

Labour Baseline Study Report

Southwestern Ontario Community Study

Prepared for:

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By: Keir Corp May 5, 2022

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Appendix A. List of Socio-Economic Community Studies

Appendix B. Inventory of Knowledge Holders Interviewed and Key Findings

List of Acronyms

AlArtificial Intelligence
APMAdaptive Phased Management
DPRADPRA Canada Inc.
IAImpact Assessment
MCRMajor Component Replacement Project
MSBMunicipality of South Bruce
NWMONuclear Waste Management Organization



Labour Baseline Study

1. Introduction

1.1 Background and Context

- 1. Since 2012, the Municipality of South Bruce (MSB) has been involved in a process of learning about the Nuclear Waste Management Organization's (NWMO) Adaptive Phased Management (APM) Project ('the Project') for the long-term management of Canada's used nuclear fuel. The two remaining siting areas in the process are the South Bruce Area and the Ignace Area. The NWMO plans to complete all preliminary assessment work and to select one community/area to host the Project by 2023. Preliminary studies suggest that the Project can be implemented safely in the South Bruce area for a repository that will contain and isolate used nuclear fuel from people and the environment for the long timeframes required.
- 2. Further detailed studies are required to fully assess the potential impacts of the Project in the community and regionally. Building on previous work, engagement completed to-date, and the MSB's 36 Guiding Principles, the NWMO and the MSB are working together to prepare a suite of community studies which will be shared broadly with the community. The list of socioeconomic community studies is included in **Appendix A**. These studies were undertaken by the NWMO or MSB, with some being joint efforts. The MSB has retained consultants (the GHD team) to develop a number of studies and to peer review others developed by the NWMO and their consultants (the DPRA Canada Inc. (DPRA) team). The information acquired through these studies is expected to help South Bruce leadership and residents make informed decisions about whether the Project is a good fit for their community, and if they are willing to consider hosting it and under what circumstances and terms.
- 3. This *Labour Baseline Study* is one of the community studies being prepared. This study is organized as follows:
 - Purpose and Scope (Section 1.3)
 - Methodology (Section 2)
 - Existing Conditions (Section 3)
 - Supply/Demand Assessment (Section 4)
 - Conclusions (Section 5)
 - References (Section 6)



Note to Reader:

This and other community studies are preliminary and strategic in nature, all intended to identify possible consequences (e.g., to labour) in the South Bruce Area based on our current level of understanding of the Project. Using information known at this point in time, these community studies will describe a range of possible consequences that are the subject of specific and separate studies. For each possible consequence, potential options are offered to leverage opportunities and/or mitigate possible negative consequences/effects.

It is important to note that these community studies (developed collaboratively by the NWMO and the MSB) being investigated at this time are <u>not</u> the formal or final baseline or effects studies that will be part of the Impact Assessment (IA). Those studies will be completed at a later date if the Project is located in the area. However, these current studies will inform the effects studies that will be initiated at a later date

These community studies are intended to support current dialogue between the MSB and the NWMO regarding a potential hosting agreement by:

- a) Exploring in more detail the questions, aspirations and topics of interest expressed by the community through the Guiding Principles approved by the MSB following the project visioning process completed in the community;
- b) Assisting the NWMO and the MSB in developing a deeper understanding of the community aspirations/values and to work with the MSB in identifying possible programs and commitments which ensure that the Project will be implemented in a manner that fosters the well-being of the community and area;
- c) Advancing learning and understanding on topics of interest to the neighboring areas; and
- d) Providing the community with information it has requested to help them make an informed decision in 2023.

The NWMO is committed to collaboratively working with the communities to ensure questions, concerns and aspirations are captured and addressed through continuous engagement and dialogue.

The NWMO will independently engage with the Saugeen Ojibway Nation to understand how they wish to evaluate the potential negative effects and benefits that the Project may bring to their communities.



1.2 Land Acknowledgement

It is acknowledged that the lands and communities discussed in this report are situated on the Traditional Territory of the Anishinabek Nation: The People of the Three Fires known as Ojibwe, Odawa and Pottawatomie Nations. The Chippewas of Saugeen and the Chippewas of Neyaashiinigmiing (Nawash), now known as the Saugeen Ojibway Nation, are the traditional keepers of this land and water. It is also recognized that the ancestors of the Historic Saugeen Métis and Georgian Bay Métis communities shared this land and these waters.

1.3 Scope and Purpose

Objectives for this study are described in the *Labour Baseline Study Work Plan* (DPRA, October 2021). The overall objective of the *Labour Baseline Study* is to describe and characterize the local/regional labour supply. In particular this study is closely intertwined with the *Workforce Development Study* (Keir Corp., 2022a), and both should be read in conjunction with each other to thoroughly understand the area labour markets. These two studies are also closely linked to the *Housing Needs and Demand Analysis Study* (Keir Corp., 2022b).

The specific objectives of this study are:

- Describe the local labour supply in terms of employment status.
- Describe the local labour force in terms of occupational classifications.
- Describe the local labour needed to sustain and grow the existing businesses in the community.

The NWMO is responsible for the completion of both the *Labour Baseline Study* and *Workforce Development Study*; the *Housing Needs and Demand Analysis Study* is a joint NWMO-MSB study. These studies were undertaken by Keir Corp, a sub-consultant to DPRA, the prime consultant to the NWMO on this study.

1.3.1 Guiding Principles

The Labour Baseline Study is relevant to MSB Guiding Principles (2020) #10 and #20.

#10: "The NWMO will identify the potential for any positive and negative socio-economic impacts of the Project on South Bruce and surrounding communities and what benefits will contribute to mitigate any specific risks."



#20: "The NWMO, in consultation with the Municipality, will commit to implementing a local employment and training strategy with the objective of ensuring that the majority of employees of the Project are located within South Bruce and surrounding communities."

The Labour Baseline Study contributes generally to Principles #10 and #20, while the Workforce Development Study (Keir Corp. 2022a), and the Local Hiring Effects Study and Strategy (MDB Insight, in preparation for the Municipality of South Bruce) will be more directly relevant to Principle #20.

1.3.2 Peer Review Approach

An earlier draft of the *Labour Baseline Study* Report was reviewed by MSB consultants according to their Peer Review Protocol. The Peer Review Protocol provides for a collaborative approach to conducting the peer review, with peer review activity occurring throughout the execution of the study. The *Labour Baseline Study* is an NWMO-led study, with the NWMO determining the spatial boundaries and the data and inputs used to establish baseline conditions.

The peer review has been carried out on the scope and framing of the study, data inputs and baseline conditions.

This final *Labour Baseline Study* Report reflects the comments provided by the MSB peer review consultants and subsequent discussions.

For the Labour Baseline Study, the peer review was led by MDB Insight Inc.

1.3.3 Spatial Boundaries

- 1. Three areas have been used to frame this study:
 - a. Regional Study Area
 - b. Local Study Area
 - c. Core Study Area
- 2. The Regional Study Area (see Figure 1, Section 3.1 below) includes the Counties of Bruce, Grey, Huron, Perth, Wellington, Oxford and Middlesex and the Region of Waterloo. This area lies within a one and half to two-hour drive time of the site and it is home to a large portion of the supply chain companies for the Bruce Nuclear Plant and its associated Major Component Replacement (MCR) Project. Additionally, it is home to many of the workers associated with the Bruce Nuclear Generating Station during refurbishment and almost all of the workers associated with station operations. For the APM Project, this area could meet almost all needs for labour and goods and services.
- 3. The Local Study Area (see Figure 6, Section 3.2 below) steps down from the Regional Study Area and focuses on the municipalities surrounding South Bruce as well as South Bruce itself. The area has a wide variety of



relationships grounded in social/cultural, economic, and political relationships, both past and present. Persons residing in this area can easily commute to the Project on a daily basis.

4. The Core Study Area (see Figure 13, Section 3.3 below) steps down from the Local Study Area and focuses on the municipalities of South Bruce, Huron-Kinloss, Brockton, Morris-Turnberry and North Huron. These five communities are again closely intertwined through social/cultural, economic, and political relationships. All five communities have met and expressed an interest in working together to explore the Project and optimize its outcomes.

1.3.4 Temporal Boundaries

- 1. Three temporal boundaries define the critical horizons of the Project for this study.
 - a. Pre-Construction 2028 to 2032
 - b. Construction 2033 to 2042
 - c. Operations 2043 to 2088 (does not include monitoring and decommissioning phases)
- 2. The pre-construction phase of the Project will be closely associated with permitting and licensing activities and it will also involve both on-site and off-site initiatives. In the latter case an office and Centre of Expertise will be made operational. The NWMO workforce strategy will entail a combination of new employee hires and relocation of existing employees.
- 3. The construction phase of the Project will begin in 2033 once permits and licenses have been obtained. It will run for 10 years.
- 4. Following the completion of construction, site operations will commence in 2043 and continue to 2088.

1.3.5 Planning Assumptions – Workforce, Population, Housing and Employment

- 1. The community studies use the following planning assumptions for Project workforce by phase, and projections for population, housing, and employment for five local municipalities:
 - Municipality of South Bruce (including Teeswater, Mildmay and Formosa)
 - Township of Huron-Kinloss (including Ripley and Lucknow)
 - Municipality of Brockton (including Walkerton)
 - Municipality of Morris-Turnberry
 - Township of North Huron (including Wingham)



2. These five municipalities comprise the 'Core Study Area' used in the Labour Baseline, Workforce Development, Housing Needs and Demand Analysis, Aggregate Resources, and Regional Economic Development studies.

