7.0 Valued Components Effects Assessment

7.8 Employment and Economy

Employment and Economy has been identified as a valued component to be assessed for the Project as specified in Section 5.0 of the AIR. This section describes and assesses the potential effects on employment and economy from the Project during all project phases.

This assessment is linked to other valued component assessments, either through integration (information from other valued components is incorporated into this assessment) or support (information from this assessment is incorporated into the assessment of other valued components).

Components of this assessment integrate information from or inform the following valued components:

- Marine Use (Section 7.10)—the assessment of effects on employment and economy refers to the marine use assessment of potential effects on commercial fisheries.
- Infrastructure and Services (Section 7.11)—the assessment of effects on housing and accommodations informed housing affordability and potential effects on cost of living. Information from labour analysis and predicted effects on employment and economy informed the Infrastructure and Services assessment.

The assessment of effects on employment, cost of living, and income informed the Summary of Human and Community Well-being (Section 22.0), including existing conditions and enhancement measures for those parameters. The predicted effects for regional employment, regional business and regional economy also informed the Summary of Effects to Current and Future Generations (Section 23.0).

7.8.1 Relevant Statutes, Policies and Frameworks

The British Columbia *Environmental Assessment Act, SBC 2002, c 43* requires an assessment to consider the environmental, economic, social, heritage, and health effects of a reviewable project. The EAO issued the *Human and Community Well-being Guidelines for Assessing Social, Cultural and Health Effects in Environmental Assessments in British Columbia* in April 2020. It provides guidance on the assessment of economic, social, health and cultural valued components, including employment and economy and provides guidance on the assessment of differential effects and GBA+, which is a requirement of the AIR. Federal frameworks and statutes relevant to the assessment of Employment and Economy include the National Occupational Classification System, the Indigenous Services Employment and Training Program, and the *First Nations Financial Transparency Act*. Table 6.1.1 in Section 6.1 (Relevant Statutes, Policies and Frameworks) also identifies additional sources of information on existing conditions collected for employment and economy and applicable standards and guidance that have been identified by Cedar to date.

7.8.2 The Influence of Consultation and Engagement

This section describes information and concerns related to employment and economy raised through consultation with Indigenous Nations, government agencies, stakeholders, and community members. Table 7.8.1 provides a summary of the topics, key information, and concerns that Cedar identified during its consultation and engagement efforts that relate to employment and economy. It also summarizes the influence that the outcomes of this consultation and engagement had on the assessment.

TABLE 7.8.1 SUMMARY OF KEY INFORMATION AND CONCERNS FOR THE PROJECT RELATED TO EMPLOYMENT AND ECONOMY

Topic	Key Information and Concerns	Influence on the Assessment
Employment and economic benefits	Effects on Indigenous Nations' access to economic benefits and opportunities and identification of mitigation measures to address long-term youth unemployment.	The Assessment includes consideration of GBA+ factors such as sex and Indigeneity, and the results of this evaluation will inform the assessment of potential effects on Indigenous interests (i.e., asserted or determined Aboriginal rights, including title and treaty rights) described in Sections 11.0 to 19.0.
Cost of living	Effects on contractors, companies and social conditions within local Indigenous communities due to changes in cost of living and access to the labour market.	The assessment includes the consideration of potential pressures and benefits of the Project on employment and economic conditions, including contributing factors that may affect cost of living such as increased competition for labour and wage inflation. The results of this evaluation inform the assessment of potential effects on Indigenous interests (i.e., asserted or determined Aboriginal rights, including title and treaty rights) are described in Sections 11.0 to 19.0.
Income equity	Kitselas noted that another potential effect on employment and economy is income disparity and unequal access to high-paying jobs within Indigenous populations and between Indigenous and non-Indigenous populations in the region (this has also been noted by other Nations in the RAA).	The assessment considers income disparity, employment inequity and barriers to employment for local communities.
Traditional economies	The Impact Assessment Agency of Canada requested a summary of potential effects of the Project on the traditional economy, including the potential loss of traditional economies and jobs.	Potential project effects on traditional economies are discussed in the Indigenous interests assessment for each Indigenous Nation (Sections 11.0 to 19.0).
Employment	Employment and Social Development Canada requested that the assessment consider economic impacts of construction and operation separately and include estimates of direct, indirect and induced job creation, and that it consider barriers to employment for vulnerable groups.	The assessment has considered the potential economic effects for construction and operation and has estimated direct, indirect and induced jobs for construction and operation. Potential barriers to employment have been considered based on gender and other vulnerable groups characteristics, where relevant.
Barriers to employment	Employment and Social Development Canada requested that availability of childcare services be considered to contextualize potential employment impacts	Availability of childcare services has been considered in the assessment to contextualize employment opportunities. Capacity of childcare services in the LAA is described in Section 7.11 (Infrastructure and Services).

TABLE 7.8.1 SUMMARY OF KEY INFORMATION AND CONCERNS FOR THE PROJECT RELATED TO EMPLOYMENT AND ECONOMY

Topic	Key Information and Concerns	Influence on the Assessment
Training	Employment and Social Development Canada noted that the Indigenous Skills and Employment Training Program provides funding to Indigenous service delivery organizations across Canada that design and deliver job training services to First Nations, Inuit, Métis and urban/non-affiliated Indigenous people in their communities.	Local and regional job training and employment services have been described.
Vulnerable populations	Kitsumkalum noted that the employment and economy valued component should provide disaggregated information for vulnerable populations.	The assessment includes data by sex and presents information for Indigenous populations.
Local content	The City of Terrace noted the importance of equal contracting opportunities for local businesses and the local workforce	The assessment includes local contracting and hiring as a mitigation and enhancement measure.
	Regional District of Kitimat-Stikine noted that effects of employment could be significant and suggested including Prince Rupert in the local assessment area for employment and economy	Prince Rupert is considered in the regional assessment area for employment and economy.
	Regional District of Kitimat-Stikine suggested that the Nass Valley (Nisga'a Lands) should be included in the employment and economy regional study area.	Measurable project effects on employment and economy in the Nass Valley are not anticipated, in consideration of the relatively small construction workforce.

7.8.3 Selection of Potential Effects and Indicators/Measurable Parameters

Potential of effects of the Project on employment and economy are identified in Table 7.8.2 as specified in the AIR. For each potential effect in Table 7.8.2, effect pathways and indicators/measurable parameters have been identified to facilitate the quantitative measurement of change in project-specific and cumulative effects potentially caused by the Project.

TABLE 7.8.2 POTENTIAL EFFECTS, EFFECTS PATHWAYS AND INDICATORS/MEASURABLE PARAMETERS FOR EMPLOYMENT AND ECONOMY

Potential Effect	Effect Pathway	Indicator and/or Measurable Parameter(s) and Units of Measurement
Change in regional employment	Project hiring of local labour will affect local labour supply	Qualified labour supply, participation and unemployment rates, estimates of direct, indirect and induced employment with reference to affected industries and occupations where applicable
Change in regional business	Project spending will affect regional businesses	Value of local and regional spending, existing wage levels, estimates of direct, indirect and induced labour income, and income inequity
Change in regional economy	Project spending will affect the regional economy	Municipal tax and gross domestic product contributions Cost of living

Several identify factors were selected for GBA+ analysis and the assessment of differential effects to be considered under each effect pathway. Identity factors for employment and economy include sex, Indigeneity, income and education. Selection of factors was completed based on feedback from project engagement, baseline conditions, a review of local studies and literature on socio-community impacts from industrial projects, and on the professional experience and knowledge of the socio-economic assessment team. Sex and Indigeneity were selected as an identity factor, as on average, Indigenous persons and females experience lower income levels than non-Indigenous males and are underrepresented in sectors and occupations likely to be required for project construction and operation. Therefore, Indigenous persons and females may disproportionally benefit from economic opportunities associated with the Project and would benefit from policies or programs that encourage and facilitate inclusion and diversity within the workforce.

7.8.4 Boundaries

The spatial, temporal, administrative, and technical boundaries for the assessment of effects on employment and economy are described below.

7.8.4.1 SPATIAL BOUNDARIES

Spatial boundaries for the assessment of potential effects considered the geographic extent over which project activities may affect employment and economy; these are described below and are shown in Figure 7.8.11 and Figure 7.8.12.

- The **project footprint** encompasses the physical footprint of onsite and offsite components (i.e., the extent of planned clearing and development within the Project Area, transmission line corridor and access roads) (Figure 1.3.1 in Section 1.3.1: Infrastructure and Sipping Route).
- The **LAA** encompasses communities with the greatest potential to experience effects related to project requirements for labour, goods, and services. The LAA is comprised of the following Statistics Canada census subdivisions and census agglomerations (CAs): Kitamaat Village (Kitamaat 2), Kitimat District Municipality, Terrace CA (this includes the City of Terrace, Kitimat-Stikine E Regional District Electoral Area [RDA] and Kulspai 6), Kitselas 1, Kshish 4, Kitsumkaylum 1 (Figure 7.8.11).

  Due to the considerable distances between communities in northwest British Columbia, the potential for project employment and expenditures to result in economic effects beyond the LAA is low. Although individuals from communities outside the LAA might want to obtain employment or otherwise participate economically in the Project, they would likely need to relocate to an LAA community or commute on a rotational basis, because the Project would be outside of their daily commuting range by road.
- The **RAA** includes the LAA as well as North Coast Regional District Electoral Areas A[1] and C[2], and Kitimat-Stikine Electoral Areas C and E (Figure 7.8.12).

7.8.4.2 TEMPORAL BOUNDARIES

Temporal boundaries identify when an effect is evaluated in relation to specific project phases and activities. Temporal boundaries are based on the timing and duration of project activities and the nature of the interactions with employment and economy.

Based on the current project schedule, the temporal boundaries for the assessment are:

- **Construction**: up to approximately four years long, commencing following receipt of necessary regulatory approvals and a final investment decision by Cedar.
- **Operation**: pursuant to Licence GL-327 issued by the National Energy Board (now Canada Energy Regulator), the Project will operate for 25 years following completion of construction. Cedar may apply to extend GL-327 to a 40-year term. A 40-year lifespan will be used for the purposes of this Application.
- **Decommissioning**: approximately 12 months following the end of operation.

[1] Includes the City of Prince Rupert, District Municipality of Port Edward, Skeena-Queen Charlotte A RDA, Lax Kw'alaams 1 and S1/2 Tsimpsean 2.

[2] Includes Skeena-Queen Charlotte C RDA, Dolphin Island 1 and Kulkayu (Hartley Bay) 4.

7.8.4.3 ADMINISTRATIVE BOUNDARIES

Administrative boundaries used in the assessment of employment and economy are limited to geo-political boundaries used to define the spatial extent of provinces, regions, municipalities and unincorporated areas. Administrative boundaries used in the assessment of employment and economy align with technical boundaries used by Statistics Canada for which statistical datasets are available.

7.8.4.4 TECHNICAL BOUNDARIES

Technical boundaries used in the assessment of employment and economy align with spatially-defined boundaries used by Statistics Canada (i.e., Statistics Canada's Standard Geographical Classification [SGC]). The SGC covers geographical regions of Canada, provinces and territories, census divisions and census subdivisions (Statistics Canada 2018a). SGC boundaries define the LAA and RAA and are the statistical units for which Census of the Population (Census) data are published. The following limitations are therefore imposed on the assessment of employment and economy:

- Timeliness of data—Information taken from the 2016 Census at the census division and census subdivision level is the most up-to-date and comparable source of population and demographic information for all LAA and RAA communities; however, this information may not exactly represent existing (i.e., 2021) conditions. The 2021 Census data are expected to be released starting in February 2022 (population counts; Statistics Canada 2021a). Data related to employment and economy (e.g., labour and education information) are expected to be released in November 2022 (Statistics Canada 2021a), therefore are not available to inform this assessment. Where relevant and available, updated information has been presented for the North Coast and Nechako Economic Region (a geographically larger area that encompasses the RAA) to provide context.
- Geographic area—Because SGC boundaries are used to define the LAA and RAA, in some instances, particularly with respect to the RAA, large geographic areas may be included (e.g., Gitnadoiks River Provincial Park falls within Kitimat-Stikine Electoral Area C) but no residual effect is expected. Inclusion of these areas in the LAA or RAA is purely a result of limitations of the available datasets used to describe the LAA and RAA.
- Data suppression—Statistics Canada regularly suppresses (i.e., selectively does not disclose) survey information to protect the identity of individuals and to address data quality issues. Both the 2011 National Household Survey (NHS) and 2016 Census are subject, in part, to data suppression by Statistics Canada. However, in comparison to the mandatory 2016 long-form Census, which had a national global non-response rate (GNR) of 5.1%, the voluntary 2011 NHS (which had a GNR of 26.1%) was subject to a higher level of survey bias (the higher the GNR, the greater possibility for data quality issues) (Statistics Canada 2019a). As such, Statistics Canada has suppressed community profile data from the 2011 NHS where GNRs are equal to or greater than 50%.

  Due to this suppression, data taken from the 2011 NHS are underrepresented, a factor that is considered in this assessment. The 2011 NHS and 2016 Census information (where available) for specific census subdivisions have not been presented in Section 13.2.2 but, rather, LAA totals have been provided. This presentation of information is appropriate because residual and cumulative effect assessments are completed at the LAA level. Both the 2011 NHS and 2016 Census information (where available) is presented for the Province of British Columbia, as applicable, for comparison.

7.8.5 Existing Conditions

This section summarizes the data sources and existing conditions for employment and economy in the LAA and RAA.

7.8.5.1 METHODS

Information on existing conditions was primarily obtained from statistical datasets and published reports. Due to the dynamic nature of socio-economic conditions and associated data quality issues (see timeliness of data, Section 7.8.4.4), use of baseline information and assessment results provided in previous environmental assessments completed in the region is limited. Previous environmental assessments completed in the region were reviewed as part of a general literature review to understand issues, concerns and the scope of topics previously identified and assessed in the region.

