



Economic Impact Analysis

Byron Generating Station
Exelon Corporation

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Background

Exelon Corporation recently announced its intention to close Byron Generating Station in September 2021. Although the facility is licensed to operate for another 24 years, the company stated that current State regulations made the retirement of the facility necessary¹.

- This will result in the **loss of 717 jobs and \$97.5 million in employee compensation.**
- Beyond this direct impact on the regional economy is the reduction of the facility's purchases of goods and services from other industry sectors, which in turn support additional jobs and sales.
- In addition, the wages and salaries paid to the affected employees will also impact other areas of the local economy. These workers, as well as the employees of related suppliers, will spend a portion of their incomes on groceries, rent, vehicle expenses, healthcare, entertainment, and other household goods.
- This analysis estimates the present contribution of the facility's jobs and related income on the economy of Northern Illinois.

¹ Source: Exelon Corporation press release, August 27, 2020.

Link: <https://www.exeloncorp.com/newsroom/exelon-generation-to-retire-illinois%E2%80%99-byron-and-dresden-nuclear-plants-in-2021>.

Methodology

- These estimates were calculated using IMPLAN, a popular Input-Output statistical model, to determine the **indirect** (business-to-business spending) impacts and **induced** (household spending of employees) impacts.
- Note that these estimates were generated based on the limited amount of data provided. Therefore some assumptions were made, such as:
 - The impacts of the layoffs were estimated based on jobs at the Byron facility and associated employee compensation. All other impacts were estimated using the default data in the IMPLAN model.
 - Some of the affected employees may be offered transfers or jobs at other facilities, others may be offered early retirement or buy-out packages. The model does not calculate these potential impacts or that of employee severance payments.
 - Over 75% of the facility's employees live in Lee, Ogle or Winnebago counties. Therefore, this three-county region was selected as the study area for the analysis.

Key Concepts

- **Employment (Jobs)** – An employee is someone who enters into an agreement formal or informal, to perform work in return for compensation in cash or in kind.
- **Output** is the value of an industry’s production. For the Byron Generating Station’s revenue plus or minus any change in inventory.
- **Value-Added** in the IMPLAN framework is the same as the official measure of “Gross Domestic Product” or “GDP” at the national or state level. In contrast to the concept of output, it represents the difference between the value of goods and services purchased as production inputs and the value of the goods and services produced.
- **Employee Compensation** includes wages and salaries and the estimated value of all employer provided benefits, plus employer paid payroll taxes.
- **The Multiplier Effect** estimates the magnitude of the economic response in a geographic area associated with a change in business activity, either in terms of jobs or spending.

Summary of Impacts

DIRECT

Jobs, wages and output sourced directly to the Byron Generating Station

INDIRECT

Impact of the Byron Generating Station's suppliers and vendors

INDUCED

Impact of Byron Generating Station employee's spending on the regional economy

+

TOTAL

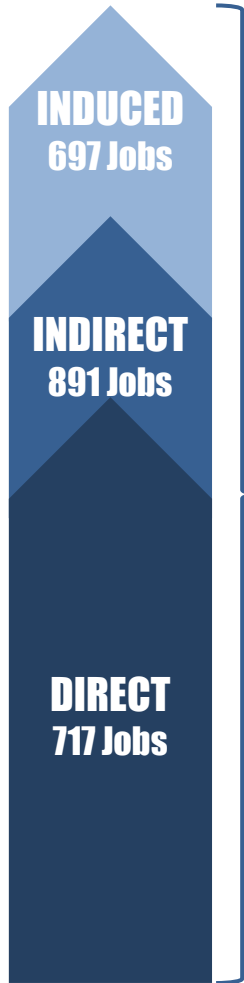
Sum of direct, indirect and induced impacts

Estimated Impacts the Byron Generating Station

Indicator	Direct	Indirect	Induced	Total	Multiplier
Employment	717	891	697	2,305	3.21
Output (\$Millions)	\$692.4	\$308.2	\$94.2	\$1,094.8	1.58
Value-added (\$ Millions)	\$288.5	\$145.5	\$52.9	\$487.0	1.69
Employee Compensation (\$ Millions)	\$97.5	\$57.3	\$26.1	\$180.9	1.86