Project Workforce

- 1. The three Project phases are:
 - Pre-Construction (2023 to 2032)
 - Construction (2033 to 2042)
 - Operations (2043 and beyond; does not include monitoring and decommissioning phases)
- 2. Table 1 describes the workforce associated with the Project phases.

Table 1: Projected Workforce by Phase

		NWMO Staff	Surface Trades	Underground Trades	Total
	Pre-construction (2028)	20	-	-	20
On-site	Construction (2033)	40	300	130	470
	Operations (2043)	510	10	60	580
	Pre-construction (2028)	180	-	-	180
Off-site	Construction (2033)	170	-	-	170
	Operations (2043)	120	-	-	120
Total	Pre-construction (2028)	200	-	-	200
	Construction (2033)	210	300	130	640
	Operations (2043)	630	10	60	700

Source: NWMO (October 2021)

Note: On-site refers to the DGR site. Off-site refers to the Centre of Expertise/Office Facility within a settlement area

Population, Housing & Employment Projections

1. The Municipality of South Bruce (metroeconomics, 2022) prepared base case ('without the Project') projections for population, housing, and employment for five local municipalities. A corresponding set of incremental 'anticipated Project effects' projections for each of these demographics for the same municipalities was also prepared (metroeconomics, 2022) utilizing Municipality of South Bruce Project-related growth targets. Tables 2 and 3 present the projections.



Table 2: Base Case Projections

			2021	2031	2041	2046
	South Bruce		6,250	7,420	8,400	8,760
		Huron-Kinloss	7,860	9,340	10,570	11,040
	Oth C A	Brockton	10,130	11,960	13,460	14,010
Population	Other Core Area Municipalities	North Huron	5,150	6,040	6,760	7,010
	riumcipandes	Morris-Turnberry	3,940	4,690	5,330	5,570
		Sum of Other Core Area	27,080	32,030	36,120	37,630
	Total Core Area		33,330	39,450	44,520	46,390
	South Bruce		2,360	2,850	3,200	3,300
	Other Core Area Municipalities	Huron-Kinloss	3,050	3,540	3,940	4,080
		Brockton	4,130	4,830	5,400	5,620
Dwellings		North Huron	2,160	2,560	2,840	2,950
		Morris-Turnberry	1,330	1,520	1,660	1,690
		Sum of Other Core Area	10,670	12,450	13,840	14,340
	Total Core Area		13,030	15,300	17,040	17,640
	South Bruce		1,570	1,730	1,880	1,950
		Huron-Kinloss	1,860	2,040	2,290	2,410
		Brockton	3,870	4,380	4,970	5,270
Employment	Other Core Area Municipalities	North Huron	2,520	2,800	3,160	3,350
	ividificipalities	Morris-Turnberry	1,010	1,130	1,240	1,290
		Sum of Other Core Area	9,260	10,350	11,660	12,320
	Total Core Area		10,830	12,080	13,540	14,270

Source: metroeconomics (2022)

Table 3: Anticipated Project Effects Projections

			2021	2031	2041	2046
	South Bruce		-	200	640	780
Population	Other Core Area Municipalities	Sum of Other Core Area	-	200	640	1,020
	Total Core Area		-	400	1,280	1,800
	South Bruce		-	70	200	250
Dwellings	Other Core Area Municipalities	Sum of Other Core Area	-	70	220	350
	Total Core Area		-	140	420	600
	South Bruce		-	230	730	840
Employment	Other Core Area Municipalities	Sum of Other Core Area	-	40	170	420
	Total Core Area		-	270	900	1,260

Source: metroeconomics (2022)

2. For this study, the employment projections were incorporated in the analysis.



2. Methodology

2.1 General Approach

- The NWMO and the MSB drafted Statements of Work for each community study in response to the MSB's 36 Guiding Principles. As previously mentioned, the community studies are being undertaken by the NWMO or the MSB, with some being joint efforts.
- 2. The socio-economic community studies were categorized into three themes: Economics, Social Cultural, and Infrastructure and Aggregate.
- 3. The following methodology pertains to the 13 community studies solely or jointly led by the NWMO.
- 4. Based on the Statements of Work, work plans for each community study were developed. The work plans:
 - Outlined the peer review approach with the MSB
 - Identified linkages to other studies
 - Identified the spatial and temporal boundaries
 - Identified key assumptions that will dictate the completion of the study
 - Described the tasks associated with the study and schedule for each task
 - Identified key information sources and data collection methods
- 5. Draft work plans were reviewed by the MSB and its peer review team. Formal peer review team comments on the draft community study work plans were received in September 2021. The peer review of the draft *Labour Baseline Study* work plan was undertaken by MDB Insight Inc.
- 6. DPRA provided Comment Disposition Tables and revised work plans to respond to the peer review comments in October 2021. In a memo dated November 3, 2021, the GHD team provided acknowledgement of comments that were addressed in the revised community study work plans or flagged to be addressed in future work such as the community study reports.
- 7. Several consultant consortium meetings and "check-in" meetings with the MSB and its peer review team were held during the development of each study.



- 8. In addition, presentations related to the *Labour Baseline Study* were made at the monthly Project meetings with the CAOs/staff of four of the municipalities in the Core Study Area (South Bruce, Huron-Kinloss, Brockton, North Huron¹):
 - a. January 20, 2022: discussion of baseline information to date for the Labour Baseline, Workforce Development, and Housing Needs and Demand Analysis studies
 - b. March 24, 2022: 'What We Have Learned' Key from the *Labour Baseline* and *Housing Needs and Demand Analysis* studies was discussed
- 9. The general approach can be summarized in the following series of steps:
 - a. Review a variety of data sources to assemble labour force and job statistics for the three study areas.
 - b. Study the NWMO parameters data to determine Project labour force requirements across the three Project phases.
 - c. Conduct interviews with knowledge holders to understand area labour force capabilities, trends, and issues.
 - d. Review available growth strategies for Bruce County and other salient areas to gain insight on future area employment forecasts.

2.2 Data Collection / Information Sources

- 1. Statistics Canada data was used to assemble labour force and job statistics from 2001 to 2016.
- 2. Manifold Data Mining Inc. (hereafter referred to as Manifold) data was used to construct labour force profiles current to 2020 for the three study areas.
- 3. Emsi data for 2021 was used to assemble jobs and occupational data for each of the three study areas.
- 4. Employment projections were derived from Ministry of Finance 2021 projections for the Regional Study Area. Local Study area projections other than those municipalities which also fall in the Core Study area were derived from data sourced from Bruce County (2021), Hemson Consulting Ltd. (2021), Huron County Planning and Economic Development Department (2021) and The Corporation of the County of Wellington (2021). Projections

¹ In February 2022, the Municipality of Morris-Turnberry began to participate in these meetings.



- for the five Core Study Area municipalities were sourced from metroeconomics (2022).
- 5. Bruce Power employee postal code data was compiled to determine place of residence distributions.
- 6. A variety of published documents from economic development agencies, municipalities, labour boards and key employers (i.e., Bruce Power) were examined to better understand the workings of the area labour markets.
- 7. As noted above (Section 1.3), the *Labour Baseline Study* is closely intertwined with the *Workforce Development Study*, and both reports should be read in conjunction with each other. These two studies are also closely linked to the *Housing Needs and Demand Analysis Study*.

2.2.1 Knowledge Holder Interviews

- 1. Interviews were conducted with economic development organizations, area employers, planning officials and municipal administrators to gain insight into labour force characteristics and issues in the Local and Core areas.
- 2. The inventory of knowledge holders interviewed is set out in Appendix B along with a table of key findings from the interviews.
- 3. The rationale for who was interviewed was in large part based on professional experience and knowledge of the types of agencies and personnel most likely able to provide insight into the labour force characteristics of the study areas.

2.3 Assessment

- 1. The framework for the analysis in this document is "supply and demand."
- 2. The current and projected supply side of the equation was derived from statistical data, documents and insights garnered through interviews.
- 3. The demand side was derived from Project labour force requirements set out by NWMO (October 2021) in their release of Project parameter information.
- 4. Superimposing the Project labour force requirements on the supply side profiles provided the basis for making an assessment of area capabilities to accommodate the Project.



3. Existing Conditions

3.1 Regional Study Area

- 1. The Regional Study Area is set out in Figure 1. All parts of the area are within a 1.5 to 2-hour drive time of Teeswater.
- 2. The area is also home to a large number of firms that are part of the supply chain for the Bruce Nuclear Generating Station.

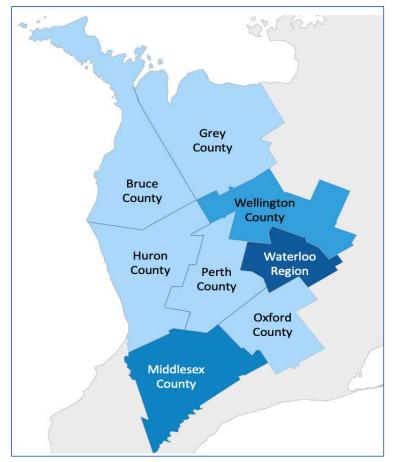


Figure 1: Regional Study Area

Source: Keir Corp using mapping from Emsi Burning Glass (2021)

3. Based on Manifold 2020 data, the area has a labour force population (age 15 years plus) of approximately 1.5 million. Persons active in the labour force total approximately 981,000 and those employed sum to roughly 908,000. The overall labour force participation rate is in the order of 66% and the unemployment rate is about 7.5%. Figure 2 presents the labour force profile within the Regional Study Area by county/region.