Where possible disaggregated data has been used in baseline descriptions to describe baseline conditions for diverse or distinct subgroups to support the GBA+ analysis of effects, as described in provincial guidance related to the British Columbia *Environmental Assessment Act*, and Impact Assessment Agency of Canada (2019). For employment and economy, quantitative data includes disaggregated data for male, female and Indigenous populations in the LAA and RAA. All data related to demographics, employment and labour force, education and income include disaggregated data.

Datasets and published reports used in the description of existing conditions include:

- 2016 Census of the Population (Census Profile and Aboriginal Population Profile)
  - LAA, RAA and provincial labour force characteristics (population 15 years and over, labour force, participation rate, unemployment rate)
  - LAA, RAA and provincial labour force employment by sector (also informs location quotient analysis)
  - LAA, RAA and provincial labour force employment by broad occupational classification
  - LAA, RAA and provincial worker mobility (commuting patterns)
  - LAA, RAA and provincial educational attainment
  - LAA, RAA and provincial individual income (total and employment) and low-income status (Low-Income Measures After Tax – LIM-AT and Low-Income Cut-Offs After Tax – LICO-AT)
  - LAA, RAA and provincial shelter costs and households spending greater than 30% of income on shelter costs
  - LAA, RAA and provincial average household income
  - LAA, RAA and provincial average household size
  - Provincial and territorial Gross Domestic Product (GDP) estimates
- 2011 National Household Survey (NHS Profile and Aboriginal Population Profile)
  - LAA, RAA and provincial labour force employment by sector
  - LAA, RAA and provincial labour force employment by broad occupational classification

- Statistics Canada Data Tables (Annual)
  - North Coast and Nechako Economic Region—unemployment rates
  - North Coast and Nechako Economic Region—labour force employment by sector
  - North Coast and Nechako Economic Region—labour force employment by broad occupational classification
- British Columbia Labour Market Outlook
  - North Coast and Nechako Economic Region—forecasted change in job openings, expansion demand and replacement demand (2019–2020)
- WorkBC Cost of Living Calculator
  - Cost of living simulations for Kitimat, Terrace, Prince Rupert, Smithers, Prince George and Fort St. John
- British Columbia Northern Real Estate Board of the Canadian Real Estate Association
  - Real estate sales and price data for Q1 2020 to Q1 2021 for Kitimat, Terrace and reference communities in northern British Columbia
- District of Kitimat 2015 Housing Action Plan
  - Key housing affordability themes obtained through consultation in support of the plan
- The Greater Terrace Housing report (2020)
  - Key housing affordability themes obtained through consultation in support of the report
- British Columbia Ministry of Finance—Office to the Comptroller General, Public Accounts 2020/21
  - Revenue information from the summary financial statements, consolidated state of operation for the fiscal year ended March 31, 2021
- Ministry of Municipal Affairs—Local Government Statistics
  - 2020 year end consolidated financial statements—District of Kitimat, City of Terrace, Regional District of Kitimat-Stikine and North Coast Regional District
- Indigenous and Northern Affairs Canada—*First Nations Financial Transparency Act* Search
  - 2020 year end consolidated financial statements—Haisla Nation, Kitselas First Nation and Kitsumkalum First Nation

Secondary information used to describe existing conditions is of sufficient quality and reliability to accurately inform the assessment of potential, residual and cumulative effects. Known quality issues include those described in Sections 7.8.4.3 and 7.8.4.4. Most secondary sources used to describe existing conditions were created for purposes other than describing baseline conditions within environmental assessments. This may affect the reliability of information drawn from these sources. As the assessment considers effects of the Project on contemporary employment and economy factors, there is no traditional knowledge that informs the existing conditions.

7.8.5.2 OVERVIEW

The Project is located in the North Coast Economic Region in the Regional District of Kitimat-Stikine within Haisla Nation traditional territory and the boundaries of the District of Kitimat. The Project is approximately 70 km southwest of the City of Terrace. Within the economic region[3], employment is largely dependent on oil and gas, forestry, mining, transportation, tourism and construction (NDIT 2021; PBC 2020).

Over the past decade, fluctuations in economic activity related to increased interest in LNG, mining and construction activity (e.g., Northwest Transmission line [completed in 2015] and Rio Tinto Alcan modernization project [completed in 2015]) have resulted in increases in housing prices, decreases in vacancy rates and labour shortages (Nisga'a Lisims Government and Big River Analytics 2020). With the regional LNG industry failing to materialize in 2016 and 2017, housing prices decreased, rental unit vacancy rates increased, and the labour market loosened (Nisga'a Lisims Government and Big River Analytics 2020). Since 2018, the positive final investment decision by joint venture participants (Shell, Petronas, PetroChina Company Limited, Mitsubishi Corporation, and Korea Gas Corporation) in the LNG Canada Export Terminal Project and commencement of that project's construction, in addition to other major projects such as the Coastal GasLink Project, economic activity in the RAA has increased.

At the onset of COVID-19 global pandemic, substantial declines in goods-producing and service sectors occurred. In the goods-producing sector, manufacturing and construction employment in the North Coast and Nechako Region both declined by over 25% between February 2020 and June 2020, linked to workforce reductions at the LNG Canada Export Terminal Project and the Coastal GasLink Project and temporary mill shutdowns (NDIT 2021). In the service sector, employment in accommodation and food services declined by over 40% (Northern Development 2021). Between June 2020 and October 2020 construction-related employment increased to levels above pre-pandemic conditions (February 2019) with the resumption of work on the LNG Canada Export Terminal Project and the Coastal GasLink Project (NDIT 2021). Employment in accommodation and food services remained lower than pre-pandemic conditions in October 2020 (NDIT 2021).

The Province of British Columbia's Labour Market Outlook for 2019 to 2029 forecasts that employment demand in the North Coast and Nechako Economic Region will increase annually at an average rate of 0.3% until 2029 (compared to the provincial average rate of 1.0%) with approximately 9,900 jobs created between 2019 and 2029 (PBC 2020). Most jobs created are anticipated to be due to the replacement of retiring workers (89%) rather than economic growth (11%).

Within the RAA, the City of Terrace (Terrace) is the economic hub of the region providing services to residents of the LAA communities and other parts of northwest British Columbia (Terrace Business Resource Center 2017). Major employers in the RAA include LNG Canada and its prime contractor JGC Fluor BC LNG JV, Coastal GasLink, School District 82, and Northern Health Authority (PBC 2021a).

[3] Because the North Coast Economic Region and the Nechako Economic Region are adjacent and have relatively small populations Statistics Canada groups the publicly-available data into one administrative unit referred to as the 'North Coast and Nechako Economic Region'. This administrative unit includes the Bulkley-Nechako, Kitimat-Stikine, and North Coast [formally Skeena-Queen Charlotte]) Regional Districts.

Recent and comparable statistical labour force information for LAA and RAA communities is limited to results of Statistics Canada's 2016 Census. Information on labour force activity within the LAA and RAA in the following sections is taken from the 2016 Census and supplemented with quantitative information on the North Coast and Nechako Economic Region, where relevant, and through qualitative secondary information sources.

General Labour Force Characteristics

In 2016, the labour force of the LAA was 13,350 persons (54.5% male, 45.5% female), comprised of 2,530 persons (53.0% male, 47.0% female) of Indigenous identity[4] (19.0% of the total labour force), and had a participation rate of 65.9% (60.7% among the Indigenous labour force) (see Table 7.8.3 and Table 7.8.4). The LAA unemployment rate was 11.3% (up from 9.7% in 2011), 4.6 percentage points greater than the provincial average of 6.7%. Males had higher levels of unemployment than females (12.0% vs 10.5% among females) (Statistics Canada 2017).

At 18.6% (down from 23.1% in 2011) the unemployment rate among the LAA's Indigenous labour force is notably higher than the overall LAA average (11.3%) but similar to, albeit a little higher than, the provincial unemployment rate of the Indigenous labour force (14.0%). As with the overall LAA labour force, unemployment rates were greater among males than females (19.8% vs. 17.2%). Participation and unemployment rates among the RAA labour force (total and Indigenous) were similar to those of the LAA (Statistics Canada 2017).

[4] Indigenous include statistics for Aboriginal identity. Statistics Canada defines Aboriginal identity as persons who self-identify as being an Aboriginal person. This includes those who are First Nations (North American Indian), Métis or Inuk (Inuit) and/or those who are Registered or Treaty Indians (that is, registered under the *Indian Act* of Canada) and/or those who have membership in a First Nation or Indian band. Aboriginal peoples of Canada are defined in the *Constitution Act*, 1982, section 35 (2) as including the Indian, Inuit and Métis peoples of Canada.

TABLE 7.8.3 TOTAL POPULATION—2016 LABOUR FORCE CHARACTERISTICS

	Population aged 15 years and over			Labour force			Participation rate			Unemployment rate		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Kitamaat 2	455	240	215	190	105	85	41.8	43.8	39.5	15.8	19.0	11.8
Kitimat DM	6,725	3,510	3,215	4,230	2,420	1,810	62.9	68.9	56.3	12.6	12.2	13.3
Terrace CA	12,625	6,315	6,310	8,665	4,600	4,065	68.6	72.8	64.4	10.2	11.3	9.0
Kitselas 1	175	90	85	100	55	45	57.1	61.1	52.9	25.0	27.3	22.2
Kitsumkaylum 1	265	145	120	165	95	70	62.3	65.5	58.3	18.2	21.1	14.3
LAA	**20,245**	**10,300**	**9,945**	**13,350**	**7,275**	**6,075**	**65.9**	**70.6**	**61.1**	**11.3**	**12.0**	**10.5**
Kitimat-Stikine C (Part 1) RDA	2,330	1,170	1,160	1,655	845	810	160	95	65	71.0	72.2	69.8
Kitimat-Stikine C (Part 2) RDA	-	-	-	-	-	-	-	-	-	-	-	-
Kitimat-Stikine E RDA	3,325	1,740	1,585	2,355	1,285	1,070	325	200	125	70.8	73.9	67.5
Prince Rupert CY	9,790	4,940	4,850	6,650	3,585	3,065	840	505	335	67.9	72.6	63.2
Port Edward DM	430	235	195	295	160	135	20	10	10	68.6	68.1	69.2
Skeena-Queen Charlotte A RDA	35	20	15	20	10	10	-	-	-	57.1	50.0	66.7
Skeena-Queen Charlotte C RDA	110	55	55	55	30	25	-	-	-	50.0	54.5	45.5
Lax Kw'alaams 1	480	255	225	265	145	120	70	40	30	55.2	56.9	53.3
S1/2 Tsimpsean 2	65	30	35	20	10	10	10	10	-	30.8	33.3	28.6

TABLE 7.8.3 TOTAL POPULATION—2016 LABOUR FORCE CHARACTERISTICS

	Population aged 15 years and over			Labour force			Participation rate			Unemployment rate		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Dolphin Island 2	255	130	125	110	60	50	35	25	10	43.1	46.2	40.0
Kulkayu (Hartley Bay) 4	40	15	25	25	15	10	20	10	10	62.5	100.0	40.0
RAA	**36,265**	**18,460**	**17,805**	**24,380**	**13,190**	**11,190**	**2,850**	**1,680**	**1,170**	**67.2**	**71.5**	**62.8**
British Columbia	**3,870,375**	**1,882,770**	**1,987,605**	**2,471,670**	**1,285,835**	**1,185,835**	**63.9**	**68.3**	**59.7**	**6.7**	**7.1**	**6.3**

NOTES:

- Data not available

Values shown in “Total” columns are the sum of male and female census subdivision subsets taken from Statistics Canada’s 2016 Census. Due to Statistics Canada rounding (Statistics Canada 2019b) totals may not exactly align with those shown on census subdivision Census Profiles and may not sum across tables.

Totals may not sum within and across tables due to Statistics Canada data suppression.

SOURCE:

Statistics Canada 2017

TABLE 7.8.4 INDIGENOUS POPULATION—2016 LABOUR FORCE CHARACTERISTICS

	Population aged 15 years and over			Labour force			Participation rate			Unemployment rate		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Kitamaat 2	445	235	210	180	100	80	40.0	42.6	38.1	16.7	25.0	12.5
Kitimat DM	695	280	415	440	215	225	63.0	76.8	54.2	16.1	14.0	17.8
Terrace CA	2,615	1,280	1,335	1,660	880	780	63.5	68.8	58.4	19.6	19.9	18.6
Kitselas 1	160	80	80	95	55	40	60.6	68.8	50.0	15.0	27.3	-
Kitsumkaylum 1	255	140	115	155	90	65	62.7	64.3	56.5	18.8	22.2	15.4
LAA	**4,170**	**2,015**	**2,155**	**2,530**	**1,340**	**1,190**	**60.7**	**66.5**	**55.2**	**18.6**	**19.8**	**17.2**
Kitimat-Stikine C (Part 1) RDA	365	175	190	280	135	145	77.8	77.1	76.3	10.7	11.1	10.3
Kitimat-Stikine C (Part 2) RDA	-	-	-	-	-	-	-	-	-	-	-	-
Kitimat-Stikine E RDA	3,325	1,740	1,585	2,355	1,285	1,070	325	200	125	70.8	73.9	67.5
Prince Rupert CY	9,790	4,940	4,850	6,650	3,585	3,065	840	505	335	67.9	72.6	63.2
Port Edward DM	430	235	195	295	160	135	20	10	10	68.6	68.1	69.2
Skeena-Queen Charlotte A RDA	35	20	15	20	10	10	-	-	-	57.1	50.0	66.7
Skeena-Queen Charlotte C RDA	110	55	55	55	30	25	-	-	-	50.0	54.5	45.5
Lax Kw'alaams 1	480	255	225	265	145	120	70	40	30	55.2	56.9	53.3
S1/2 Tsimpsean 2	65	30	35	20	10	10	10	10	-	30.8	33.3	28.6
Dolphin Island 2	255	130	125	110	60	50	35	25	10	43.1	46.2	40.0

TABLE 7.8.4 INDIGENOUS POPULATION—2016 LABOUR FORCE CHARACTERISTICS

	Population aged 15 years and over			Labour force			Participation rate			Unemployment rate		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Kulkayu (Hartley Bay) 4	40	15	25	25	15	10	20	10	10	62.5	100.0	40.0
RAA	**36,265**	**18,460**	**17,805**	**24,380**	**13,190**	**11,190**	**2,850**	**1,680**	**1,170**	**67.2**	**71.5**	**62.8**
British Columbia	**200,655**	**94,500**	**106,150**	**127,885**	**63,375**	**64,510**	**63.7**	**67.1**	**60.8**	**14.0**	**16.2**	**11.7**

NOTES:

- Data not available

Values shown in “Total” columns are the sum of male and female census subdivision subsets taken from Statistics Canada’s 2016 Census. Due to Statistics Canada rounding (Statistics Canada 2019b) totals may not exactly align with those shown on census subdivision Census Profiles and may not sum across tables.