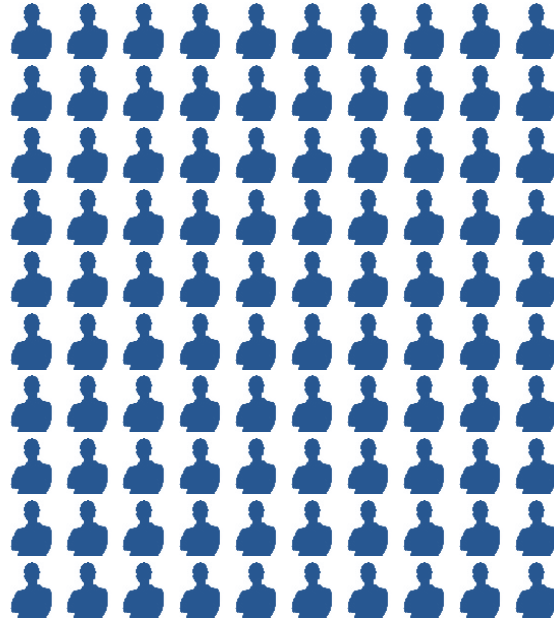
IMPLAN Code: 41 Electric power generation - Nuclear.
Source: IMPLAN, 2020.

Employment Impacts



Source: IMPLAN, 2020..

Every **100 jobs** at the Byron Generating Station...



...supports another **221 jobs** are in other industries.



A jobs multiplier of
3.21

Note: The multiplier is determined by dividing the total jobs by the direct jobs.

Key Employment Impacts

Industries experiencing the **greatest indirect employment impacts:**

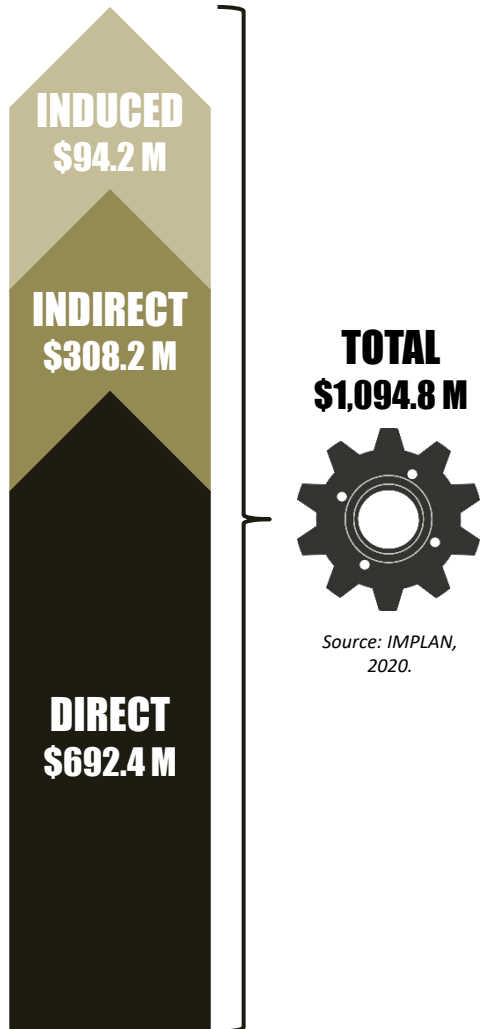
Employment services	203 Jobs
Electric power transmission and distribution	129 Jobs
Marketing research and all other miscellaneous professional, scientific, and technical services	64 Jobs
Full-service restaurants	44 Jobs
Support activities for transportation	43 Jobs
Other real estate	29 Jobs
Truck transportation	28 Jobs
Scientific research and development services	27 Jobs
Monetary authorities and depository credit intermediation	24 Jobs
Legal services	23 Jobs