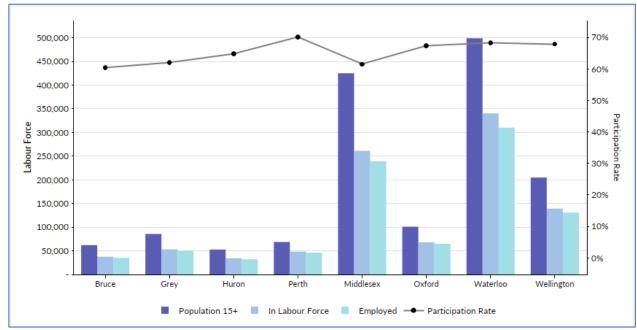


Figure 2: Regional Study Area Labour Force Profile (2020)

Source: Keir Corp using data from Manifold Data Mining Inc (2020)

4. Currently, within the Regional Study Area there are an estimated 914,000 jobs. The distribution of these jobs across the constituent counties and region is profiled in Figure 3.

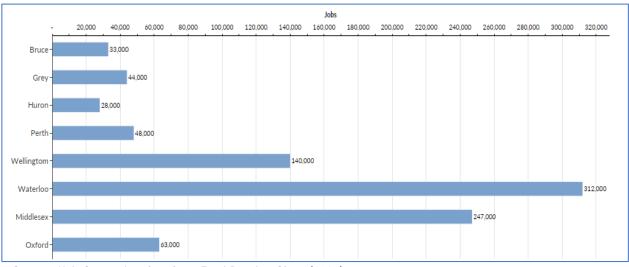


Figure 3: Regional Study Area – Job Totals (2021)

Source: Keir Corp using data from Emsi Burning Glass (2021)

5. Based on the 2021 job numbers, the approximate percentage distribution of jobs among the constituent counties and region that make up the Regional Study Area is provided in Table 4.



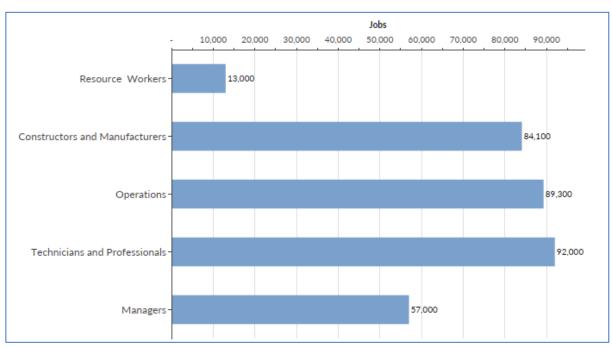
Table 4: Regional Study Area – Job Distribution (2021)

	Job Distribution 2021
Bruce	4%
Grey	5%
Huron	3%
Perth	5%
Wellingtom	15%
Waterloo	34%
Middlesex	27%
Oxford	7%
Regional Total	100%

Source: Keir Corp using data from Emsi Burning Glass (2021)

6. NWMO furnished a set of occupational groupings that provide a high-level profile of the types of occupations that will characterize its workforce over the Project timeframe. Figure 4 provides a summary breakdown of the presence of these occupations within the Regional Study Area.

Figure 4: Regional Study Area Jobs in NWMO Denoted Occupational Categories (2021)



Source: Keir Corp using data from Emsi Burning Glass (2021)



- 7. In total, these occupational groupings sum to 335,400 which accounts for approximately 37% of the 2021 jobs in the Regional Study Area.
- 8. Table 5 provides an aggregated summary of the distribution of these occupations by constituent county in the Regional Study Area. Waterloo, Middlesex, and Wellington account for almost 74% of the total. Bruce, Grey, and Huron account for roughly 13% and Perth and Oxford make up the balance.

Table 5: Distribution of Jobs within Regional Study Area for NWMO Denoted Occupational Categories (2021)

	Total of NWMO Specified Occupations	Area Distribution
Bruce	14,500	4%
Grey	15,700	5%
Huron	12,100	4%
Perth	20,000	6%
Wellingtom	55,800	17%
Waterloo	115,100	34%
Middlesex	76,200	23%
Oxford	26,000	8%
Regional Total	335,400	100%

Source: Keir Corp using data from Emsi Burning Glass (2021); NWMO (2021)

9. Figure 5 sets out labour force projections for the Regional Study Area counties. Between 2021 and 2046, the labour force in the area is expected to grow by 42% from just under a million to 1.4 million. Waterloo, Middlesex and Wellington and Oxford collectively account for 88% of the labour force growth. Bruce, Grey, Huron, and Perth collectively account for the remaining 12%.



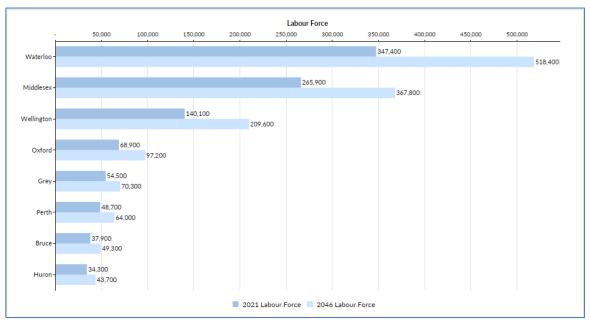


Figure 5: Regional Study Area Labour Force Growth (2021 - 2046)

Source: Keir Corp projection using data from Ministry of Finance (2021) and Manifold Data Mining Inc (2020)

3.2 Local Study Area

1. The Local Study Area is set out in Figure 6. It encompasses 13 municipalities distributed within four counties (Bruce, Grey, Huron, and Wellington). The study area includes South Bruce and surrounding municipalities. All parts of the Local Study Area are within an hour driving time of Teeswater.

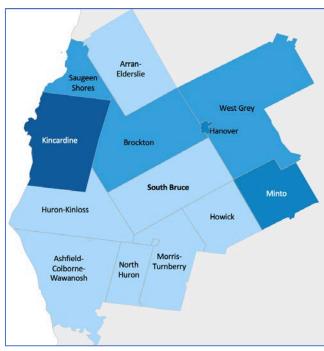


Figure 6: Local Study Area

Source: Keir Corp using mapping from Emsi Burning Glass (2021)



2. Manifold 2020 data reveals that the Local Study Area has a labour force population (age 15 years plus) of approximately 90,300. Persons active in the labour force total approximately 57,600 and those employed sum to roughly 54,400. The overall labour force participation rate is in the order of 64% and the unemployment rate is about 5.6%. Figure 7 presents the labour force profile for the Local Study Area municipalities.

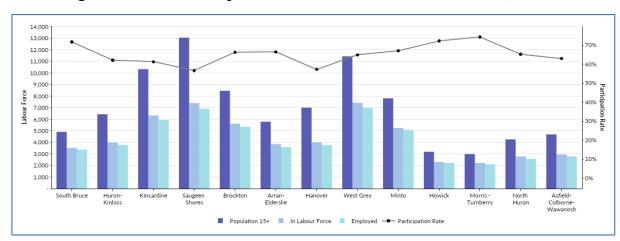


Figure 7: Local Study Area Labour Force Profile (2020)

Source: Keir Corp using data from Manifold Data Mining Inc. (2020)

3. Within the Local Study Area, in 2021 there are an estimated 48,600 jobs. The distribution of these jobs across the constituent municipalities is set out in Figure 8.

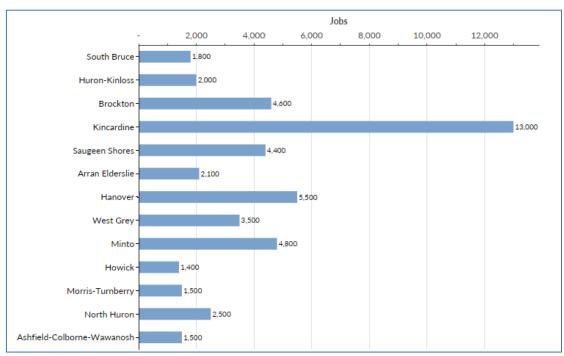


Figure 8: Local Study Area - Job Totals (2021)

Source: Keir Corp using data from Emsi Burning Glass (2021)



4. Based on the 2021 job numbers the approximate percentage distribution of jobs among the municipalities that make up the Local Study Area is provided in the Table 6.

Table 6: Local Study Area – Job Distribution (2021)

		Job Distribution 2021
	South Bruce	4%
	Huron-Kinloss	4%
	Brockton	9%
Bruce	Kincardine	27%
	Saugeen Shores	9%
	Arran Elderslie	4%
	Sum of Bruce	57%
	Hanover	11%
Grey	West Grey	7%
	Sum of Grey	18%
Wallington	Minto	10%
Wellington	Sum of Wellington	10%
	Howick	3%
	Morris-Turnberry	3%
Huron	North Huron	5%
	Ashfield-Colborne-Wawanosh	3%
	Sum of Huron	14%
Local Area Total		100%

Source: Keir Corp using data from Emsi Burning Glass (2021)

5. The occupational groupings furnished by NWMO provide a high-level profile of the types of occupations that will characterize its workforce over the Project timeframe. Figure 9 provides a summary breakdown of the presence of these occupational groups within the Local Study Area. Table 7 provides a more detailed breakdown of the occupations in these categories.