Totals may not sum within and across tables due to Statistics Canada data suppression.

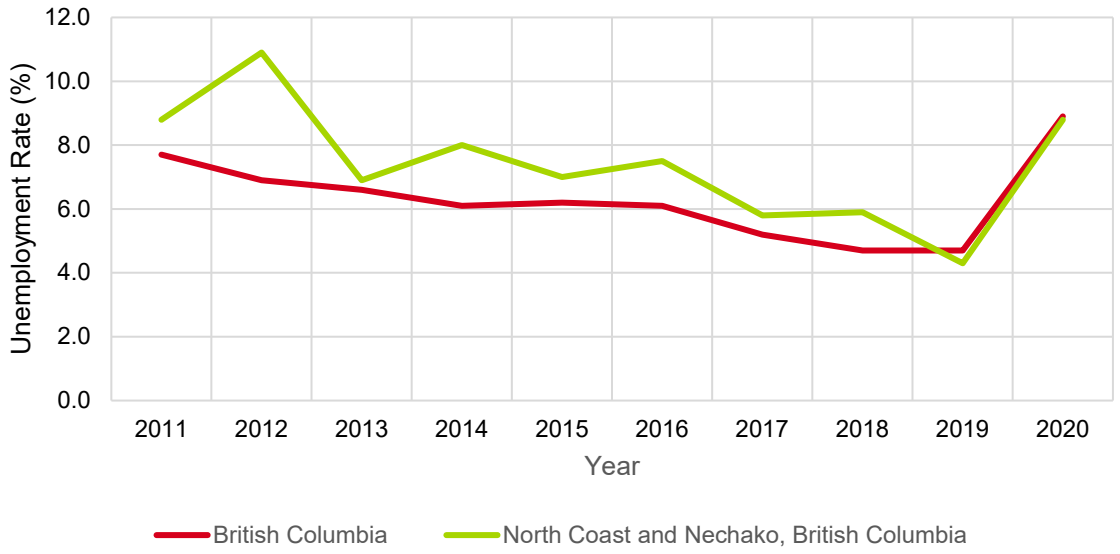
SOURCE:

Statistics Canada 2018b

Change in Unemployment Rates – North Coast and Nechako

Statistics Canada does not publish annual unemployment information for census divisions or census subdivisions. Annual unemployment rates are therefore unavailable at the LAA and RAA level. Unemployment rates for the North Coast and Nechako Economic Region are therefore used to contextualize changes and trends in unemployment which are assumed to be representative of those at the LAA and RAA level, relative to the provincial average. Annual unemployment rates from 2011 through 2020 are illustrated in Figure 7.8.1 for both the North Coast and Nechako Economic Region and British Columbia.

FIGURE 7.8.1 UNEMPLOYMENT RATES 2011-2020, NORTH COAST AND NECHAKO AND BRITISH COLUMBIA



SOURCE: Statistics Canada 2021b

Employment in the North Coast and Nechako Economic Region is largely dependent on forestry, mining, transportation and construction related to major projects such as the LNG Canada Export Terminal Project and Coast Gas Link Project (NDIT 2021). Between 2011 and 2019, unemployment rates across British Columbia and the North Coast and Nechako Economic Region decreased. In general, unemployment rates were higher and more variable in the North Coast and Nechako Economic Region (one notable increase occurring between 2011 and 2012 [from 8.8% to 10.9%]) than across the province. Between 2011 and 2019 the average provincial unemployment rate decreased three percentage points from 7.7% to 4.7%, whereas the average unemployment rate in the North Coast and Nechako Economic Region decreased four and a half percentage points, from 8.8% to 4.3%.

In 2019, the average unemployment rate in the North Coast and Nechako Economic Region (4.3%) was lower than the provincial average (4.7%), likely a reflection of increased economic activity associated with the positive final investment decision and commencement of construction of the LNG Canada Export Terminal Project. The sudden increase in unemployment rates across the province and in the North Coast and Nechako Economic Region in 2020 (increasing to 8.9% and 8.8%, respectively) can be largely attributed to the COVID-19 global pandemic and associated public health restrictions.

Labour Force by Sector

Total Population

In 2016 the top three employment sectors within the LAA and RAA were retail trade (12.5% of employment in the LAA and 12.0% of employment in the RAA), construction (11.7% of employment in the LAA and 10.5% of employment in the RAA), and health care and social assistance (10.9% of employment in the LAA and 10.7% of employment in the RAA; see Table 7.8.5). Employment in retail trade in the LAA and RAA was relatively evenly distributed among males (~47%) and females (~54%), whereas employment in construction was largely undertaken by males (85% in the LAA and 87% in the RAA versus. 15% and 13% for females) and employment in health care and social assistance largely undertaken by females (84% in the LAA and 86% in the RAA versus 16% and 14% for males). In 2016, Differences in male and female employment in the LAA's and RAA's top three sectors, as defined by the North American Industry Classification System (NAICS), were similar to provincial averages (see Table 7.8.5).

TABLE 7.8.5 TOTAL POPULATION—2016 EMPLOYMENT BY SECTOR

NAICS Code / Sector	LAA				RAA			
	Total		% Male	% Female	Total		% Male	% Female
	Persons	%			Persons	%		
11: Agriculture, forestry, fishing and hunting	280	2.1	87.5	12.5	800	3.2	83.1	16.9
21: Mining, quarrying, and oil and gas extraction	225	1.7	71.1	28.9	335	1.4	73.1	26.9
22: Utilities	140	1.1	75.0	25.0	205	0.8	78.0	22.0
23: Construction	1,565	11.7	84.7	15.3	2,595	10.5	86.9	13.1
31-33: Manufacturing	1,265	9.5	84.2	15.8	1,910	7.7	81.4	18.6
41: Wholesale trade	335	2.5	82.1	17.9	510	2.1	85.3	14.7
44-45: Retail trade	1,670	12.5	46.4	53.6	2,975	12.0	46.9	53.1
48-49: Transportation and warehousing	625	4.7	75.2	24.8	2,190	8.8	77.6	22.4
51: Information and cultural industries	175	1.3	48.6	51.4	265	1.1	43.4	56.6
52: Finance and insurance	200	1.5	20.0	80.0	420	1.7	19.0	81.0
53: Real estate and rental and leasing	170	1.3	61.8	38.2	280	1.1	50.0	50.0
54: Professional, scientific and technical services	635	4.8	59.8	40.2	1,000	4.0	56.5	43.5
55: Management of companies and enterprises	-	-	-	-	20	0.1	-	100.0

TABLE 7.8.5 TOTAL POPULATION—2016 EMPLOYMENT BY SECTOR

NAICS Code / Sector	LAA				RAA			
	Total		% Male	% Female	Total		% Male	% Female
	Persons	%			Persons	%		
56: Administrative and support, waste management and remediation services	555	4.2	60.4	39.6	995	4.0	58.3	41.7
61: Educational services	985	7.4	25.9	74.1	1,775	7.2	24.8	75.2
62: Health care and social assistance	1,450	10.9	16.2	83.8	2,655	10.7	14.5	85.5
71: Arts, entertainment and recreation	205	1.5	48.8	51.2	450	1.8	43.3	56.7
72: Accommodation and food services	1,235	9.3	42.9	57.1	2,140	8.6	40.0	60.0
81: Other services (except public administration)	515	3.9	47.6	52.4	1,015	4.1	47.8	52.2
91: Public administration	810	6.1	51.2	48.8	1,660	6.7	53.0	47.0
NAICS not applicable	280	2.1	41.1	58.9	580	2.3	41.4	58.6
Total	**13,320**	**100.0**	**54.5**	**45.5**	24,775	100.0	54.0	46.0

NOTES:

- Data not available

Values shown in “Total” columns are the sum of male and female census subdivision subsets taken from Statistics Canada’s 2016 Census. Due to Statistics Canada rounding (Statistics Canada 2019b) totals may not exactly align with those shown on census subdivision Census Profiles and may not sum across tables.

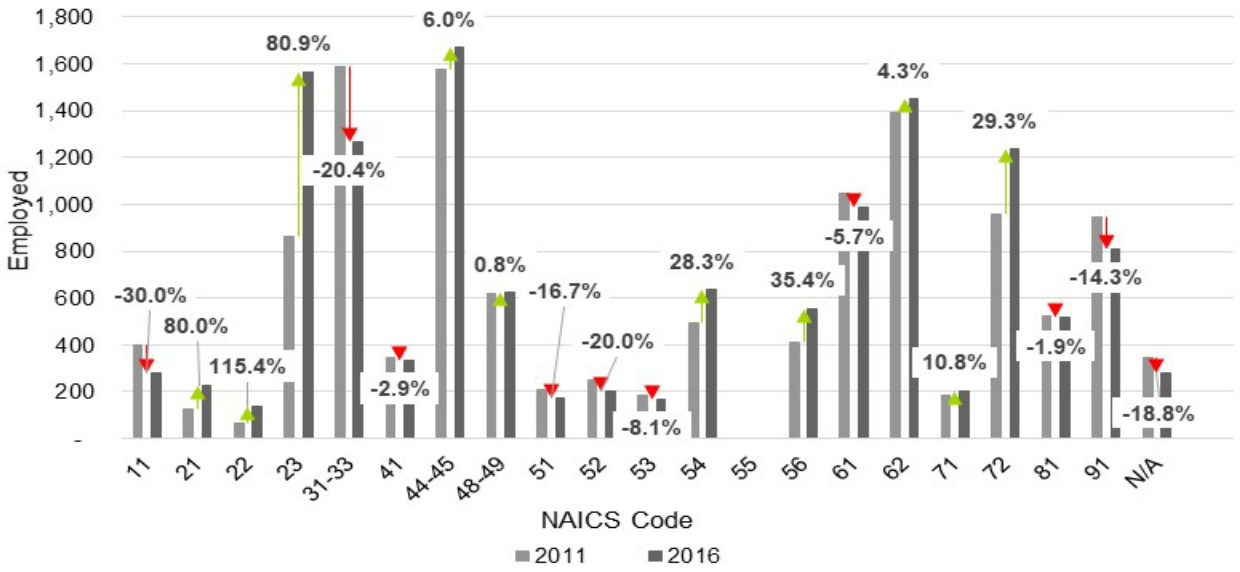
Totals may not sum within and across tables due to Statistics Canada data suppression.

SOURCE:

Statistics Canada 2017

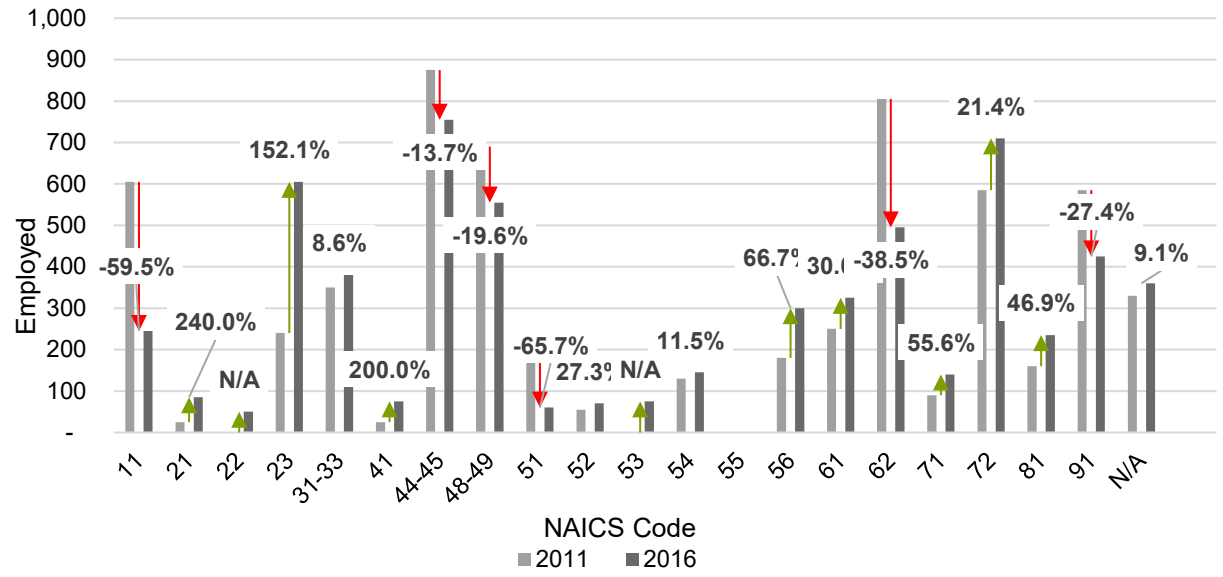
Between 2011 and 2016 the largest increases in sector employment within the LAA occurred in utilities (NAICS 22; +115.4%), construction (NAICS 23; +80.9%) and mining, quarrying, and oil and gas extraction (NAICS 21; +80.0%) (see Figure 7.8.2). The largest decreases in employment occurred in agriculture, forestry, fishing and hunting (NAICS 11; -30.0%), manufacturing (NAICS 31-33; -20.4%) and finance and insurance (NAICS 52; -20.0%). Similar changes in employment are seen at the RAA level (Figure 7.8.3).