Industries experiencing the **greatest induced employment impacts:**

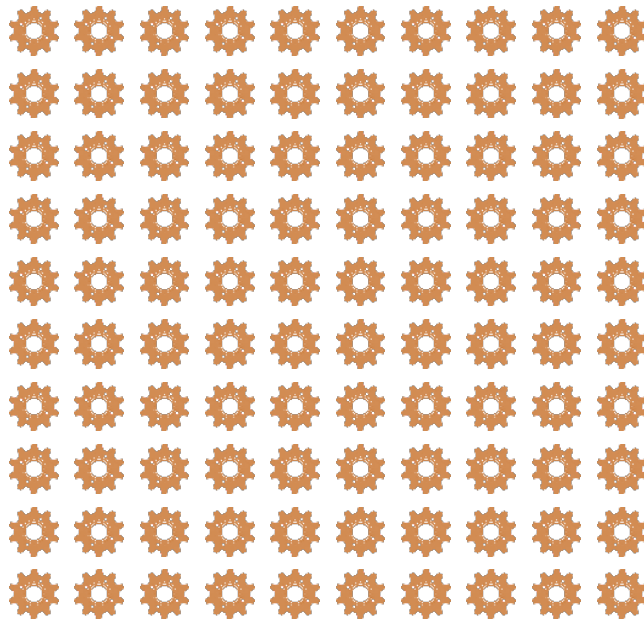
Hospitals	47 Jobs
Limited-service restaurants	40 Jobs
Full-service restaurants	36 Jobs
Religious organizations	25 Jobs
Offices of physicians	23 Jobs
General merchandise stores	22 Jobs
Food and beverage stores	21 Jobs
Nursing and community care facilities	20 Jobs
Other financial investment activities	16 Jobs
Other real estate	16 Jobs

Source: IMPLAN, 2020.

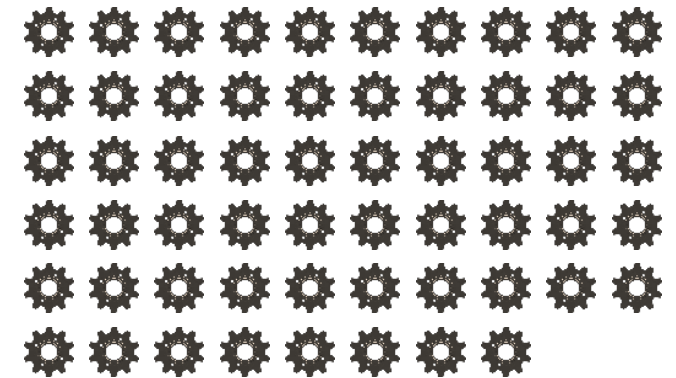
Output Impacts



For every \$1 million in output from the Byron Generating Station...



...supports in an additional \$581,000 in the output of other business sectors.



An output multiplier of
1.58

Note: The multiplier is determined by dividing the total output by the direct output.

Key Output Impacts

Industries experiencing the greatest **indirect output impacts**:

Electric power transmission and distribution	\$184.0 Million
Employment services	\$18.8 Million
Monetary authorities and depository credit intermediation	\$7.5 Million
Scientific research and development services	\$6.7 Million
Support activities for transportation	\$6.5 Million
Truck transportation	\$5.3 Million
Rail transportation	\$5.3 Million
Other real estate	\$4.9 Million
Legal services	\$4.3 Million
Petroleum and petroleum products –wholesale merchants	\$3.8 Million

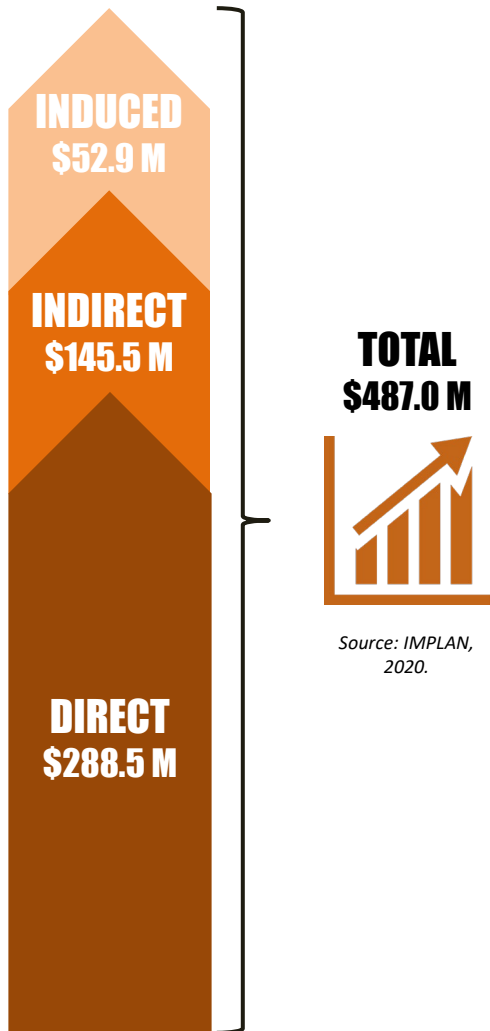
Industries experiencing the greatest **induced output impacts**:

Owner-occupied dwellings	\$13.1 Million
Hospitals	\$8.7 Million
Offices of physicians	\$4.3 Million
Limited-service restaurants	\$3.0 Million
Insurance carriers, except direct life	\$2.9 Million
Monetary authorities and depository credit intermediation	\$2.8 Million
Other real estate	\$2.7 Million
Full-service restaurants	\$2.2 Million
Religious organizations	\$2.0 Million
Tenant-occupied housing	\$1.8 Million

Source: IMPLAN, 2020.

Note: Figures have been rounded to the nearest one hundred thousand dollars.

Value-Added (GDP) Impacts



Source: IMPLAN,
2020.

- Byron Station's **direct contribution** to the regional economy (GDP) is estimated to be over \$288 million; **1.6% of the total GDP of the region¹**.
- Byron Station's **total contribution** to the regional economy is estimated to be \$487 million; **2.6% of the total GDP of the region and 17.0% of the total GDP of Ogle County.**
- Byron Station's **direct contribution** to the Ogle County economy is estimated to be over \$283 million; **14.3% of the total GDP of Ogle County²**.
- Byron Station's **total contribution** to the Ogle County economy is estimated to be \$338 million; **17.0% of the total GDP of Ogle County.**

Note: Figures have been rounded to the nearest one hundred thousand dollars.

¹The estimated GDP of the region (Lee, Ogle and Winnebago counties) is \$18.6 billion.

²The estimated GDP of Ogle County is \$2.0 billion.



Key Value-Added Impacts

Industries experiencing the greatest indirect value-added impacts:

Electric power transmission and distribution	\$82.8 Million
Employment services	\$11.4 Million
Monetary authorities and depository credit intermediation	\$3.9 Million
Petroleum and petroleum products wholesale merchants	\$3.4 Million
Scientific research and development services	\$3.2 Million
Support activities for transportation	\$3.0 Million
Truck transportation	\$2.8 Million
Legal services	\$2.7 Million
Rail transportation	\$2.4 Million
Petroleum refineries	\$2.3 Million

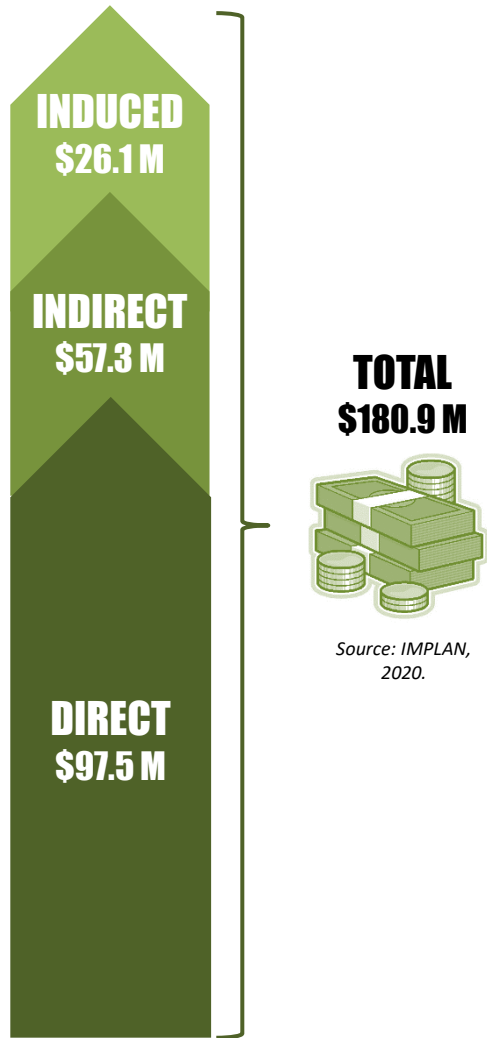
Industries experiencing the greatest induced value-added impacts:

Owner-occupied dwellings	\$10.4 Million
Hospitals	\$4.8 Million
Offices of physicians	\$2.9 Million
Tenant-occupied housing	\$1.6 Million
Monetary authorities and depository credit intermediation	\$1.4 Million
Limited-service restaurants	\$1.4 Million
Insurance carriers, except direct life	\$1.4 Million
Full-service restaurants	\$1.2 Million
Food and beverage stores	\$1.0 Million
General merchandise stores	\$1.0 Million

Source: IMPLAN, 2020.

Note: Figures have been rounded to the nearest one hundred thousand dollars.

Employee Compensation Impacts

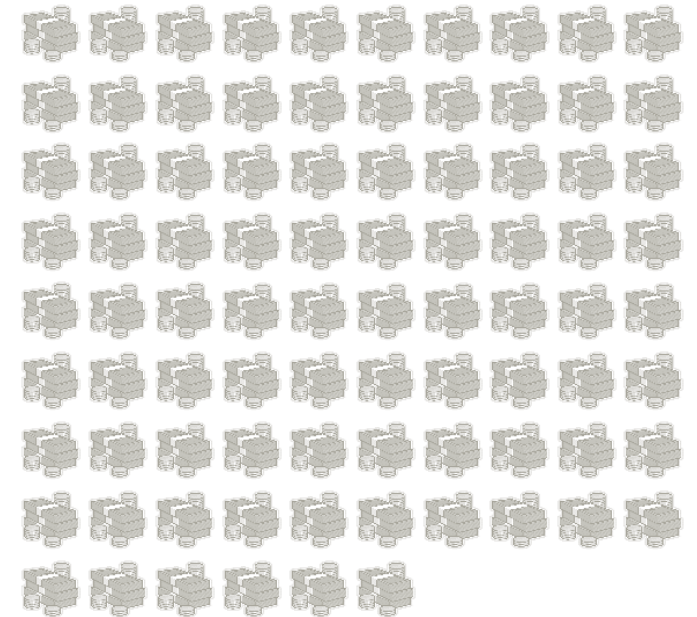


Source: IMPLAN, 2020.

For every \$1 million in compensation paid to the employees of the Byron Generating Station...



...supports in an additional \$855,000 in compensation paid to employees in related business sectors.



Note: The multiplier is determined by dividing the total employee compensation by the direct employee compensation.

An employee compensation multiplier of
1.86

Key Employee Compensation Impacts

Industries experiencing the greatest indirect employee compensation impacts:

Electric power transmission and distribution	\$24.2 Million
Employment services	\$7.1 Million
Support activities for transportation	\$2.5 Million
Scientific research and development services	\$2.2 Million
Truck transportation	\$1.8 Million
Rail transportation	\$1.6 Million
Monetary authorities and depository credit intermediation	\$1.5 Million
Legal services	\$1.2 Million
Water, sewage and other systems	\$1.1 Million
Marketing research and all other miscellaneous professional, scientific, and technical services	\$1.0 Million

Industries experiencing the greatest induced employee compensation impacts:

Hospitals	\$3.9 Million
Offices of physicians	\$2.4 Million
Securities and commodity contracts intermediation and brokerage	\$0.9 Million
Religious organizations	\$0.9 Million
Limited-service restaurants	\$0.8 Million
Nursing and community care facilities	\$0.7 Million
Full-service restaurants	\$0.7 Million
Food and beverage stores	\$0.7 Million
General merchandise stores	\$0.6 Million
Automotive repair and maintenance, except car washes	\$0.6 Million

Source: IMPLAN, 2020.

Note: Figures have been rounded to the nearest one hundred thousand dollars.

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