Technicians and Professionals
Managers
1,000
2,000
3,000
4,000
5,000
6,000

5,420

6,370

Figure 9: Local Study Area Jobs in NWMO Denoted Occupational Categories (2021)

Source: Keir Corp using data from Emsi Burning Glass (2021) and NWMO (2021)

Table 7: Breakdown of Occupational Categories

Resource	Natural Resources and Agriculture Workers
Workers	Natural Resources and Agriculture Supervisors
Constructors and	Industrial Electrical Construction Trades
Manufacturers	Processing and Manufacturing
	Transportation O&M
Operations	Equipment O&M
	Supervisors and Control Operators
Tb-:-:	Technical in Natural and Applied Sciences
Technicians and Professionals	Professional Occupations in Natural and Applied Sciences
Troressionais	Professionals in Business and Finance
	Middle Management
Managers	Specialized Middle Management
	Senior Management

Source: Keir Corp using data from Emsi Burning Glass (2021) and NWMO (2021)

- 6. In total the occupational categories sum to 22,100 which accounts for approximately 45% of the 2021 jobs in the Local Study Area.
- 7. Table 8 provides an aggregated summary of the distribution of these occupational groups by Local Study Area municipality. Within the Local Study Area, the Bruce County municipalities account for 58% of these jobs respectively followed by integral municipal groupings in Huron (17%), Grey (15%) and Wellington (10%) counties.



8. On the basis of individual municipalities, Kincardine is the standout with a 33% share of the Local Study Area jobs total. South Bruce by comparison accounts for 4%.

Table 8: Distribution of Jobs within Local Study Area for NWMO Denoted Occupational Categories (2021)

		Total of NWMO Specified Occupations	Area Distribution
Bruce	South Bruce	950	4%
	Huron-Kinloss	880	4%
	Brockton	1,800	8%
	Kincardine	7,370	33%
	Saugeen Shores	1,040	5%
	Arran Elderslie	870	4%
	Sum of Bruce	12,910	58%
Grey	Hanover	1,670	8%
	West Grey	1,620	7%
	Sum of Grey	3,290	15%
Wellington	Minto	2,200	10%
	Sum of Wellington	2,200	10%
Huron	Howick	920	4%
	Morris-Turnberry	930	4%
	North Huron	970	4%
	Ashfield-Colborne-Wawanosh	880	4%
	Sum of Huron	3,700	17%
Local Area Total		22,100	100%

Source: Keir Corp using data from Emsi Burning Glass (2021) and NWMO (2021)

9. Figure 10 sets out top 10 industry sectors in the Local Study Area based on job counts. Utilities top the list, followed by construction. Retail trade, manufacturing, agriculture, and health care occupy mid-range followed in the lower part of the spectrum by various services including waste management.



Figure 10: Local Study Area Top 10 Industry Sectors by Number of Jobs (2021)

Source: Keir Corp using data from Emsi Burning Glass (2021)

10. Figure 11 sets out the industry sectors in the Local Study Area that have the highest location quotients. These statistics indicate job concentrations in industry sectors relative to what would be expected across Canada. A value of 1 is the expected benchmark. Higher values show concentrations above the benchmark, and lesser values indicate weaker concentrations below the benchmark.

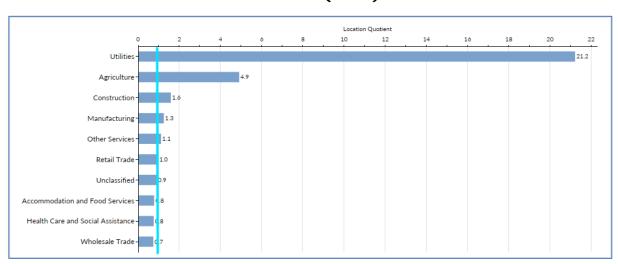


Figure 11: Local Study Area Industry Sectors with Highest Location Quotients (2021)

Source: Keir Corp with data from Emsi Burning Glass (2021)

11. Once again, the utility sector stands out, reflecting an exceptional concentration of jobs. The presence of Bruce Power is undoubtedly the main influence. Agriculture also shows a high quotient followed by



- construction and manufacturing. Retail trade is at the benchmark and the remaining sectors fall beneath it.
- 12. Figure 12 provides employment projections for the Local Study Area municipalities. Between 2021 and 2046, the employment in the area is expected to grow by 22% from approximately 49,000 to 60,000. Fifty-five percent of the projected employment growth in the Local Study Area is accounted for by the Bruce County municipalities. The two Grey County municipalities account for 20%, Minto accounts for 13% and the three Huron County Municipalities account for roughly 12%.

Employment 2.000 4.000 6.000 8.000 10.000 12,000 14.000 12,760 Kincardine 14,290 5,120 4.740 Saugeen Shores 6,450 4.100 Minto 3,870 Brockton 5.270 3,550 West Grev 4.230 2,810 2,860 1.860 Huron-Kinloss 2,410 1,990 Arran-Elderslie 2.300 1,570 South Bruce 1 950 Morris-Turnberry 2021 2046

Figure 12: Local Study Area Employment Growth (2021 – 2046)

Source: Keir with data from Bruce County (2021), Hemson Consulting Ltd. (2021), Huron County Planning and Economic Development Department (2021), The Corporation of the County of Wellington (2021) and metroeconomics (2022)



3.3 Core Study Area

1. The Core Study Area comprises five municipalities – South Bruce, Huron-Kinloss, Brockton (Bruce County), Morris-Turnberry and North Huron (Huron County). Figure 13 provides a map showing their relative location.

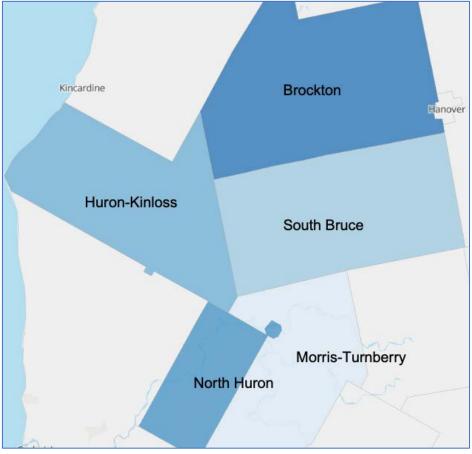


Figure 13: Core Study Area

Source: Keir Corp using mapping from Emsi Burning Glass (2021)

2. The Core Study Area has a labour force population (age 15 years plus) of approximately 27,000 (Manifold,2020). Persons active in the labour force sum to approximately 18,100 and those employed total roughly 17,200. The overall labour force participation rate is in the order of 67%, and the unemployment rate is about 5.3%. The labour force profile for the area municipalities is presented in Figure 14.



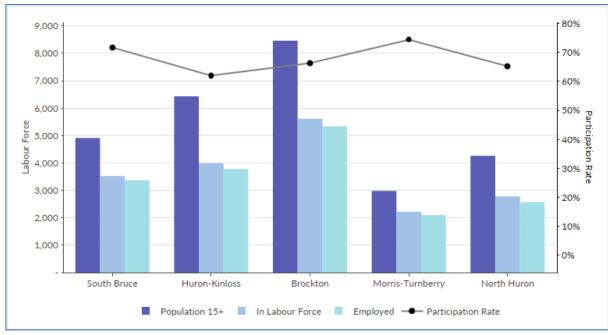


Figure 14: Core Study Area Labour Force Profile (2020)

Source: Keir Corp using data from Manifold Data Mining Inc. (2020)

3. In 2021, there were an estimated 12,400 jobs in the Core Study Area. The distribution of these jobs across the 5 municipalities is set out in Figure 15.

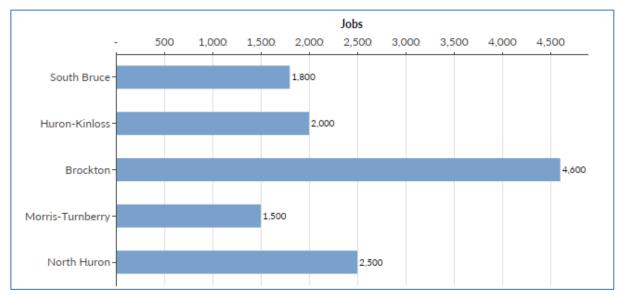


Figure 15: Core Study Area – Job Totals (2021)

Source: Keir Corp using data from Emsi Burning Glass (2021)

4. Based on the 2021 job numbers, the percentage distribution of jobs among the municipalities that make up the Core Study Area is provided in Table 9.



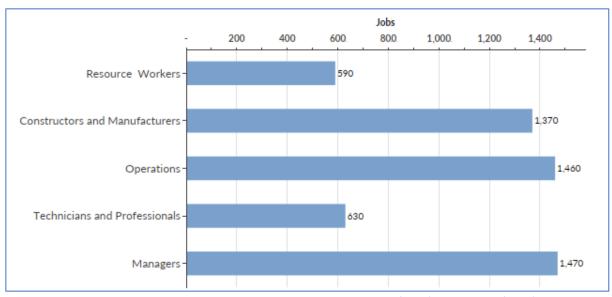
Table 9: Core Study Area – Job Distribution (2021)

	Job Distribution 2021	
South Bruce	14%	
Huron-Kinloss	16%	
Brockton	37%	
Morris-Turnberry	12%	
North Huron	21%	
Core Area Total	100%	

Source: Keir Corp using data from Emsi Burning Glass (2021)

5. Job counts within the Core Study Area for the occupational groupings that are of primary interest to NWMO are provided in Figure 16.

Figure 16: Core Study Area Jobs in NWMO Denoted Occupational Categories (2021)



Source: Keir Corp using data from Emsi Burning Glass (2021) and NWMO (2021)

- 6. In total, these groups sum to approximately 5,500 jobs which accounts for roughly 45% of the 2021 jobs in the Core Study Area.
- 7. Table 10 provides an aggregated summary of the distribution of these occupations by municipality. Within the Core Study Area, Brockton accounts for 33% of these jobs respectively, followed by North Huron (18%) South Bruce and Morris-Turnberry (both at 17%), and Huron-Kinloss (16%).