FIGURE 7.8.2 TOTAL POPULATION – CHANGE IN LAA EMPLOYMENT BY SECTOR, 2011 TO 2016



SOURCE: Statistics Canada 2017

FIGURE 7.8.3 TOTAL POPULATION – CHANGE IN RAA EMPLOYMENT BY SECTOR, 2011 TO 2016



SOURCE: Statistics Canada 2017

Indigenous Population

In 2016, the top three sectors employing Indigenous persons were accommodation and food services (15.4% of LAA employment, 11.7% of RAA employment), retail trade (13.3% of LAA employment, 12.4% of RAA employment), and construction (12.5% of LAA employment, 9.9% of RAA employment) (Table 7.8.6). Employment in the LAA and RAA in accommodation and food services and retail trade was mainly undertaken by female workers (56.8%, 62.0%, 57.1% and 57.0% vs. 43.2%, 38.0%, 42.9% and 43.0% respectively) whereas construction was male dominated (87.9% in the LAA and 89.3% in the RAA vs. 12.1% and 10.7% for females). Provincially, in 2016, the top three occupations were retail trade 11.5%, accommodation and food services 10%, and health care and social assistance 10% (Table 7.8.6).

TABLE 7.8.6 INDIGENOUS POPULATION—EMPLOYMENT BY SECTOR

NAICS Code / Sector	LAA				RAA			
	Total		% Male	% Female	Total		% Male	% Female
	Persons	%			Persons	%		
11: Agriculture, forestry, fishing and hunting	65	2.5	84.6	15.4	245	4.0	83.7	16.3
21: Mining, quarrying, and oil and gas extraction	40	1.5	50.0	50.0	85	1.4	58.8	41.2
22: Utilities	30	1.1	66.7	33.3	50	0.8	80.0	20.0
23: Construction	330	12.5	87.9	12.1	605	9.9	89.3	10.7
31-33: Manufacturing	115	4.4	69.6	30.4	380	6.2	64.5	35.5
41: Wholesale trade	45	1.7	77.8	22.2	75	1.2	86.7	13.3
44-45: Retail trade	350	13.3	42.9	57.1	755	12.4	43.0	57.0
48-49: Transportation and warehousing	105	4.0	81.0	19.0	555	9.1	78.4	21.6
51: Information and cultural industries	50	1.9	50.0	50.0	60	1.0	41.7	58.3
52: Finance and insurance	30	1.1	33.3	66.7	70	1.1	28.6	71.4
53: Real estate and rental and leasing	45	1.7	66.7	33.3	75	1.2	66.7	33.3
54: Professional, scientific and technical services	85	3.2	41.2	58.8	145	2.4	41.4	58.6
55: Management of companies and enterprises	-	-	-	-	-	-	-	-
56: Administrative and support, waste management and remediation services	130	4.9	57.7	42.3	300	4.9	53.3	46.7
61: Educational services	110	4.2	22.7	77.3	325	5.3	15.4	84.6

TABLE 7.8.6 INDIGENOUS POPULATION—EMPLOYMENT BY SECTOR

NAICS Code / Sector	LAA				RAA			
	Total		% Male	% Female	Total		% Male	% Female
	Persons	%			Persons	%		
62: Health care and social assistance	190	7.2	13.2	86.8	495	8.1	14.1	85.9
71: Arts, entertainment and recreation	50	1.9	50.0	50.0	140	2.3	50.0	50.0
72: Accommodation and food services	405	15.4	43.2	56.8	710	11.7	38.0	62.0
81: Other services (except public administration)	115	4.4	52.2	47.8	235	3.9	51.1	48.9
91: Public administration	185	7.0	48.6	51.4	425	7.0	51.8	48.2
NAICS not applicable	160	6.1	43.8	56.3	360	5.9	50.0	50.0
Total	**2,635**	**100.0**	**52.4**	**47.6**	6,090	100.0	52.5	47.5

NOTES:

- Data not available

Values shown in "Total" columns are the sum of male and female census subdivision subsets taken from Statistics Canada's 2016 Census. Due to Statistics Canada rounding (Statistics Canada 2019b) totals may not exactly align with those shown on census subdivision Census Profiles and may not sum across tables.

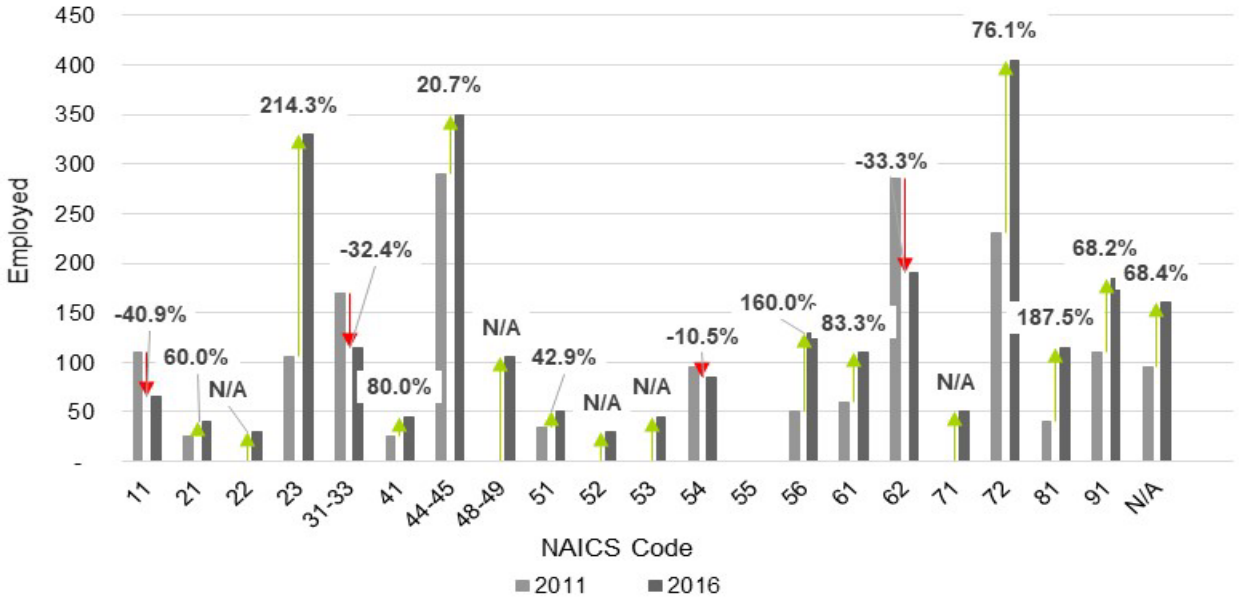
Totals may not sum within and across tables due to Statistics Canada data suppression.

SOURCE:

Statistics Canada 2018

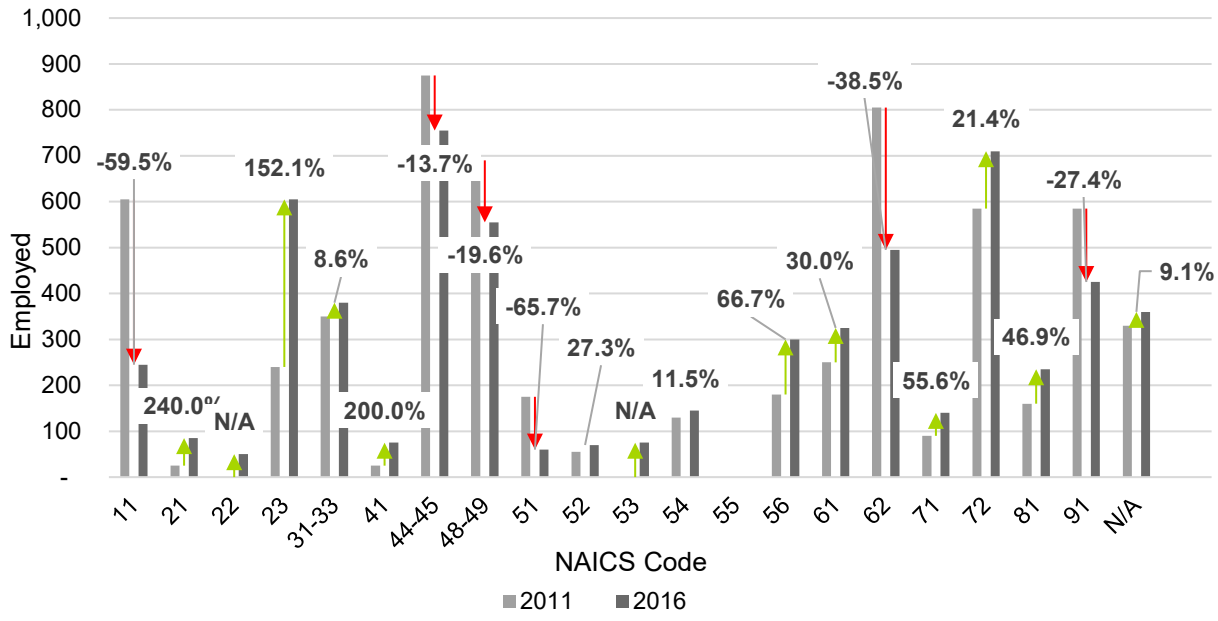
Between 2011 and 2016 the largest increases in sector employment for the Indigenous population within the LAA occurred in construction (NAICS 23; +214.3%), other services (NAICS 81 +187.5%), and administrative and support, waste management and remediation services (NAICS 56; +160.0%) (see Figure 7.8.4). Other notable gains were seen in accommodation and food services (NAICS 72, 87%). New employment sectors for 2016 included utilities (NAICS 22), transportation and warehousing (NAICS 48-49), finance and insurance (NAICS 52), real estate and rental leasing (NAICS 53), and arts, entertainment and recreation (NAICS 71). The largest decreases in employment between 2011 and 2016 occurred in agriculture, forestry, fishing and hunting (NAICS 11; -40.9%), health care and social assistance (NAICS 62; -33.3%), and manufacturing (NAICS 31-33; -32.4%). Similar changes in employment are seen at the RAA level with notable differences in manufacturing (NAICS 31-33), retail trade (NAICS 44-45), transportation and warehousing (NAICS 48-49), information and cultural industries (NAICS 51), professional, scientific and technical services (NAICS 54), and public administration (NAICS 91) (Figure 7.8.5).

FIGURE 7.8.4 INDIGENOUS POPULATION—CHANGE IN LAA EMPLOYMENT BY SECTOR, 2011 TO 2016



SOURCE: Statistics Canada 2018

FIGURE 7.8.5 INDIGENOUS POPULATION—CHANGE IN RAA EMPLOYMENT BY SECTOR, 2011 TO 2016

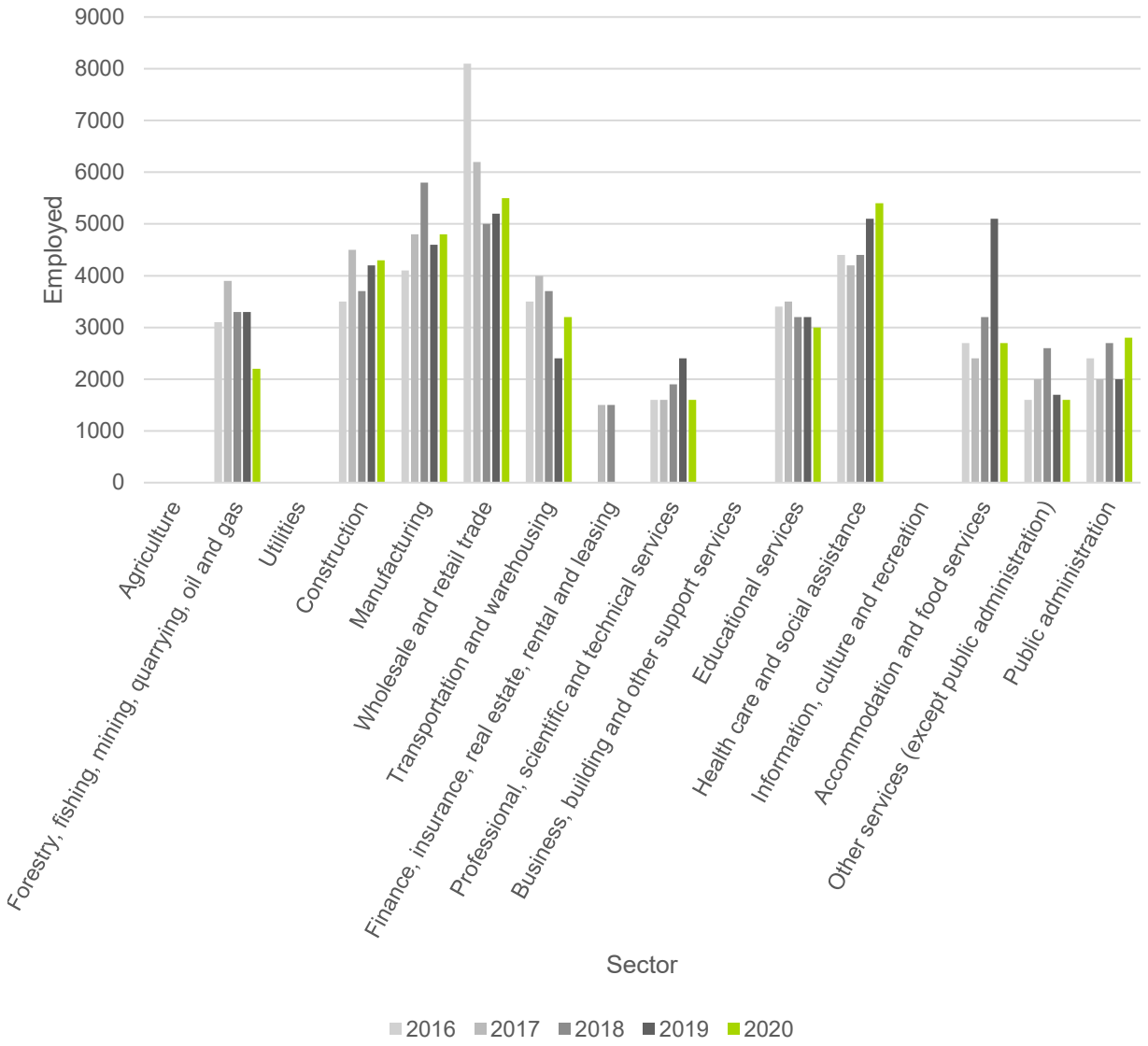


SOURCE: Statistics Canada 2018

Sector Employment—North Coast and Nechako Economic Region

While employment data by sector in the LAA and RAA is not available beyond 2016, information from the North Coast and Nechako Economic Region is available for 2016-2020 and is useful in providing context for regional trends. Sector employment in the region is illustrated in Figure 7.8.6. As illustrated, employment levels have remained fairly consistent across sectors with employment in wholesale and retail trade and healthcare and social assistance and manufacturing accounting for the greatest proportion of employment. Changes in occupational employment between 2019 and 2020, especially in the wholesale and retail trade sector, are likely influenced by the COVID-19 pandemic. Employment data for 'utilities, business, building and support services', 'information, culture and recreation' as well as data for 2016, 2019 and 2020 for 'finance, insurance, real estate, rental and leasing' has been suppressed by Statistics Canada to meet confidentiality requirements.

