per	h	vlvania		
Esitmated		mic Losses in Per Cumulative conomic Losses	1	ylvania Projected Economic Losses 2018	Economic Losses 2016	Economic Losses 2013
		Cumulative	1	Projected Economic		Losses 2013
Impact Type	Ec	Cumulative conomic Losses		Projected Economic Losses 2018	Losses 2016	Losses 2013 \$ 823,254,275
Impact Type Direct Effect Indirect Effect Induced Effect	E0 \$ \$ \$	Cumulative conomic Losses 1,445,355,158 851,669,675 418,060,292	\$ \$ \$	Projected Economic Losses 2018 486,787,558 286,837,598 139,460,714	Losses 2016 \$ 135,313,325 \$ 79,732,829 \$ 38,674,032	Losses 2013 \$ 823,254,275 \$ 485,099,249 \$ 239,925,546
Impact Type Direct Effect Indirect Effect Induced Effect Total Effect	Ec \$ \$ \$ \$	Cumulative conomic Losses 1,445,355,158 851,669,675 418,060,292 2,715,085,125	\$ \$	Projected Economic Losses 2018 486,787,558 286,837,598	Losses 2016 \$ 135,313,325 \$ 79,732,829	Losses 2013 \$ 823,254,275 \$ 485,099,249 \$ 239,925,546
Impact Type Direct Effect Indirect Effect Induced Effect Total Effect	Ec \$ \$ \$ \$	Cumulative conomic Losses 1,445,355,158 851,669,675 418,060,292 2,715,085,125	\$ \$ \$	Projected Economic Losses 2018 486,787,558 286,837,598 139,460,714	Losses 2016 \$ 135,313,325 \$ 79,732,829 \$ 38,674,032	Losses 2013 \$ 823,254,275 \$ 485,099,249 \$ 239,925,546
Impact Type Direct Effect Indirect Effect Induced Effect Total Effect Source: Parker Philips using IMPLAN with data from UE Loc	E \$ \$ \$ \$ cal 506 Eed Job	Cumulative conomic Losses 1,445,355,158 851,669,675 418,060,292 2,715,085,125	\$ \$ \$ ylva	Projected Economic Losses 2018 486,787,558 286,837,598 139,460,714 913,085,870 ania	Losses 2016 \$ 135,313,325 \$ 79,732,829 \$ 38,674,032 \$ 253,720,185	Losses 2013 \$ 823,254,275 \$ 485,099,245 \$ 239,925,546 \$1,548,279,070
Impact Type Direct Effect Indirect Effect Induced Effect Total Effect Source: Parker Philips using IMPLAN with data from UE Loc	E \$ \$ \$ \$ cal 506 Eed Job	Cumulative conomic Losses 1,445,355,158 851,669,675 418,060,292 2,715,085,125	\$ \$ \$ ylva	Projected Economic Losses 2018 486,787,558 286,837,598 139,460,714 913,085,870	Losses 2016 \$ 135,313,325 \$ 79,732,829 \$ 38,674,032 \$ 253,720,185	Losses 2013 \$ 823,254,275 \$ 485,099,245 \$ 239,925,546 \$1,548,279,070
Impact Type Direct Effect Indirect Effect Induced Effect Total Effect Source: Parker Philips using IMPLAN with data from UE Loc Esitmate	E \$ \$ \$ \$ cal 506 Eed Job	Cumulative conomic Losses 1,445,355,158 851,669,675 418,060,292 2,715,085,125	\$ \$ \$ ylva	Projected Economic Losses 2018 486,787,558 286,837,598 139,460,714 913,085,870 ania	Losses 2016 \$ 135,313,325 \$ 79,732,829 \$ 38,674,032 \$ 253,720,185	Losses 2013 \$ 823,254,275 \$ 485,099,245 \$ 239,925,546 \$1,548,279,070 Job Losses 201
Impact Type Direct Effect Indirect Effect Induced Effect Total Effect Source: Parker Philips using IMPLAN with data from UE Loc Esitmate	E \$ \$ \$ \$ cal 506 Eed Job	Cumulative conomic Losses 1,445,355,158 851,669,675 418,060,292 2,715,085,125 0 Losses in Pennsy ulative Job Losses	\$ \$ \$ ylva	Projected Economic Losses 2018 486,787,558 286,837,598 139,460,714 913,085,870 ania ojected Job Losses 2018	Losses 2016 \$ 135,313,325 \$ 79,732,829 \$ 38,674,032 \$ 253,720,185 Job Losses 2016	Losses 2013 \$ 823,254,275 \$ 485,099,245 \$ 239,925,546 \$1,548,279,070 Job Losses 201 956
Impact Type Direct Effect Indirect Effect Induced Effect Total Effect Source: Parker Philips using IMPLAN with data from UE Loc Esitmate Impact Type Direct Effect	E \$ \$ \$ \$ cal 506 Eed Job	Cumulative conomic Losses 1,445,355,158 851,669,675 418,060,292 2,715,085,125 0 Losses in Penns ulative Job Losses 1,687	\$ \$ \$ ylva	Projected Economic Losses 2018 486,787,558 286,837,598 139,460,714 913,085,870 ania ojected Job Losses 2018 572	Losses 2016 \$ 135,313,325 \$ 79,732,829 \$ 38,674,032 \$ 253,720,185 Job Losses 2016 159	Losses 2013 \$ 823,254,275 \$ 485,099,249 \$ 239,925,546 \$1,548,279,070