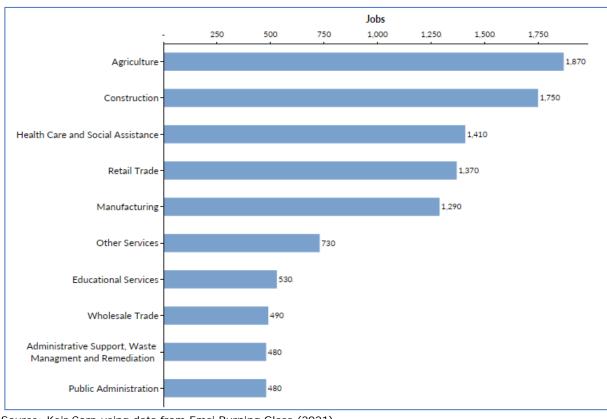
Table 10: Distribution of Jobs within Core Study Area for NWMO Denoted Occupational Categories (2021)

	Total of NWMO Specified Occupations	Area Distribution
South Bruce	950	17%
Huron-Kinloss	880	16%
Brockton	1,800	33%
Morris-Turnberry	930	17%
North Huron	970	18%
Core Area Total	5,530	100%

Source: Keir Corp using data from Emsi Burning Glass (2021) and NWMO (2021)

8. The 10 top industry sectors in the Core Study Area by job count are set out in Figure 17. Agriculture is at the top of the list, followed by construction and health care and social assistance. Retail trade and manufacturing occupy middle positions in the list. The lower portion of the spectrum is occupied by several service sectors, and the public administration and waste management and remediation sectors.

Figure 17: Core Study Area Top 10 Industry Sectors by Number of Jobs (2021)

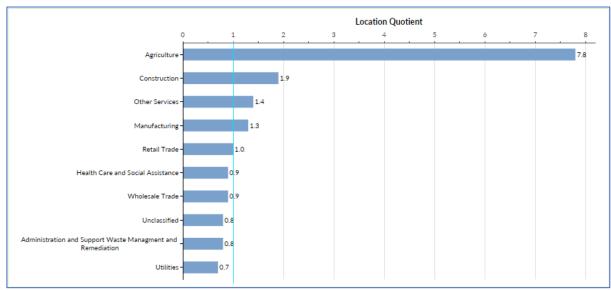


Source: Keir Corp using data from Emsi Burning Glass (2021)



- 9. Figure 18 sets out the industry sectors in the Core Study Area that have the highest location quotients. Again, these statistics indicate job concentrations in industry sectors relative to what would be expected across Canada. A value of 1 is the expected benchmark. Higher values show concentrations above the benchmark, and lesser values indicate weaker concentrations below the benchmark.
- 10.In contrast to the Local Study Area (Figure 11 above), the sector with the highest level of concentration in the Core Study Area is agriculture, followed by construction, other services, and manufacturing. The remaining 6 sectors are at or slightly below the expected benchmark.

Figure 18: Core Study Area Industry Sectors with Highest Location Quotients (2021)



Source: Keir Corp using data from Emsi Burning Glass (2021)

11. Figure 19 puts forward employment projections for the Core Study Area municipalities. Between 2021 and 2046, Core Study Area employment is expected to grow by 32% from approximately 10,800 to 14,300. Of the projected employment growth, over 41% is predicted to occur in Brockton, followed by North Huron, Huron-Kinloss, South Bruce and Morris-Turnberry with respective percentages of 24%, 16%, 11% and 8%.



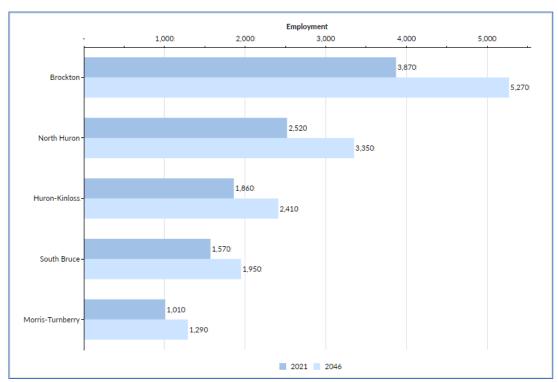


Figure 19: Core Study Area Employment Growth (2021 - 2046)

Source: Keir with data from Bruce County (2021), Huron County Planning and Economic Development Department (2021) and metroeconomics (2022)

3.4 Further Notes and Observations

3.4.1 Bruce Power

1. In the Local Study Area, Bruce Power is the biggest economic engine. It employs approximately 4,200 persons for operations. The place of residence for this workforce is very localized. Roughly 81% reside in Bruce County, and within the County the municipalities of Kincardine and Saugeen Shores respectively account for 31% and 34% of the residencies. Figures 20 and 21 show the distributions of operating staff place of residence.

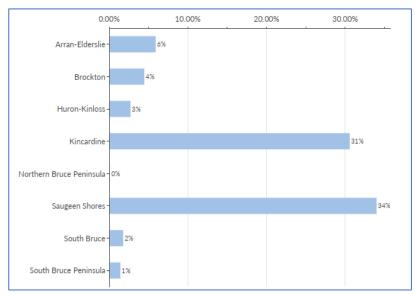


% of Employees 10% 30% 40% 80% 90% 100% 0% 20% 50% 60% 70% 81% Bruce Perth 1% Wellington - 1%

Figure 20: Bruce Power Operating Staff Place of Residence by County

Source: Keir Corp with data from Bruce Power (2021)

Figure 21: Bruce Power Operating Staff Place of Residence by Lower-Tier Municipality



Source: Keir Corp with data from Bruce Power (2021)

- 2. Bruce Power is currently in the midst of its MCR Project which will secure operation of the station until 2064. The Project value is \$13 billion and having started in 2016 it is scheduled for completion in mid-2033 when work wraps up on reactor 8. Bruce Power estimates that the Project will support an estimated 5,000 direct and indirect jobs annually with approximately 1,600 on-site. Moreover, they further estimate in the Bruce, Grey, Huron Counties combined, the MCR Project could support 400 direct jobs from suppliers and 3,000 jobs overall.
- 3. Bruce Power estimates that 25% of the trades people employed on the MCR Project reside within commuting distance of the Generating Station, while the remaining 75% (travelers) reside outside of 100 Kms. They further note



that travelers tend to remain travelers, with few converting over to local area home ownership, and that when residing in the area they generally prefer month-to-month room rentals.

- 4. Building Trade Halls (unions) that are traditionally used by Bruce Power have indicated there will be a high rate of member retirements over the next decade. With this in mind, they are focusing recruitment strategies on local talent to support Bruce Power thereby lowering the reliance on travelers. In Bruce Power's experience, local new hires in the workforce tend to settle in the same area over the long term.
- 5. Figure 22 is a map showing the location of companies that constitute the majority of Bruce Power's supply chain. The counties that constitute the Regional Study Area for this *Labour Baseline Study* are central players.

PARRY SOUND-MUSKOKA HALIBURTON KAWARTHA LAKES-BROCK MacDonnell Fuel Ltd. Acuren Abraflex McCullough Fuels Price Schonstrom Ideal Supply tion Nuclear HASTINGS-LENNOX AND ADDINGTON Black & McDonald United Rentals **BWXT Nuclear Energ** Owen Sou Port Eigin **AMEC Foster Wheeler** Peterborough Areva Bruce Power Commissioning and Technical Services CTS North America Mincardine EMC Power Canada E.S. Fox Ltd. BAY OF QUIN HURON-BRUCE Cameco Corporation PERTH RCM Technologies Sargent & Lundy Special Electronics and Design WELLINGTO WorleyParsons B.M. Ross & Associat NA Engineering Oakville Rankin Construction St. Catharines at Lakes Industrial Controls Nagara Falls OXFORD elok Southwestern Ontario NORTH Sarnia X HALDIMAND-NORFOLK LESEX-LONDO ries Jones Industrial Nortrax Canada Inc. Johnson Controls LP

Figure 22: Bruce Power Supply Chain Companies and Locations





- 6. Bruce Power is a high wage employer and a preferred place of work. Stories abound across the Local Study Area of employees in other companies "jumping ship" when they have the necessary qualifications to gain employment at Bruce Power. Given this bent, some local employers are wary of investing in staff training for fear these employees will migrate to Bruce Power once they upgrade their capabilities.
- 7. Bruce Power is praised for encouraging companies associated with the MCR Project to move offices and facilities to the local area. Some 60 companies are purported to have done so with a combination of full and part-time staffing.

3.4.2 Community Interactions

- Communities in the Local and Core Study Areas are very interconnected.
 The boundaries between municipalities are essentially political or
 administrative constructions. They define political and administrative
 jurisdictions, but they are highly permeable to the social, cultural, and
 economic activities of area residents.
- 2. Within the Local and Core Study Areas, residents drive to shop for goods and services. Hanover, Walkerton, Wingham, Kincardine and Port Elgin ring South Bruce and are key central places for routine and specialty shopping, services, and personal care.
- On the employee front, there is significant inter-municipal traffic. Figure 23 shows municipal in and out flows for employees in and around South Bruce in 2016.