FIGURE 7.8.6 2016-2020 EMPLOYMENT BY SECTOR, NORTH COAST AND NECHAKO ECONOMIC REGION



SOURCE: Statistics Canada 2021c

Location Quotient

Location quotient (LQ) provides a measure of the intensity of employment in a given sector in a region (i.e., the LAA and RAA) relative to the level of employment in that sector to a reference region (e.g., British Columbia) (Statistics Canada 2015). Location quotients are commonly used in economic analysis to assess the concentration of economic activities in a smaller area relative to an overarching region in which it is located (Statistics Canada 2015; BEDC 2018). Location quotients for the LAA and RAA relative to British Columbia are provided in Table 7.8.7.

Critical values for the LQ analysis are as follows:

- LQ > 1.0—the LAA or RAA has a higher intensity of employment in the given sector relative to British Columbia
- LQ = 1.0—the LAA or RAA has the same intensity of employment in the given sector relative to British Columbia
- LQ < 1.0—the LAA or RAA has a lower intensity of employment in the given sector relative to British Columbia (Statistics Canada 2015)

Where the LQ is greater than 1.25, the LAA or RAA is considered to have a local concentration of economic activity in the given sector (relative to British Columbia) and may be an indication that the local economy is specialized in the provision of associated goods/services (BEDC 2018). An LQ greater than 1.25 can also suggest that the sector may be export-oriented with the supply of associated goods/services exceeding local demand; conversely, an LQ of less than 1.0 may suggest that local demand exceeds supply and goods/services of that sector are imported (BEDC 2018).

Sectors exceeding an LQ of 1.25 in the LAA, relative to the province, are as follows:

- Total population—utilities 2.09; mining, quarrying, and oil and gas extraction 1.61; manufacturing 1.49; and construction 1.45
- Indigenous population—utilities 2.37; accommodation and food services 1.54; real estate and rental and leasing 1.37; and construction 1.30

Sectors exceeding an LQ of 1.25 in the RAA, relative to the province, are as follows:

- Total population—mining, quarrying, and oil and gas extraction 1.29; utilities 1.64; construction 1.29; transportation and warehousing 1.70; public administration 1.32; and NAICS not applicable 1.32
- Indigenous population—utilities 1.71; transportation and warehousing 1.81; and NAICS not applicable 1.43

TABLE 7.8.7 LABOUR FORCE POPULATION AGED 15 YEARS AND OVER BY SECTOR, LOCATION QUOTIENTS, 2017

NAICS Code / Sector	Total Population		Indigenous Population	
	LAA	RAA	LAA	RAA
11: Agriculture, forestry, fishing and hunting	0.80	1.22	0.56	0.91
21: Mining, quarrying, and oil and gas extraction	1.61	1.29	0.79	0.72
22: Utilities	2.09	1.64	2.37	1.71
23: Construction	1.45	1.29	1.30	1.03
31-33: Manufacturing	1.49	1.21	0.72	01.03
41: Wholesale trade	0.76	0.62	0.81	0.58
44-45: Retail trade	1.09	1.05	1.15	1.08
48-49: Transportation and warehousing	0.90	1.70	0.79	1.81
51: Information and cultural industries	0.48	0.39	1.23	0.64
52: Finance and insurance	0.40	0.45	0.76	0.76
53: Real estate and rental and leasing	0.57	0.51	1.37	0.99
54: Professional, scientific and technical services	0.60	0.51	0.89	0.66
55: Management of companies and enterprises	-	0.46	-	-
56: Administrative and support, waste management and remediation services	0.94	0.91	0.94	0.94
61: Educational services	1.05	1.02	0.68	0.87
62: Health care and social assistance	0.99	0.98	0.65	0.74
71: Arts, entertainment and recreation	0.66	0.77	0.83	1.01
72: Accommodation and food services	1.11	1.03	1.54	1.16
81: Other services (except public administration)	0.85	0.90	1.00	0.88
91: Public administration	1.20	1.32	0.91	0.90
NAICS not applicable	1.19	1.32	1.47	1.43

SOURCE:

Statistics Canada 2017, 2018

Labour Force by Broad Occupational Classification

In 2016, the top three occupations (based on Statistics Canada's National Occupational Classification [NOC]) in the LAA and RAA total populations were sales and service (accounting for 23.6% of the LAA and RAA labour force), trades, transport and equipment operation (accounting for 21.7% of the LAA labour force and 23.2% of the RAA labour force) and business, finance and administration (accounting for 12.1% of the LAA labour force and 11.4% of the RAA labour force) (see Table 7.8.8). Employment in sales and service was more prominent among females (59.8% in the LAA and 61.9% in the RAA) than males (40.2% in the LAA and 38.1% in the RAA). Employment was greatest among males in occupations in trades, transport and equipment operation (94.0% in the LAA and 93.1% in the RAA) whereas employment in business, finance and administration was greatest among females (75.5% in the LAA and 77.5% in the RAA).

Employment among the Indigenous population of the LAA and RAA was similar to that of the overall population: greatest in sales and service (accounting for 33.5% of the LAA labour force and 19.0% of the RAA labour force) and trades, transport and equipment operation (accounting for 20.5% of the LAA labour force and 23.5% of the RAA labour force) (see Table 7.8.9). Unlike the total population, employment in education, law and social, community and government services (accounting for 10.3% of the LAA labour force and 11.3% of the RAA labour force) was also a prominent occupation. As with the total population, employment in sales and service was greatest among females (61.3% in the LAA and 61.9% in the RAA) while employment in trades, transport and equipment operation was greatest among males (93.4% and 93.1% in the RAA). Employment in education, law and social, community and government services were greatest among females (66.0% in the LAA, 72.7% in the RAA).

TABLE 7.8.8 TOTAL POPULATION—EMPLOYMENT BY BROAD OCCUPATIONAL CLASSIFICATION

NOC Code / Sector	LAA				RAA			
	Total		% Male	% Female	Total		% Male	% Female
	Persons	%			Persons	%		
0: Management	1,155	8.6	56.3	43.7	2,190	8.9	56.6	43.4
1: Business, finance and administration	1,615	12.1	24.5	75.5	2,825	11.4	22.5	77.5
2: Natural and applied sciences	780	5.8	80.8	19.2	1,280	5.2	80.9	19.1
3: Health	765	5.7	20.9	79.1	1,340	5.4	21.6	78.4
4: Education, law and social, community and government services	1,550	11.6	27.7	72.3	2,800	11.3	27.3	72.7
5: Art, culture, recreation and sport	250	1.9	42.0	58.0	455	1.8	31.9	68.1
6: Sales and service	3,160	23.6	40.2	59.8	5,820	23.6	38.1	61.9
7: Trades, transport and equipment operators	2,910	21.7	94.0	6.0	5,735	23.2	93.1	6.9
8: Natural resources, agriculture and related production	305	2.3	85.2	14.8	840	3.4	82.1	17.9
9: Manufacturing and utilities	625	4.7	87.2	12.8	1,045	4.2	78.9	21.1
NOC not applicable	280	2.1	39.3	60.7	370	1.5	62.2	94.6
Total	**13,395**	**100.0**	**54.4**	**45.6**	24,700	100.0	54.3	46.5

NOTES:

- Data not available

Values shown in “Total” columns are the sum of male and female census subdivision subsets taken from Statistics Canada’s 2016 Census. Due to Statistics Canada rounding (Statistics Canada 2019b) totals may not exactly align with those shown on census subdivision Census Profiles and may not sum across tables.

Totals may not sum across tables due to Statistics Canada data suppression.

SOURCE:

Statistics Canada 2017

TABLE 7.8.9 INDIGENOUS POPULATION—EMPLOYMENT BY BROAD OCCUPATIONAL CLASSIFICATION

NOC Code / Sector	LAA				RAA			
	Total		% Male	% Female	Total		% Male	% Female
	Persons	%			Persons	%		
0: Management	130	5.0	46.2	53.8	315	5.1	49.2	50.8
1: Business, finance and administration	240	9.3	16.7	83.3	425	6.9	27.1	72.9
2: Natural and applied sciences	100	3.9	80.0	20.0	355	5.8	40.8	59.2
3: Health	75	2.9	13.3	86.7	170	2.8	32.4	67.6
4: Education, law and social, community and government services	265	10.3	34.0	66.0	420	6.9	33.3	66.7
5: Art, culture, recreation and sport	30	1.2	66.7	33.3	355	5.8	23.9	76.1
6: Sales and service	865	33.5	38.7	61.3	1,165	19.0	36.5	63.5
7: Trades, transport and equipment operators	530	20.5	93.4	6.6	1,440	23.5	64.2	35.8
8: Natural resources, agriculture and related production	105	4.1	90.5	9.5	770	12.6	89.6	10.4
9: Manufacturing and utilities	90	3.5	77.8	22.2	325	5.3	80.0	20.0
NOC not applicable	150	5.8	50.0	50.0	390	6.4	51.3	48.7
Total	2,580	100.0	53.1	46.9	6,130	100.0	52.1	47.9

NOTES:

- Data not available

Values shown in “Total” columns are the sum of male and female census subdivision subsets taken from Statistics Canada’s 2016 Census. Due to Statistics Canada rounding (Statistics Canada 2019b) totals may not exactly align with those shown on census subdivision Census Profiles and may not sum across tables.

Totals may not sum across tables due to Statistics Canada data suppression.

SOURCE:

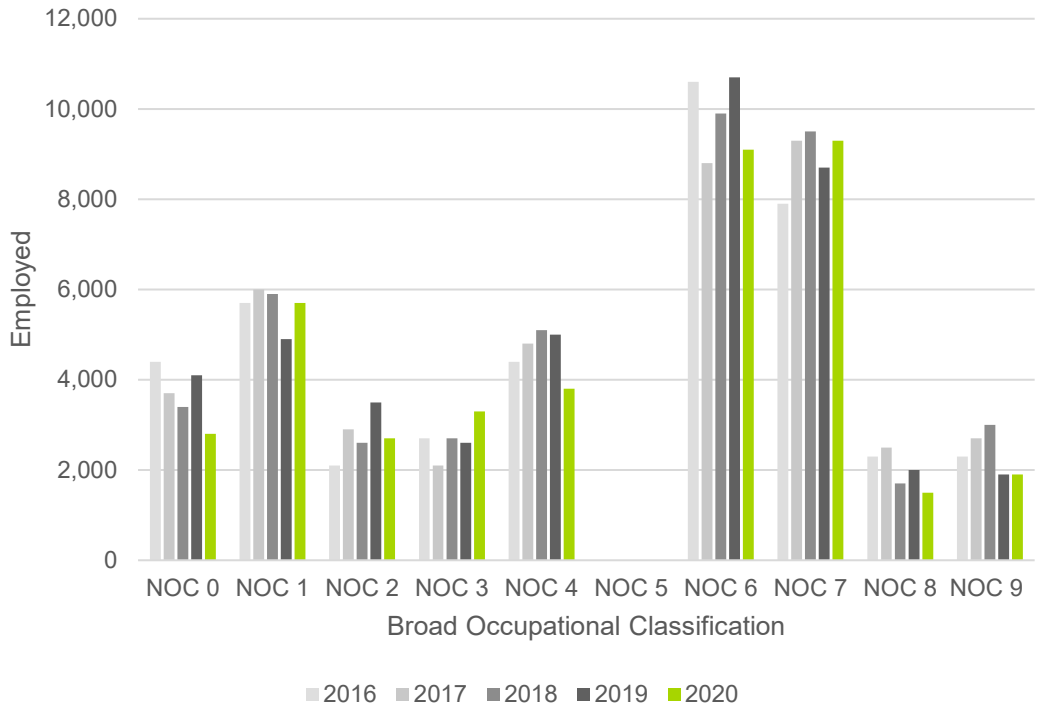
Statistics Canada 2018

Education and skills requirements for NOC code/sectors presented in Table 7.8.8 and Table 7.8.9 are detailed in Appendix 7.8A.

Occupational Employment in the North Coast and Nechako Economic Region

While employment data by broad occupational category in the LAA and RAA is not available beyond 2016, information at the North Coast and Nechako Economic Region is available and is useful in providing context for regional trends. Occupational employment in the North Coast and Nechako Economic Region is illustrated in Figure 7.8.7. As illustrated, employment levels have remained fairly consistent across broad occupational classifications with employment in sales and service (NOC 6) and trades, transport and equipment operation (NOC 7) representing the greatest proportion of employment. As with other regional data presented for 2020, changes in occupational employment between 2019 and 2020 are likely heavily influenced by the COVID-19 global pandemic. Occupational employment data for art, culture, recreation and sport (NOC 5) has been suppressed by Statistics Canada to meet confidentiality requirements.