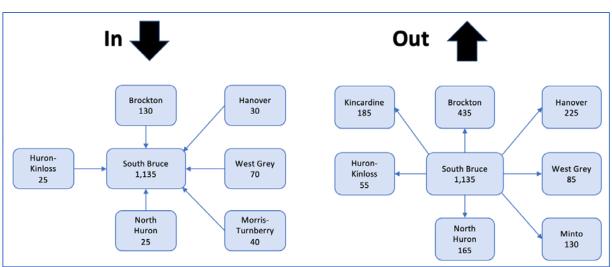


Figure 23: Local Area - South Bruce Employee Flows (2016)

Source: Keir Corp with Statistics Canada data (2016)



3.4.3 Housing and Employment

- 1. During the course of collecting information on the Local Study Area, discussions have been held with a variety of knowledge holders in public and private sector organizations. A common issue raised in many of these conversations is the lack of affordable housing for low wage workers and those requiring assistance. It is not a new problem in the area, but people feel the situation is definitely worsening with the in-migration of people into the area from London, Kitchener/Waterloo, and the Greater Toronto/Hamilton Area.
- 2. The demand for housing is high and prices are continually rising. Low wage workers and those just starting out in their careers are finding it difficult if not impossible to afford accommodation in the area. Stories about people living in vehicles and crowding into small single residences are common.
- 3. Rental units are in short supply in the area and particularly in communities such as Kincardine and Saugeen Shores landlords give preference to prospective tenants who are working on projects for Bruce Power.
- 4. As a result of these circumstances, many local employers (particularly those in low wage sectors) are starved for workers. They simply cannot fill the positions they have available. The people they would normally recruit have been displaced such that they are no longer in the area because they cannot afford to be. Conversely, for others who remain in the area they have had to move from the larger centers to small hamlets or the countryside and do not have means to get to work.
- 5. The separate *Housing Needs and Demand Analysis Study* (Keir Corp. 2022b) explores this in more detail.

3.5 Section 3 Summary

3.5.1 Regional Study Area

- The Regional Study Area encompasses five counties and one region, and all parts of this area are within a 1.5 to 2-hour drive of the potential Project site.
- 2. Based on 2021 data there are approximately 900,000 jobs within the Regional Study Area and of this number roughly 335,000 are in occupational categories of interest to the NWMO.



3. The current labour force (2021) stands at roughly 1 million and it is projected to grow to 1.4 million by 2046.

3.5.2 Local Study Area

- The Local Study Area comprises South Bruce and 12 surrounding municipalities distributed in 4 counties (i.e., Bruce, Grey, Wellington, and Huron). All parts of the Local Study Area are within a one-hour drive of the proposed Project site.
- 2. In 2021 the area had an employed labour force of approximately 54,000 and there were roughly 49,000 jobs within its borders. About 22,000 of these jobs were occupational categories of interest to the NWMO.
- 3. The top 3 industry sectors in the Local Study Area by job count are utilities, construction and retail trade. The top 3 industry sector concentrations are utilities, agriculture, and construction. Utilities and agriculture are particularly concentrated and in the case of utilities, the influencing factor is the presence of Bruce Power.
- 4. Employment projections from 2021 to 2046 for the Local Study Area predict a growth of 22% from roughly 49,000 to 60,000. The majority of this growth (55%) is accounted for by the Bruce County municipalities. The two Grey County municipalities account for 20%, Minto accounts for 13% and the three Huron County Municipalities account for roughly 12%.

3.5.3 Core Study Area

- 1. The Core Study Area comprises five municipalities South Bruce, Huron-Kinloss, and Brockton (all in Bruce County) and Morris-Turnberry and North Huron (both in Huron County).
- 2. In 2021 the Core Study Area had an employed labour force of approximately 17,200 and there were roughly 12,440 jobs distributed across the municipalities. Of these jobs approximately 45% (5,500) have occupational categories of interest to the NWMO.
- 3. The top 3 industry sectors by job count in the Core Study Area are agriculture, construction and Health care and social assistance. The top 3 industry sector concentrations are agriculture, construction, and other services.
- 4. Employment projections for the Core Study Area between 2021 and 2046 predict 32% growth from roughly 10,800 to 14,300. Over 41% of the projected employment growth is predicted to occur in Brockton, followed by



North Huron, Huron-Kinloss, South Bruce and Morris-Turnberry with respective percentages of 24%, 16%, 11% and 8%.

3.5.4 Further Notes and Observations

- 1. Bruce Power employs approximately 4,200 persons for operations and most of this workforce (81%) resides in Bruce County. Kincardine and Saugeen Shores respectively accounting for 31% and 34% of the County residencies.
- 2. Bruce Power is currently in the midst of its \$13 billion Major Component Replacement Project (MCR). The Project is scheduled for completion in mid-2033 and it employs an average annual on-site workforce of approximately 1,600.
- 3. Approximately 25% of the trades people employed on the MCR Project reside within commuting distance, while the remaining 75% are classified as travellers whose permanent residence is outside of 100km. The latter generally prefer month-to-month rentals while working on the Project and it is Bruce Power's experience that travelers tend to remain travelers.
- 4. Bruce Power is a high wage employer and some local employers are wary of investing in staff training for fear employees will migrate to Bruce Power once they upgrade their capabilities.
- 5. Bruce Power is lauded for encouraging companies associated with the MCR to move offices and facilities to the local area. It is purported that over 60 companies did so.
- 6. Within the Local and Core Study Areas there is substantial social, cultural and economic interaction across municipal boundaries. Area residents drive to shop for goods and services particularly in the central place communities of Wingham, Walkerton, Hanover, Kincardine, and Port Elgin.
- 7. There are a number of issues that appear to be affecting labour force availability in the Local and Core Study area particularly for low wage workers. These include:
 - Lack of affordable housing.
 - Lack of rental housing.
 - Lack of public transit.
 - Continually rising prices for homes and rental accommodation.
 - Landlord preferences for renting to high wage tenants (i.e., MCR Project travelers).



4. Supply/Demand Assessment

1. The labour force requirements of the Project occur in three waves as depicted in Figure 24. Table 1 (Section 1.3.5, above) summarizes this information.

Project in 3 Waves

Pre-Construction 2024 - 2031

Construction 2032 - 2042

Construction 2032 - 2042

NWMO.Total Trades.Total

NWMO.Total Trades.Total

Figure 24: Project Labour Force Profile

Source: Keir Corp working with data from NWMO (2021)

- 2. During the first Project wave, there are approximately 200 NWMO staff in the Project workforce, both on-site and at an off-site office facility. The strategy will entail a combination of new employee hires and relocation of existing employees.
- 3. The second wave of the Project coincides with the construction phase. During this phase an additional 10 NWMO staff are required along with 430 construction trades of which, 300 will be involved in surface works and 130 involved with works below ground.
- 4. Given the scale of the Regional labourshed, the requirement for 300 surface trades represents a small fraction of a percent of the potential supply. Furthermore, this supply is growing with an anticipated increase between now and 2046 of 42% (see Section 3.1, above).
- 5. A further factor which needs to be considered in the labour supply/demand equation is the wind down of the MCR Project at the Bruce Nuclear Generating Station. The MCR Project is scheduled for completion in 2033 thereby freeing up its on-site work force of approximately 1,600 trades people to work elsewhere, with one potential being the APM Project. The



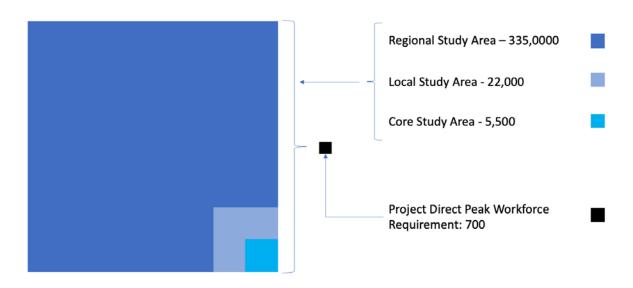
- MCR Project is currently on schedule and NWMO will monitor its progress to inform its own workforce recruitment strategy.
- 6. The requirement for below ground trades will likely require contracts with appropriately skilled persons and companies in the Sudbury, Timmins, and Northwest Ontario areas to fulfill workforce requirements. However, as outlined in the *Workforce Development Study* (Keir Corp. 2022a) there are opportunities to fill some of these underground positions with area residents by providing them with appropriate training.
- 7. In the third wave of the Project which coincides with operations, the staffing requirements are for an additional 420 NWMO staff coupled with a downsizing of trade positions to 70. With respect to the NWMO workforce requirement there is ample capacity in the Regional Study Area to meet the need. Recruitment potential within the Local and Core Study Areas can be optimized with NWMO training provisions and local area recruitment strategies. Given that operations start in 2043, there is ample lead time to implement these measures.
- 8. For Project trade position requirements in the operations phase it seems probable that the desired long-term staff for these positions would be recruited from the trade contingents involved with construction.
- 9. In addition to the direct labour force requirements of the Project, additional employment is forecast for the Core Study Area municipalities because of Project staff living and working in them. Household and personal expenditures made by these workers are projected to create another 560 local jobs by 2046. South Bruce would like to capture 140 of these jobs with the remainder distributed across the other municipalities in the Core Area (metroeconomics 2022). Given the projected base case growth occurring across the municipalities over the time frame both in terms of population and employment, staffing these jobs with local resources is feasible with the caveat being that consideration will need to be given to the availability of housing and/or transportation for low wage positions
- 10. From a labour force supply/demand perspective there appears to be good potential to accommodate the labour force needs of the Project drawing on the resource capabilities of the combined study areas. The one exception is for underground trades which may need to be recruited from other regions in Ontario. In all cases proactive training of local talent synchronized with NWMO local area recruitment strategies will help optimize the potential for Project job opportunities to be netted by residents of the Local and Core Study Areas.



5. Conclusions

1. Figure 24 uses proportional squares to set out the Study Area workforce capabilities in occupational categories of interest to the NWMO relative to the direct labour force requirements of the Project. Quantitatively, the Figure highlights the relative magnitude of capability across the Study Areas to meet the labour needs of the Project.