FIGURE 7.8.7 2016-2020 EMPLOYMENT BY BROAD OCCUPATIONAL CLASSIFICATION, NORTH COAST AND NECHAKO ECONOMIC REGION



SOURCE: Statistics Canada 2021d

Haisla Nation Employment Survey

Haisla Nation Council commissioned an employment survey in 2021 to collect labour force information on its membership. At the time of writing a finalized report detailing survey methods and findings was unavailable; however, draft survey results were made available (Haisla Nation Council 2022).

A total of 266 individuals responded to the employment survey, 88% (n = 233) of whom were registered Haisla Nation members, 12% (n = 33) of whom were spouses of Haisla members (spouse defined as a person who had lived with a Haisla member as a partner for a period of not less than one year). Of total respondents (n = 266), 65% (n = 173) indicated that they were currently employed, 35% (n = 93) not currently employed. Of employed respondents (n = 173), 38% (n = 65) were looking for other employment opportunities, 62% [n = 108] were not. Of respondents who indicated that they were not currently employed (n = 93), 20% (n = 53) were unemployed and looking for work, 6% (n = 17) were unemployed and not looking for work, 6% (n = 16) were fulltime students, and 3% (n = 7) were retired.

When asked if employed respondents were currently working on a list of identified regional projects (n = 231), 11% (n = 25) indicated that they were working on Rio Tinto Alcan, 6% (n = 13) on LNG Canada Export Terminal, 4% (n = 9) on Kitimat LNG, 3% (n = 6) on Coastal GasLink, and less than 1% (n = 1) on the Project. The remaining 76% (n = 177) indicated that they worked on other projects/with other employers. Employed respondents were also asked to identify whether their role was unionized (n = 210), to which 37% (n = 77) of respondents indicated their role was unionized while 63% (n = 133) of respondents indicated that their role was not unionized.

Respondents to the employment survey were asked to identify their highest level of education and whether they held a valid drivers license (potential barriers to employment). Of the 266 respondents, 3% (n = 9) held a degree at or above the undergraduate level, 3% (n = 7) were Red Seal/Journeyman certified, 35% (n = 92) held a certificate or diploma/associate degree, 7% (n = 19) completed a trade apprenticeship, and 52% (n = 139) held a high school diploma or equivalent certificate. Approximately 72% (n = 191) of respondents (n = 266) had a valid drivers license, 28% (n = 75) did not. For drivers with a valid license (n = 191), class five was the most common (69%, n = 131), followed by class seven (25%, n = 48). Less than 1% of respondents held a class six license (n = 1). The remainder of respondents with a valid driver's license (6%; n = 11) held a commercial class license (class one, two, three, or four).

Labour Market Outlook

The *British Columbia Labour Market Outlook* provides a 10-year forecast for the supply and demand of labour in the province, with the latest publication covering the 2019 to 2029 period. Illustrated in Figure 7.8.8, between 2019 and 2029 Job openings, most of which are attributable to expansion demand (replacement demand remains relatively constant), are estimated to increase between 2019 and 2020, following which a substantial decline is expected between 2020 and 2023 dipping well below 2019 levels. After 2023, job openings increase to levels similar to 2019 by 2026 after which a more or less constant rate of job openings are forecast until 2029. Overall, job openings in the North Coast and Nechako Economic Region are expected to increase at an average annual rate of 0.3% for a total of 9,900 job openings by 2029 (PBC 2020).

FIGURE 7.8.8 FORECAST CHANGE IN JOB OPENINGS, EXPANSION DEMAND AND REPLACEMENT DEMAND, NORTH COAST AND NECHAKO ECONOMIC REGION, 2019-2029

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Job Openings	1,997	4,185	3,813	-883	-1,992	-1,096	841	1,399	1,495	1,178	967
Expansion Demand	1,180	3,307	2,876	-1,816	-2,887	-1,958	-11	543	632	313	105
Replacement Demand	817	878	938	934	895	862	853	856	863	865	862

SOURCE: Ministry of Advanced Education and Skills Training (MAEST) 2021a

Table 7.8.10 provides summary information on the number of job openings by top five occupations across all industry sectors and for the construction sector within the North Coast and Nechako Economic Region between 2019 and 2029. The most in demand occupation between 2019 and 2029 is transport truck drivers (NOC 7511) with an estimated 485 openings followed by longshore workers (NOC 7451) with 220 job openings (MAEST 2021b). Within the construction industry (selected due to recent large scale construction work [e.g., LNG Canada] occurring within the North Coast and Nechako Economic Region) the most in demand occupation is carpenters (NOC 7271) with 130 job openings between 2019 and 2020 followed by heavy equipment operators (except cranes) (NOC 7521) with 82 openings (MAEST 2021b).

TABLE 7.8.10 JOB OPENINGS BY TOP FIVE OCCUPATIONS, NORTH COAST AND NECHAKO ECONOMIC REGION 2019-2029, ALL SECTORS AND CONSTRUCTION SECTOR

Occupation (NOC)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2019-2029
All Industries											
Transport truck drivers (7511)	119	112	7	12	18	39	48	55	42	32	485
Longshore workers (7451)	33	26	26	42	28	14	12	16	13	11	220
Janitors, caretakers and building superintendent (6733)	80	71	-9	-28	-14	18	27	29	25	21	220
Retail and wholesale trade managers (0621)	79	82	-24	-49	-28	17	33	37	29	24	199
General office support workers (1411)	67	58	-7	-21	-11	14	22	24	19	17	182
Construction											
Carpenters (7271)	239	174	-101	-191	-114	19	44	37	16	8	130
Heavy equipment operators (except crane) (7521)	112	83	-43	-85	-50	11	22	18	9	5	82
Construction trades helpers and labourers (7611)	180	129	-80	-148	-89	13	31	26	11	5	78
Construction managers (0711)	57	42	-21	-42	-25	6	12	11	6	4	52
Transport truck drivers (7511)	58	43	-22	-43	-26	6	11	10	5	3	44
SOURCE: MAEAST 2021b											

Worker Mobility

Worker mobility within the LAA, RAA and British Columbia is summarized in Table 7.8.11 (total population) and Table 7.8.12 (Indigenous population). In 2016, most resident workers of the LAA and RAA lived and worked in the same census subdivision (i.e., their community of residence). A greater proportion of Indigenous workers commuted to other communities in their own census division (i.e., their region of residence) than non-Indigenous workers. Less than 2% of the non-Indigenous population lived and worked in different census divisions and/or provinces/territories than their home residence.

TABLE 7.8.11 TOTAL POPULATION—WORKER MOBILITY, 2015

Sector	LAA		RAA		British Columbia	
	Persons	%	Persons	%	Persons	%
Commute within census subdivision of residence	7,460	76.2	12,295	69.7	864,420	48.9
Commute to a different census subdivision within census division of residence	2,135	21.8	4,975	28.2	807,835	45.7
Commute to a different census subdivision and census division within province or territory of residence	140	1.4	285	1.6	81,750	4.6
Commute to a different province or territory	50	0.5	95	0.5	12,955	0.7
Total	**9,785**	**100.0**	**17,650**	**100.0**	**1,766,960**	**100.0**
SOURCE: Statistics Canada 2017						

TABLE 7.8.12 INDIGENOUS POPULATION—WORKER MOBILITY, 2015

Sector	LAA		RAA		British Columbia	
	Persons	%	Persons	%	Persons	%
Commute within census subdivision of residence	35	63.6	1,350	81.8	5,250	87.9
Commute to a different census subdivision within census division of residence	20	36.4	235	14.2	720	12.1
Commute to a different census subdivision and census division within province or territory of residence	-	-	55	3.3	-	-
Commute to a different province or territory	-	-	10	0.6	-	-
Total	**55**	**100.0**	**1,650**	**100.0**	**5,970**	**100.0**
NOTE: - Data not available SOURCE: Statistics Canada 2018						

Educational Attainment

Educational attainment, by highest level achieved, within the LAA, RAA and British Columbia, are summarized in Table 7.8.13 (total population) and Table 7.8.14 (Indigenous population). As of 2016, 48.0% of the LAA population and 45.6% of the RAA population had obtained some form of post-secondary education (i.e., education above the high school or equivalent level). Among the Indigenous population, 36.4% of the LAA population and 32.8% of the RAA population had obtained some form of post-secondary education. Educational attainment above the secondary level among the total and Indigenous populations of the LAA and RAA are lower than provincial averages (55.0% and 39.8%, respectively).

About 13% of the total population (11% of the Indigenous population) of the LAA and RAA hold an apprenticeship or trades certificate or diploma, 20% (17% of the LAA Indigenous population and 15% of the RAA Indigenous population) a college, or other non-university certificate or diploma, and 15% (8% of the Indigenous population) a university degree or certificate at or above the bachelor level. Males account for the greatest proportion of the population with an apprenticeship or trades certificate or diploma, with females accounting for the greatest proportion of the population with all other forms of post-secondary education. Females also account for the greatest proportion of the population, total and Indigenous, with secondary education.

TABLE 7.8.13 TOTAL POPULATION—EDUCATIONAL ATTAINMENT

	LAA				RAA				British Columbia			
	Total		% Male	% Female	Total		% Male	% Female	Total		% Male	% Female
	Persons	%			Persons	%			Persons	%		
No certificate, diploma or degree	4,555	22.5	51.6	48.4	9,105	24.6	51.2	48.8	601,635	15.5	50.7	49.3
Secondary (high) school diploma or equivalent	5,955	29.4	47.9	52.1	11,065	29.8	47.6	52.4	1,138,565	29.4	48.3	51.7
Apprenticeship or trades certificate or diploma	2,595	12.8	78.6	21.4	4,790	12.9	80.2	19.8	338,985	8.8	73.8	26.2
College, CEGEP or other non-university certificate or diploma	4,065	20.1	44.4	55.6	7,010	18.9	43.6	56.4	700,945	18.1	40.0	60.0
University certificate or diploma below bachelor level	520	2.6	29.8	70.2	910	2.5	31.3	68.7	138,010	3.6	39.4	60.6
University certificate, diploma or degree at bachelor level or above	2,540	12.6	42.3	57.7	4,205	11.3	41.4	58.6	952,235	24.6	46.5	53.5
Total	**20,230**	**100.0**	**50.8**	**49.2**	**37,085**	**100.0**	**50.8**	**49.2**	**3,870,375**	**100.0**	**48.6**	**51.4**

NOTES:

Values shown in “Total” columns are the sum of male and female census subdivision subsets taken from Statistics Canada’s 2016 Census. Due to Statistics Canada rounding (Statistics Canada 2019b) totals may not exactly align with those shown on census subdivision Census Profiles and may not sum across tables.

Totals may not sum across tables due to Statistics Canada data suppression.

SOURCE: Statistics Canada 2017

TABLE 7.8.14 INDIGENOUS POPULATION – EDUCATIONAL ATTAINMENT

	LAA				RAA				British Columbia			
	Total		% Male	% Female	Total		% Male	% Female	Total		% Male	% Female
	Persons	%			Persons	%			Persons	%		
No certificate, diploma or degree	1,450	34.8	49.3	50.7	3,830	39.4	49.3	50.7	59,955	29.9	52.0	48.0
Secondary (high) school diploma or equivalent	1,200	28.8	47.5	52.5	2,710	27.9	46.3	53.7	60,865	30.3	47.6	52.4
Apprenticeship or trades certificate or diploma	475	11.4	67.4	32.6	1,110	11.4	74.3	25.7	21,945	10.9	67.6	32.4
College, CEGEP or other non-university certificate or diploma	725	17.4	40.7	59.3	1,410	14.5	37.6	62.4	35,330	17.6	33.9	66.1
University certificate or diploma below bachelor level	115	2.8	17.4	82.6	260	2.7	28.8	71.2	6,295	3.1	30.7	69.3
University certificate, diploma or degree at bachelor level or above	200	4.8	37.5	62.5	405	4.2	38.3	61.7	16,265	8.1	34.3	65.7
Total	**4,165**	**100.0**	**47.9**	**52.1**	**9,725**	**233.5**	**48.6**	**51.4**	**200,655**	**4,817.6**	**47.1**	**52.9**

NOTES:

Values shown in “Total” columns are the sum of male and female census subdivision subsets taken from Statistics Canada’s 2016 Census. Due to Statistics Canada rounding (Statistics Canada 2019b) totals may not exactly align with those shown on census subdivision Census Profiles and may not sum across tables.

Totals may not sum across tables due to Statistics Canada data suppression.

SOURCE: Statistics Canada 2017

Indigenous Skills and Training Programs

Haisla Nation identify economic development as one of nine interconnected community goals in their Comprehensive Community Plan to promote economic development that respects community values and creates employment, and skills development opportunities for members (Haisla Nation 2020). The Haisla Nation Education and Employment Department offer employment services for community members, including job coaches, work placement coordinators, and administrative liaison (Haisla Nation 2021). They also offer capacity development funds and employment supports for community members, including the Bridge Funding to New Employment Program, and support with resume development, personal protective equipment/work attire, internships and mentorships, employment referrals, resource referrals, wage subsidy, reimbursement of student loans, criminal record check fares, medical clearance fees, and union dues (Haisla Nation 2021). The Haisla Nation Council has established partnership agreements with over 25 businesses operating in Haisla territory (Haisla Nation 2021).

The Kitselas Development Limited Partnership and the Kitselas Development Corporation focus on building resilience and independence among Kitselas First Nation through development of sustainable economic business opportunities and job creation for Kitselas members (Kitselas First Nation 2020b). The Kitselas Development Corporation is focused on building Kitselas-owned entities to complement business and contracting opportunities in Kitselas territory. The Kitselas Development Corporation aims to lease Kitselas lands to potential business partners for revenue and profit sharing (Kitselas First Nation 2020b).