Figure 25: Area Jobs in NWMO Identified Occupations & Project Direct Job Requirements



Source: Keir Corp using data from Emsi Burning Glass (2021) and NWMO (2021)

2. The average annual direct labour force requirements of the Project are:

Pre-construction (2028–2032): 200
 Construction (2033–2042): 640
 Operations (2043-2087): 700

3. The Regional Study Area is one of the strongest labour sheds in Canada. Regional Study Area employment in 2021 was approximately 1 million persons and by 2046 this number is projected to climb by 42% to 1.4 million. NWMO identified occupational categories pertinent to their needs and at present the labour shed has 335,000 persons with occupations meeting these requirements. Additionally, the Regional Study Area is home to a large contingent of companies that are part of the supply chain for the Bruce Nuclear Generating Station. The Local Study Area itself as evidenced by location quotient statistics has a labour force that is exceptionally strong for jobs in the utility sector. Area jobs in this sector are approximately 21 times the norm expected in other communities across the country.

- 4. As previously stated, the study areas in combination are home to one of the largest and most capable laboursheds in Canada. There is an enormous expertise in nuclear matters garnered through the presence of the Bruce Nuclear Generating Station and its supply chain. The Station (the second largest in the world) has been part of the Local Study Area for 50 years and is recognized as a key economic engine in Bruce County.
- 5. In addition to the presence of the labour force and Bruce Nuclear Generating Station, the Regional Study Area is home to four major universities (Wilfred Laurier, Waterloo, Guelph and Western), two large colleges (Conestoga and Fanshawe), and a host of large businesses (both domestic and international). In combination these bestow the area with rich abilities to evolve labour force capacity and capability to respond to changing skill and knowledge needs.
- 6. During the pre-construction stage, NWMO projects a Project workforce by 2028 of approximately NWMO 200 staff. The strategy will entail a combination of new employee hires and relocation of existing employees. During pre-construction and in subsequent phases of the Project, replacement and new additional NWMO staff can be potentially sourced from the Regional, Local and Core Study Areas.
- 7. The direct labour force requirements of the Project are substantially lower than Bruce Power's MCR Project and its operation of the Bruce Nuclear Generating Station. On-site average annual workforce compliments for Bruce Power's MCR Project and Generating Station operations are respectively 1,600 and 4,200.
- 8. Projected completion of the MCR Project in 2033 dovetails with the 2033 the construction start-up of the Project. This timing potentially provides NWMO with the opportunity to access a pool of labour and companies located across the Study Areas that are highly skilled and experienced with nuclear project work.
- 9. In combination, the Study Areas are home to many companies that are already part of the Bruce Nuclear Generating Station supply chain. As part of the MCR Project over 60 companies established offices in Bruce, Grey, and Huron Counties. Approximately 25% of the workers engaged on the MCR Project are permanent residents of the Local Study Area and the remaining 75% largely reside in temporary accommodation in nearby communities (i.e., particularly Kincardine and Saugeen Shores). Roughly 81% of workers associated with plant operations live in Bruce County with 65% being resident in Kincardine and Saugeen Shores.

- 10.Recognizing that aging and retirement will have an impact on their labour force, Bruce Power is focusing recruitment strategies on local talent to support their needs. Their recruitment experience has demonstrated that investing in local talent provides a double payoff in terms of creating a stable work force and a workforce that is resident and committed to the local area.
- 11. Similarly, NWMO should consider developing initiatives to attract and encourage more young people from the local area to enter the skilled trades or careers in science and technology2. By taking a proactive approach, NWMO will ensure that they will have the talent they need for the future. Young people will benefit by being able to take advantage of career opportunities that allow them to remain in, or return to, their home communities.
- 12.Employment in the Study Areas is projected to increase significantly between 2021 and 2046. Across the Regional Study Area labour force growth is projected to be 42% and across the Local and Core Study Areas employment growth projections are respectively about 22% and 32%. Growth in all areas will both contribute towards a reduction in the average age of the labour force and help mitigate any shortfalls due to retirement.
- 13. The occupational groupings provided by NWMO account for a significant portion of jobs at all levels within the study areas. Trends in education as described in the *Workforce Development Study* (Keir Corp., 2022a) suggest that these groupings will not only continue to account for a significant percentage of the jobs, but over time will likely intensify. The available workforce within the combined study areas appears sufficient to support the needs of the Project throughout its various phases.
- 14. The companion *Workforce Development Study* (Keir Corp., 2022a) is a continuation of this report and should be read in conjunction. It envisages options around workforce development both for the Project specifically and for the development of expertise in other sectors and occupations. Agriculture for example, is on a fast track involving the use of advanced technologies such as robotics and artificial intelligence (AI) that will be part of the Project. Through coordinated workforce development initiatives enabled by the Project, it appears reasonable to suggest that strong opportunities for multi-sector benefit can be realized through Project teaching, training demonstrations and workplace initiatives.
- 15.Based on the foregoing analysis, the Regional, Local and Core study areas in combination appear to be able to meet almost all the needs for labour and goods and services required by the Project. The one exception is for mining expertise and underground trades which may potentially have to be sourced from other areas in Ontario (i.e., Sudbury and Timmins and Northwest Ontario).

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² The *Workforce Development Study* (Keir, 2022a) report describes existing workforce development initiatives in the study areas, and potential options for workforce development for the Project.

6. References

B.M. Ross and Associates Limited (2019). *Township of Huron-Kinloss Draft Development Charges Background Study*. Township of Huron-Kinloss. https://www.huronkinloss.com/en/townhall/resources/Documents/2019-Development-Charges-Background-Study.pdf

B.M. Ross and Associates Limited. (2016). Township of North Huron Development Charges Background Study. Draft. https://nhuron-pub.escribemeetings.com/filestream.ashx?DocumentId=3539

Bruce County. (2020). Bruce County Economic Development Annual Report 2020.

https://brucecounty.on.ca/sites/default/files/2020%20Economic%20Development%20Annual%20Report%20Final-011121%20AODA.pdf

Bruce County. (2020). Find your Career in Bruce County: Workforce Development & Attraction Strategy 2021 – 2025. https://brucecounty.on.ca/sites/default/files/BC_Workforce-Strategy_2020.pdf

Bruce County. (2021, September 21). *Plan The Bruce: Good Growth.* Discussion Paper. https://www.planthebruce.ca/good-growth

Bruce Power. (2019). *Bruce Power's Major Component Replacement Program* https://municipalengineers.on.ca/files/workshop_presentations/2019/6.%20Wed%20Eric%20Chassard.pdf

DPRA Canada. (October 5, 2021). Southwestern Ontario Labour Baseline Study Work Plan. Prepared for the Nuclear Waste Management Organization. Emsi Burning Glass (2021). https://www.economicmodeling.com

Four County Labour Market Planning Board. (2018). *Employee Survey 2018*. https://www.planningboard.ca/reports/employee-survey-2018/

Four County Labour Market Planning Board. (2020). *Employee Engagement & Retention Toolkit*. https://www.planningboard.ca/2020-vision/employee-engagement-and-retention-toolkit-2020/

Four County Labour Market Planning Board. (2021). *Local Labour Market Plan*. https://www.planningboard.ca/wp-content/uploads/2021/02/LLMP-2021-ENG-FINAL.pdf

Four County Labour Market Planning Board. (2021). *Post Pandemic Economic Scenarios: Local Labour Action Plan*.

https://www.workforcewindsoressex.com/wp-content/uploads/2021/03/Post-Pandemic-Economic-Scenarios-Report-2021-Four-County.pdf

GSP Group Inc., & Curtis Planning Inc. (2018). *Wellington North Community Growth Plan*. The Township of Wellington North. https://wellington North Community Order North Community O



Hemson Consulting Ltd. (2021). *Growth Forecasts to 2046.* County of Grey Growth Management Strategy – Update 2021. Grey County. https://docs.grey.ca/share/s/gbXgOhWeTRSDknnmgiWMOw

Hemson Consulting Ltd. (2020). Phase One Comprehensive Review: Oxford County. Oxford County.

https://www.oxfordcounty.ca/Portals/15/Documents/CASPO/Studies/Final%20Phase%201%20Comprehensive%20Review%20Report.pdf

Hemson Consulting Ltd. (2021, July 14). *Update to the County of Grey Growth Management Strategy*. Memorandum. Grey County. https://www.grey.ca/planning-development/planning-and-development-studies

Huron County Planning and Development Department (2021). *Huron County Official Plan*

https://www.huroncounty.ca/plandev/county-official-plan/

Keir Corp. (2022a). Workforce Development Study: Southwestern Ontario Community Study. Prepared for the Nuclear Waste Management Organization.

Keir Corp. (2022b). *Housing Needs and Demand Analysis Study: Draft Southwestern Ontario Community Study.* Prepared for the Nuclear Waste Management Organization and the Municipality of South Bruce.

Kossek, E.E., Gettings, P., & Misra, K. (2021, September 28). *Work-Life Balance: The Future of Flexibility at Work*. Harvard Business Review. https://hbr.org/2021/09/the-future-of-flexibility-at-work

Manifold Data Mining Inc. (2020) https://polarisintelligence.com

metroeconomics. (February, 2022). South Bruce and Area Growth Expectations Memorandum. Prepared for MDB Insight and the Municipality of South Bruce.

Millier Dickinson Blais. (2014, October 3). *Municipality of South Bruce Economic Development Strategy 2014-2019*. Municipality of South Bruce. https://www.southbruce.ca/en/build-and-invest/economic-development-strategy.aspx

Millier Dickinson Blais. (2014). *Municipality of South Bruce Corporate Strategic Plan 2014-2019.* Final Report: Part 1 – Strategic Plan. Municipality of South Bruce. https://www.southbruce.ca/en/A-PDF-Forms/Clerks-forms/south-bruce-corporate-strategic-plan-2014-updated-oct-7-2014-VK.pdf

Municipality of South Bruce. (2020). *Resolution for South Bruce Guiding Principles for NWMO's Site Selection Process*. https://www.southbruce.ca/en/A-PDF-Forms/Nuclear/Municipal-Council-Resolution-36-Principles.pdf

Nuclear Waste Management Organization. (October 2021). *Community Studies Planning Assumptions* (Confidential).



Ontario Chamber of Commerce, & Bruce Power. (2019). *Bruce Power Major Component Replacement Project: Economic Impact Analysis*. https://occ.ca/wp-content/uploads/2019.03-OCC-Bruce-Power-Report-Final Digital.pdf

Ontario Ministry of Municipal Affairs and Housing. (2020). *A Place to Grow: Growth Plan for the Greater Golden Horseshoe*. Queen's Printer for Ontario. https://files.ontario.ca/mmah-place-to-grow-office-consolidation-en-2020-08-28.pdf

Ontario Ministry of Finance. (2021). Ontario Population Projections Update, 2019-2046. Queens Printer for Ontario. https://www.ontario.ca/page/ministry-finance

Region of Waterloo. (2021, June 10). Regional Official Plan Review Update – Preliminary Growth Scenarios and Evaluation Criteria. Planning, Development and Legislative Services, Community Planning. Report: PDL-CPL-21-29. Region of Waterloo.

https://ehq-production-canada.s3.ca-central-

1.amazonaws.com/161740bacb0ac1be71226b1e801f0eed9b008952/original/162 7056223/a2174abc3bc5f9252443487b1d12e6c5_ROPR_Tech_Memo_Employment_Lands_Strategy - July 23 2021.pdf?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAIBJCUKKD4ZO4WUUA%2F20220309%2Fca-central-1%2Fs3%2Faws4_request&X-Amz-Date=20220309T150123Z&X-Amz-Expires=300&X-Amz-SignedHeaders=host&X-Amz-Signature=57babfb3ce6c5f26e0fde0752f634c8a382246ae894dedca6cdf07c367fd40f0

Statistics Canada. (2020, July 23). *Census Profile – Map : Stratford – Bruce Peninsula (Economic Region), Ontario*. https://www12.statcan.gc.ca/census-recensement/2011/dp-

pd/prof/details/page_Map_Carte_Detail.cfm?Lang=E&G=1&Geo1=ER&Code1=35 80&Geo2=PR&Code2=01&Data=Count&SearchText=&SearchType=Begins&Sear chPR=01&B1=All&Custom=&TABID=1&geocode=3580

The Corporation of the County of Wellington. (2021, July 20). *County of Wellington Official Plan*. https://www.wellington.ca/en/resident-services/Planning/Official-Plan/Wellington-County-Official-Plan-07-20-2021.pdf

The Provincial Building and Construction Trades Council of Ontario, The Canadian Manufacturers & Exporters, and Bruce Power. (2018). *Powering Innovation, Jobs & Economic Growth*. https://www.brucepower.com/wp-content/uploads/2019/12/140368_EconomicImpactStudy_R003.pdf.

Township of Huron-Kinloss. (n.d.). *Commercial Marketing Package: Ripley Industrial Park*.

Watson & Associates Economists Ltd. (2019). 2020 Development Charges Background Study: Town of Minto. https://town.minto.on.ca/content/news/minto-2020-dc-background-study.pdf



Watson & Associates Economists Ltd. (2020). *Development Charges Background Study: Municipality of West Grey*. Municipality of West Grey. https://www.westgrey.com/en/government/resources/Documents/West-Grey-DC-Report.pdf

Watson and Associates Economists Ltd. (2019). Perth County Official Plan Update – Comprehensive Review, Final Report https://www.perthcounty.ca/en/county-government/resources/files/links/OPU-2019-Review-Watson.pdf

Weeden, S. A. (2021). *Getting to Work Exploring Labour Market Dynamics in Saugeen Shores Ontario.* Saugeen Times. https://saugeentimes.com/wp-content/uploads/2021/01/Getting-to-Work-Investigating-Labour-Market-Challenges-in-Saugeen-Shores-Report.pdf



Appendix A: List of Socio-Economic Community Studies

Study Name	Study Proponent	Lead Consultant
Local Economic Development Study and Strategy	MSB	MDB
Economic Development Study on Youth	MSB	MDB
Local Hiring Effects Study & Strategy	MSB	MDB
Agriculture Business Impact Study	MSB	MDB
Fiscal Impact and Public Finance Study	MSB	Watson & Associates Economists
Tourism Industry Effects Study and Strategy	MSB	MDB
Housing Needs and Demand Analysis Study	NWMO, MSB	Keir Corp.
Labour Baseline Study	NWMO	Keir Corp.
Workforce Development Study	NWMO	Keir Corp.
Regional Economic Development Study	NWMO	Keir Corp.
Effects on Recreational Resources	MSB	Tract Consulting
Local/Regional Education Study	NWMO, MSB	DPRA
Land Use Study	NWMO, MSB	DPRA
Social Programs Study	NWMO, MSB	DPRA
Emergency Services Study	NWMO	DPRA
Vulnerable Populations Study	NWMO	DPRA
Community Health Programs and Infrastructure Study	NWMO	DPRA
Aggregate Resources Study	NWMO, MSB	Keir Corp.
Infrastructure Baseline and Feasibility Study	NWMO	Morrison Hershfield
Local Traffic Study	NWMO	Morrison Hershfield
Road Conditions Study	NWMO	Morrison Hershfield



Appendix B: Inventory of Knowledge Holders Interviewed and Key Findings

The table below includes an inventory of Knowledge Holders interviewed in 2021 applicable to the *Labour Baseline Study*. Names have been excluded to respect the privacy of individuals. A table summarizing key findings from the interviews follows.

Table 11: Inventory of Knowledge Holders Interviewed

Date	Knowledge Holder – Organization	Applicable Studies ³
28-Jul-21	Four County Labour Market Planning Board	Labour Baseline Study Workforce Development Study
29-Jul-21	Economic Development, Planning and Development, Bruce County	Regional Economic Development Study Workforce Development Study Labour Baseline Study
01-Sep-21	Grey County	Workforce Development Study Labour Baseline Study
08-Sep-21	Nuclear Innovation Institute	Labour Baseline Study Workforce Development Study
09-Sep-21	Organization of Canadian Nuclear Industries	Labour Baseline Study Workforce Development Study
16-Sep-21	Bruce Power	Emergency Services Study Housing Needs and Demand Analysis Study Labour Baseline Study Workforce Development Study Local Traffic Effects Study Road Conditions Study Regional Economic
16-Sep-21	Huron County	Land Use Study Regional Economic Development Study Housing Needs and Demand Analysis Study Workforce Development Study Labour Baseline Study

³ Applicable Studies only includes community studies that are led or jointly led by the NWMO



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Date	Knowledge Holder – Organization	Applicable Studies ³	
13-Oct-21	Ontario Youth Apprenticeship Program	Local/ Regional Education Study Workforce Development Study	
03-Nov-21	VPI Working Solutions	Workforce Development Study Labour Baseline Study	
11-Nov-21	Fanshawe College	Workforce Development Study Labour Baseline Study	
15-Nov-21	Municipality of Brockton	Housing Needs and Demand Analysis Study Regional Economic Development Study Workforce Development Study Labour Baseline Study	
16-Nov-21	MSB Public Works	Housing Needs and Demand Analysis Study Regional Economic Development Study Workforce Development Study Labour Baseline Study	
17-Nov-21	Township of North Huron	Housing Needs and Demand Analysis Study Regional Economic Development Study Workforce Development Study Labour Baseline Study	
17-Nov-21	Hydro One	Labour Baseline Study Workforce Development Study	
24-Nov-21	Township of Huron-Kinloss	Housing Needs and Demand Analysis Study Regional Economic Development Study Workforce Development Study Labour Baseline Study	



Table 12: Key Findings from Knowledge Holder Interviews Relevant to this Study

Bruce Nuclear Generating Station	 Is the major driver in Bruce County's economy. Employs approximately 4,100 persons for operations. Most of the operating staff reside in Bruce County particularly in Saugeen Shores and Kincardine. Most of the company's supply chain is in Southern Ontario Bruce Power and its suppliers are recognized as good employers. Bruce Power is recruiting and training local people as these are the persons who most want to live and work in the area.
MCR Project	 Onsite annual jobs range from 1,000 to 2,300 with average around 1,600. 75% of trades are travelers (i.e., commute is more than 1 hour). 80 % of travelers are staying in Kincardine and Saugeen Shores predominately in rental accommodation. The MCR Project finishes in mid-2033 just as the APM Project starts construction. The confluence of these two projects is seen as an opportunity for area employment continuity. Encouraging/making supply chain companies locate in the area was a good idea, successful and helped win over public opinion. Over 60 companies located to Bruce, Grey, and Huron Counties. Bruce Power encouraged Bruce, Grey, and Huron Counties to work as a team.
Major Area Issues	 Lack of affordable housing. Public transportation is not available for people who do not live close to work. Labour availability for low wage jobs is a big problem particularly in hospitality, tourism, manufacturing, healthcare, childcare, and agriculture. Housing is becoming unaffordable for locals. Rental housing availability is low and rental rates are high. Landlords have a preference for renting to high wage tenants (i.e., those associated with Bruce Power and the MCR Project). Livable wage is too low. Municipal boundaries are political constructs they are not economic boundaries. County level cooperation tends to be stronger than municipal level cooperation when it comes to economic development. Majority of young people who go away to get an education don't come back because there are opportunities for them elsewhere.