The Kitsumkalum Land Code aims to support the Kitsumkalum First Nation's economy and employment opportunities by creating conditions that are favorable for local businesses, identifying opportunities to partner with companies, industry, and municipalities, and improve communication between proponents (Kitsumkalum First Nation 2020d). Kitsumkalum Social Development Department strives to eradicate poverty experienced by Nation members living on-reserve and offers a range of programs to support eligible adult and dependent Nation members (Kitsumkalum First Nation 2020d). Programs include training employment support and employment initiatives (Kitsumkalum First Nation 2020d). Kitsumkalum First Nation operates a series of businesses within their territory (Kitsumkalum First Nation 2020d).

The elected Hartley Bay Band Council operates an Economic Development Department, which manages Gitga'at First Nation's business affairs to benefit the people of the Nation and has negotiated numerous Economic Development and Employment and Training Agreements in partnership with neighboring First Nations communities, the provincial government, and industry (BCAFN 2021).

Gitxaała Nation have developed an active (and evolving) Education, Training, and Employment Plan 2020-2030 to address barriers that Gitxaała members have historically faced with education and help their community members pursue their training and education goals (Gitxaała Nation 2021). Gitxaała Nation develops employment and training opportunities through culturally relevant social and economic programs and services and maintains an active list of employment opportunities for community members living on-reserve (Gitxaała Nation 2021).

Lax Kw'alaams Business Development LP works to build partnerships that can sustain an environmentally and economically sustainable future in order to enhance the quality of life for all the members of the Lax Kw'alaams Band (Lax Kw'alaams 2021). Lax Kw'alaams has launched an employment and training database in partnership with EXPORT Database (a skills inventory and vendor registration database) that will support members create work profiles, develop resumes, match jobs and training opportunities to work profiles, and allow businesses to search contract opportunities (Export Data 2021).

The Metlakatla Development Corporation is an independent business arm of the Governing Council, which was developed to oversee the community economic initiatives (Metlakatla 2021). With a mandate to grow the business base through strategic joint venture opportunities within Metlakatla traditional territory the Metlakatla Development Corporation identifies new business opportunities, maintain and strengthen existing business activities, and identify capacity building and skills training opportunities (Metlakatla 2021). The Metlakatla Development Corporation builds partnerships with local and regional businesses to allow for active participation in a variety of local and regional economic opportunities and provide access to employment to members (Metlakatla 2021).

The Haida House of Assembly, through the Haida Independence Project, approved the creation of the Haida Enterprise Corporation as a National Corporation in to manage, grow, and govern the business enterprises of the Haida Nation (HaiCo 2021).

The Métis Nation British Columbia Ministry of Employment and Training operates a number of key programs and services throughout the province (MNBC 2021). The Métis Nation British Columbia Ministry of Employment and Training's mandate is to improve the employment potential, earning capacity, and self-sufficiency of Métis people in British Columbia. The Métis Nation British Columbia administers the Métis Employment and Training Program, which helps support their mandate (MNBC 2021).

The Indigenous Skills and Employment Training (ISET) Program, implemented by Employment and Social Development Canada and co-developed with Indigenous partners, provides funding to Indigenous service delivery organizations that design and deliver job training to First Nations, Inuit, Métis, and urban/non-affiliated Indigenous people in their communities (Government of Canada 2021). The ISET Program incorporates a new distinctions-based strategy that recognizes, respects, and reflects Canada's Indigenous peoples, specifically the First Nations, Inuit, and Métis and addresses urban/non-affiliated service delivery needs.

In British Columbia, there are 23 organizations that provide ISET programs and services and provide opportunities for skill development, job training, and financial aid (WorkBC 2021). In the RAA, there is one ISET partnership in Prince Rupert; the Tribal Resources Investment Corporation (TRICORP). TRICORP is a lending institution owned by five First Nations' economic development corporations: the Kitkatla-Metlakatla Economic Development Corporation, Nisga'a Lisims Government, Haida Gwaii Economic Development Corporation, and the Gitks'an Wet'suwet'en Development Corporation. TRICORP focuses on development lending to increase the number of permanent jobs, reduce unemployment and facilitate business ownership among First Nations people. Applicants must be of Aboriginal descent and the activities funded must take place within the region (TRICORP 2021). Current programs offered by TRICORP include: business development loans, employment skills and training services, Indigenous entrepreneurship training, workplace essential skills trades training, youth employment and skills training and pre-employment support programs (TRICORP 2021).

Individual Income and Income Equality

Income information for the LAA, RAA and British Columbia is summarized in Table 7.8.15 (total population) and Table 7.8.16 (Indigenous population). Total income is presented for persons aged 15 years and older and is the sum of regular and recurring monetary receipts from part-time and full-time employment income (e.g., wages, tips, and commissions), income from investment sources (e.g., dividends, guaranteed investment certificates, and mutual funds), income from employer and personal pension sources (e.g., private pensions and payments from annuities and registered retirement income funds), other regular cash income (e.g., child support payments and spousal support payments), and income from government sources (e.g., social assistance, Employment Insurance benefits, Old Age Security benefits, and Canada Pension Plan benefits and disability income).

As of 2015, the mean total income in the LAA was $38,752 ($32,399 among the Indigenous population) with males earing $47,146 ($39,646 among Indigenous males) and females $29,695 ($25,922 among Indigenous females). The mean employment income was greater, at $56,201 ($47,997 among the Indigenous population), with males earning $64,259 ($55,550 among Indigenous males) and females $44,760 ($38,679 among Indigenous females). For both the total and Indigenous populations (male and female), mean total incomes in the LAA were less than provincial means.

In the RAA, the mean individual income was $40,954 ($31,940 among the Indigenous population), with males earning $49,595 ($38,712 among Indigenous males) and females $31,632 ($25,573 among Indigenous females). The mean employment income was greater at $53,707 ($47,297 among the Indigenous population), with males earning $62,076 ($49,231 among Indigenous males) and females $42,752 ($35,547 among Indigenous females). For the male and female total and Indigenous populations, mean employment incomes in the RAA were less than provincial means.

In terms of income equity, average total income and average employment income in the LAA and RAA are less for Indigenous than non-Indigenous persons and lower for females than males with Indigenous females earning the lowest average income. Disparities in income also exist within each category (total and employment income) among both men and women as illustrated through differences in mean and median total and employment incomes within the LAA, RAA and British Columbia (Table 7.8.15 and Table 7.8.16).

TABLE 7.8.15 TOTAL POPULATION—INDIVIDUAL INCOME, 2015

	Mean Total Income			Median Total Income			Mean Employment Income			Median Employment Income		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Kitamaat 2	33,562	42,654	23,753	24,064	33,600	17,888	48,297	56,237	35,708	36,992	43,392	32,149
Kitimat DM	58,180	75,767	38,598	46,678	62,512	27,333	89,940	104,455	65,870	78,623	93,291	54,250
Terrace CA	45,568	55,081	36,002	36,185	47,101	30,081	61,889	71,228	50,323	55,421	66,477	45,021
Kitselas 1	27,670	30,527	24,847	21,152	23,104	19,968	38,527	39,267	37,503	31,104	32,320	27,968
Kitsumkaylum 1	28,781	31,700	25,274	21,696	27,072	19,520	42,353	50,109	34,398	37,760	44,416	33,408
LAA	**38,752**	**47,146**	**29,695**	**N/A**	**N/A**	**N/A**	**56,201**	**64,259**	**44,760**	**N/A**	**N/A**	**N/A**
Kitimat-Stikine C (Part 1) RDA	47,909	57,158	38,452	38,628	51,095	32,792	61,490	70,652	50,525	57,878	67,427	45,425
Kitimat-Stikine C (Part 2) RDA	-	-	-	-	-	-	-	-	-	-	-	-
Kitimat-Stikine E RDA	41,430	50,503	31,262	34,171	45,082	27,320	54,683	62,656	44,403	48,005	59,472	39,918
Prince Rupert CY	45,788	55,404	35,971	34,535	41,841	29,648	44,916	55,758	33,059	33,557	42,770	27,275
Port Edward DM	39,701	47,564	30,527	27,136	38,656	21,952	41,267	48,319	32,976	27,712	38,784	19,776
Skeena-Queen Charlotte A RDA	-	-	-	-	-	-	-	-	-	-	-	-
Skeena-Queen Charlotte C RDA	-	-	-	-	-	-	-	-	-	-	-	-
Lax Kw'alaams 1	20,362	17,949	23,014	16,096	15,168	16,864	18,577	15,896	21,765	9,632	8,800	11,584
S1/2 Tsimpsean 2	-	-	-	-	-	-	-	-	-	-	-	-
Dolphin Island 2	17,238	15,890	18,717	13,872	12,896	15,072	20,849	19,291	22,968	17,536	16,032	19,584

TABLE 7.8.15 TOTAL POPULATION—INDIVIDUAL INCOME, 2015

	Mean Total Income			Median Total Income			Mean Employment Income			Median Employment Income		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Kulkayu (Hartley Bay) 4	-	-	-	-	-	-	-	-	-	-	-	-
RAA	**40,954**	**49,595**	**31,632**	**N/A**	**N/A**	**N/A**	**53,707**	**62,076**	**42,752**	**N/A**	**N/A**	**N/A**
British Columbia	**45,616**	**54,797**	**36,901**	**32,983**	**40,306**	**27,489**	**64,625**	**72,840**	**53,801**	**53,940**	**61,004**	**47,039**

NOTES:

- Data not available

N/A = Not applicable

Total income is presented for persons aged 15 years and older and is the sum of regular and recurring monetary receipts from part-time and full-time employment income (e.g., wages, tips, and commissions), income from investment sources (e.g., dividends, guaranteed investment certificates, and mutual funds), income from employer and personal pension sources (e.g., private pensions and payments from annuities and registered retirement income funds), other regular cash income (e.g., child support payments and spousal support payments), and income from government sources (e.g., social assistance, Employment Insurance benefits, Old Age Security benefits, and Canada Pension Plan benefits and disability income).

Employment income is the sum of wages, salaries, tips, commissions, and net income from self-employment.

Values shown in “Total” columns are the sum of male and female census subdivision subsets taken from Statistics Canada’s 2016 Census. Due to Statistics Canada rounding (Statistics Canada 2019b) totals may not exactly align with those shown on census subdivision Census Profiles and may not sum across tables.

Totals may not sum across tables due to Statistics Canada data suppression.

SOURCE: Statistics Canada 2018

TABLE 7.8.16 INDIGENOUS POPULATION—INDIVIDUAL INCOME, 2015

	Mean Total Income			Median Total Income			Mean Employment Income			Median Employment Income		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Kitamaat 2	33,469	42,507	23,709	24,064	33,664	17,856	48,297	56,237	35,708	36,992	43,392	32,149
Kitimat DM	40,163	56,251	28,758	28,378	46,759	20,725	62,062	75,309	46,316	57,694	67,689	39,170
Terrace CA	32,861	38,923	27,035	23,675	29,707	19,587	48,500	56,355	39,470	38,352	40,566	35,032
Kitselas 1	27,057	29,715	24,531	20,864	22,336	19,904	38,771	39,740	37,503	31,104	32,320	27,968
Kitsumkaylum 1	28,443	30,832	25,576	21,568	26,432	19,648	42,353	50,109	34,398	37,760	44,416	33,408
LAA	**32,399**	**39,646**	**25,922**	**N/A**	**N/A**	**N/A**	**47,997**	**55,550**	**38,679**	**N/A**	**N/A**	**N/A**
Kitimat-Stikine C (Part 1) RDA	34,504	43,708	26,141	27,701	39,389	25,442	46,447	47,278	44,732	41,180	41,198	37,873
Kitimat-Stikine C (Part 2) RDA	-	-	-	-	-	-	-	-	-	-	-	-
Kitimat-Stikine E RDA	34,235	40,620	26,306	25,534	35,168	18,780	46,274	52,294	39,766	39,173	52,487	32,714
Prince Rupert CY	33,729	39,666	28,505	24,054	28,506	22,659	54,896	65,753	42,029	47,089	61,182	36,833
Port Edward DM	22,998	26,184	19,600	13,438	23,764	12,440	38,072	-	-	45,413	-	-
Skeena-Queen Charlotte A RDA	-	-	-	-	-	-	-	-	-	-	-	-
Skeena-Queen Charlotte C RDA	-	-	-	-	-	-	-	-	-	-	-	-
Lax Kw'alaams 1	19,117	16,854	21,589	15,696	14,752	16,544	38,758	35,459	40,620	35,371	28,992	35,541
S1/2 Tsimpsean 2	-	-	-	-	-	-	-	-	-	-	-	-
Dolphin Island 2	16,356	15,047	17,795	13,088	12,512	14,176	34,862	31,057	37,906	31,808	27,136	32,320

TABLE 7.8.16 INDIGENOUS POPULATION—INDIVIDUAL INCOME, 2015

	Mean Total Income			Median Total Income			Mean Employment Income			Median Employment Income		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Kulkayu (Hartley Bay) 4	-	-	-	-	-	-	-	-	-	-	-	-
RAA	**31,940**	**38,712**	**25,573**	**N/A**	**N/A**	**N/A**	**47,297**	**49,231**	**35,547**	**N/A**	**N/A**	**N/A**
British Columbia	**33,864**	**39,456**	**28,938**	**23,857**	**27,183**	**21,930**	**52,200**	**59,495**	**44,159**	**44,885**	**52,392**	**39,308**

NOTES:

- Data not available

N/A = Not applicable

Total income is presented for persons aged 15 years and older and is the sum of regular and recurring monetary receipts from part-time and full-time employment income (e.g., wages, tips, and commissions), income from investment sources (e.g., dividends, guaranteed investment certificates, and mutual funds), income from employer and personal pension sources (e.g., private pensions and payments from annuities and registered retirement income funds), other regular cash income (e.g., child support payments and spousal support payments), and income from government sources (e.g., social assistance, Employment Insurance benefits, Old Age Security benefits, and Canada Pension Plan benefits and disability income).

Employment income is the sum of wages, salaries, tips, commissions, and net income from self-employment.

Values shown in “Total” columns are the sum of male and female census subdivision subsets taken from Statistics Canada’s 2016 Census. Due to Statistics Canada rounding (Statistics Canada 2019b) totals may not exactly align with those shown on census subdivision Census Profiles and may not sum across tables.

Totals may not sum across tables due to Statistics Canada data suppression.

SOURCE: Statistics Canada 2018

Low-Income Status

Statistics Canada has adapted two standardized measures of low-income, LIM-AT and LICO-AT. Low-income measure after tax is used to identify the proportion of a population that falls below the after-tax low-income threshold (Table 7.8.17) (Statistics Canada 2021e). Low-income measure after tax is used to identify the proportion of the low-income population that falls below the after-tax income threshold (see Table 7.8.18) where it is likely that an economic person/household would have to devote a larger share of income than average (specifically, 20 percentage points more than average) on basic cost of living expenses (i.e., food, shelter, and clothing) (Statistics Canada 2021f).

TABLE 7.8.17 LIM-AT THRESHOLDS, 2015

Family size	After tax threshold
1 person	22,133
2 persons	31,301
3 persons	38,335
4 persons	44,266
5 persons	49,491
6 persons	54,215
7 persons or more	58,588
SOURCE: Statistics Canada 2016	

TABLE 7.8.18 LICO-AT THRESHOLDS, 2015

Family size	Rural Area	Population under 30,000	Population 30,000 to 99,999	Population 100,000 to 499,999	Population 500,000 and over
1 person	13,335	15,261	17,025	17,240	20,386
2 persons	16,230	18,576	20,722	20,982	24,811
3 persons	20,211	23,129	25,802	26,128	30,895
4 persons	25,213	28,856	32,191	32,596	38,544
5 persons	28,711	32,859	36,657	37,118	43,890
6 persons	31,841	36,441	40,654	41,165	48,675
7 persons or more	34,972	40,024	44,649	45,211	53,460
SOURCE: Statistics Canada 2021g					

The number persons falling below LIM-AT and LICO-AT thresholds and the prevalence of low-income (based on these measures) for LAA and RAA communities is presented in Table 7.8.19. Statistics Canada does not apply LIM-AT or LICO-AT concepts in territories or Indigenous communities because substantial in-kind transfers (e.g., subsidized housing and band housing), barter economies and consumption from own production (e.g., hunting, farming, and fishing) make the interpretation of low-income statistics more nuanced for these areas (Statistics Canada 2021e). For these reasons LAA and RAA summary statistics have not be produced. Only those non-Indigenous communities for which data is available are presented in Table 7.8.19.

TABLE 7.8.19 LIM-AT AND LICO-AT STATISTICS, LAA/RAA AND BRITISH COLUMBIA (2016)

	Total		Male		Female	
	Persons	Prevalence (%)	Persons	Prevalence (%)	Persons	Prevalence (%)
LIM-AT						
Kitimat DM	670	8.3	320	7.6	350	9.1
Terrace CA	2,105	13.7	1,000	12.9	1,100	14.4
Kitimat-Stikine C (Part 1) RDA	290	10.3	150	10.5	140	10.1
Kitimat-Stikine E RDA	590	14.9	295	14.3	300	15.7
Prince Rupert CY	2,130	17.7	1,025	16.8	1,105	18.6
Port Edward DM	75	15.2	40	16.3	35	15.9
British Columbia	694,960	15.5	325,015	14.8	369,940	16.2
LICO-AT						
Kitimat DM	315	3.9	155	3.7	160	4.1
Terrace CA	915	6.0	490	6.3	425	5.6
Kitimat-Stikine C (Part 1) RDA	130	4.6	75	5.2	55	4.0
Kitimat-Stikine E RDA	260	6.5	140	6.8	120	6.3
Prince Rupert CY	860	7.1	420	6.9	440	7.4
Port Edward DM	25	6.5	15	6.1	10	4.5
British Columbia	491,645	11.0	236,430	10.8	255,215	11.2
SOURCE: Statistics Canada 2017						

Cost-of-Living

Table 7.8.20 provides a summary of the monthly cost-of-living in Kitimat, Terrace and four reference communities across northern British Columbia (Prince Rupert, Smithers, Prince George, and Fort St. John). Estimates were taken from the province of British Columbia's online Cost-of-Living Calculator (PBC 2021b) from WorkBC with the following variables:

- Annual household income of $95,000—the average household income in 2015 for communities included in Table 7.8.20 was $95,778 (Kitimat = $107,834; Terrace = $90,737; Prince Rupert = $87,489, Smithers = $84,461, Prince George = $89,945, Fort St. John = $114,201) (Statistics Canada 2017)
- Average household size of three persons (two adults and one dependent)—the average household size in 2016 for these communities was 2.4 persons (Kitimat = 2.3 persons; Terrace = 2.5 persons; Prince Rupert = 2.4 persons, Smithers = 2.3 persons, Prince George = 2.4 persons, Fort St. John = 2.5 persons) (Statistics Canada 2017)
- Housing—Own/rent an average size house (2,000 sq. ft.)
- Transportation—One car; daily commute of 14.5 km (5,292.5 km/year)

TABLE 7.8.20 MONTHLY COST-OF-LIVING BY TENURE, KITIMAT, TERRACE AND REFERENCE COMMUNITIES IN NORTHERN BRITISH COLUMBIA

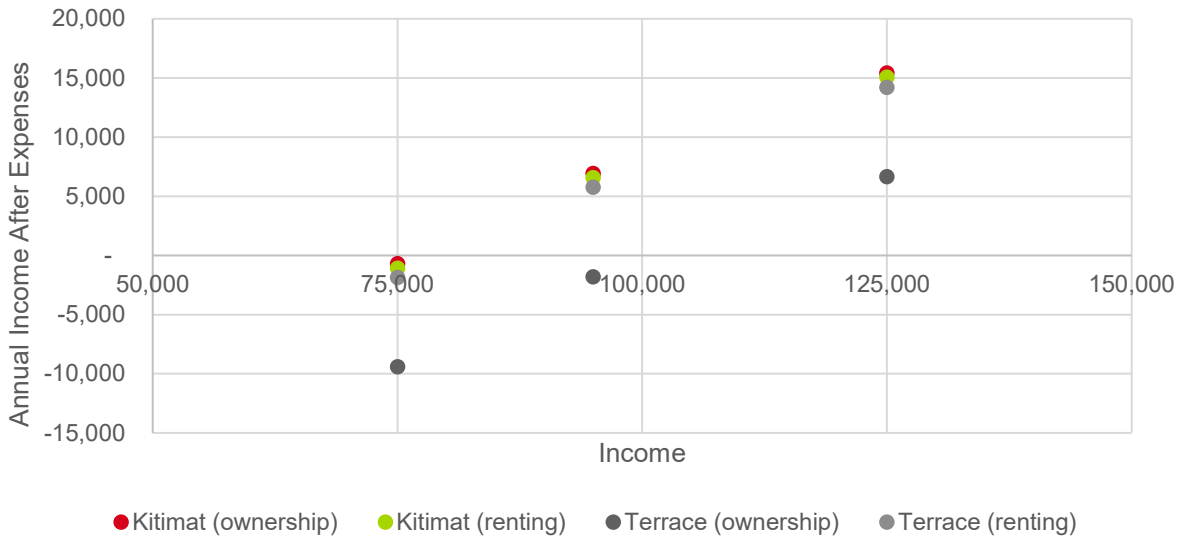
	LAA Communities				Reference Communities							
	Kitimat		Terrace		Prince Rupert		Smithers		Prince George		Fort St. John	
	Own	Rent	Own	Rent	Own	Rent	Own	Rent	Own	Rent	Own	Rent
Housing	2,080	2,110	2,796	2,166	2,445	2,039	2,411	2,224	2,984	2,360	3,153	2,353
Transportation	272	272	269	269	276	276	266	266	260	260	259	259
Consumables	2,827	2,827	2,843	2,843	2,857	2,857	2,849	2,849	2,772	2,772	2,911	2,911
Health	219	219	218	218	219	219	217	217	217	217	215	215
Taxes	1,940	1,940	1,940	1,940	1,940	1,940	1,940	1,940	1,940	1,940	1,940	1,940
Total Cost of Living	**7,338**	**7,368**	**8,066**	**7,436**	**7,737**	**7,331**	**7,683**	**7,496**	**8,173**	**7,549**	**8,478**	**7,678**
Cost of living differential, by tenancy type, compared to Kitimat	$0	$0	$728	$68	$399	-$37	$345	$128	$835	$181	$1,140	$310
Cost of Living Index, by tenancy type (Kitimat = 100)	100	100	110	101	105	99	105	102	111	102	116	104

SOURCE: PBC 2021b

Based on British Columbia's calculator (and above noted variables), housing costs account for about 30% of the monthly estimated cost-of-living, transportation 4%, consumables 40% and taxes 25%. From an index perspective (holding Kitimat as reference [index score of 100]), the most affordable community included in Table 7.8.20 in terms of ownership is Kitimat (index score of 100) followed by Smithers and Prince Rupert (each with an index score of 105) and Terrace (index score of 110). At the high-end, the cost of living in Fort St. John is 16% (index score of 116) greater than that in Kitimat. For renters, the most affordable community is Prince Rupert (index score of 99) followed by Kitimat (index score of 100) and Terrace (index score of 101). At the high-end, the cost of living in Fort St. John is 4% (index score of 104) greater than in Kitimat.

Illustrated in Figure 7.8.9, household disposable income (income after basic expenses) in Kitimat and Terrace increases with income. This relationship supports the notion that lower income families spend a greater proportion of income on basic expenses and are therefore more suspectable to inflationary changes in costs, in particular consumables and housing (two the of largest basic cost of living expenses). Disposable income estimates shown in Figure 7.8.9 were estimated using the Province of British Columbia's Cost-of-Living calculator using the same inputs as described above for an annual income of $95,000, but additionally modelled for annual incomes of $75,000 and $125,000 in Kitimat and Terrace.

FIGURE 7.8.9 ANNUAL INCOME AFTER BASIC COST-OF-LIVING EXPENSES BY TENURE, KITIMAT AND TERRACE (ANNUAL INCOME OF $75K, $95K, AND $125K)



SOURCE: PBC 2021b

Housing Affordability

Demonstrated above, housing costs account for approximately 30% of the total cost of living in Kitimat, Terrace and reference communities across northern British Columbia. For a family of three, housing costs account for the second largest percentage of cost-of-living expenses second only to consumables. Table 7.8.21 shows real estate sales and price data for Q1 2020 to Q1 2021 for Kitimat, Terrace and reference communities in northern British Columbia, taken from the British Columbia Northern Real Estate Board of the Canadian Real Estate Association.

Year-over-year changes in housing sales between Q1 2020 and Q1 2021 were greatest in Kitimat (+227.3%) followed by Fort St. John (+114.0%) and Prince George (+78.7%) (CREA 2021). Median sale prices increased the most in Prince Rupert (+40.3%, from $290,000 to $406,750) followed by Smithers and area (+21.5%, from $329,500 to $400,500) and Terrace (+19.0%, from $386,450 to $460,000) (CREA 2021). As of Q1 2021 median sales prices in Terrace were the highest among all reference communities.

TABLE 7.8.21 REAL ESTATE SALES AND PRICES, KITIMAT, TERRACE AND REFERENCE COMMUNITY IN NORTHERN BRITISH COLUMBIA (Q1 2020 – Q1 2021)

	Unit Sales			Median Sale Price ($)		
	Q1-2021	Q1-2020	Percent Change (%)	Q1-2021	Q1-2020	Percent Change (%)
Kitimat	36	11	227.3	375,000	325,000	15.4
Terrace	41	40	2.5	460,000	386,450	19.0
Prince Rupert	44	30	46.7	406,750	290,000	40.3
Smithers and area	31	32	-3.1	400,500	329,500	21.5
Prince George	243	136	78.7	420,00	354,000	18.6
Fort St. John	107	50	114.0	379,000	381,000	-0.5
SOURCE: CREA 2021						

The Canada Mortgage and Housing Corporation and Statistics Canada measure housing affordability through the shelter-cost-to-income ratio. It is calculated by dividing average monthly shelter costs by average monthly total household income and multiplying the result by 100 (Statistics Canada 2019c). The shelter-cost-to-income ratio indicates that households spending more than 30% of their income on housing are likely to experience housing affordability challenges; shelter-cost-to-income ratio does not indicate if a household can afford basic non-housing expenses such as food and transportation after paying housing expenses (CMHC 2021). For LAA and RAA communities with available data, in both 2011 and 2016 the proportion of residents in owner-occupied dwellings spending 30% or more of their income on housing was less than the British Columbia average (Table 7.8.22). Except for Kitimat-Stikine E RDA in 2011 (47.8%), the proportion of residents of tenant-occupied dwellings in the LAA and RAA in 2011 and 2016 spending 30% or more of their income on housing was less than the provincial average (45.3% in both 2011 and 2016). However, recent industrial development has led to increased demand for housing (Section 7.11: Infrastructure and Services) and upward pressure on housing prices.

TABLE 7.8.22 2011-2016 SHELTER COSTS AND HOUSEHOLDS SPENDING GREATER THAN 30% OF INCOME ON SHELTER COSTS

	Year	Median Income of Households	Owner-Occupied Dwellings			Tenant-Occupied Dwellings		
			Households	Median monthly payments ($)	Percent (%) spending 30% or more of income on shelter costs	Households	Median monthly payments ($)	Percent (%) spending 30% or more of income on shelter costs
Kitamaat 2	2011	39,591	150	-	-	15	-	-
	2016	57,344	145	-	-	25	-	-
Kitimat DM	2011	65,998	2810	608	10.9	835	600	33.5
	2016	92,365	2785	743	6.5	715	933	34.3
Terrace CA	2011	57,070	4440	633	10.7	1790	706	45.3
	2016	73,856	4495	954	9.2	1865	1052	35.1
Kitselas 1	2011	-	55	-	-	20	-	-
	2016	46,208	40	-	-	10	-	-
Kitsumkaylum 1	2011	-	-	-	-	-	-	-
	2016	57,472	90	-	-	10	-	-
Kitimat-Stikine C (Part 1) RDA	2011	58,444	850	633	7.2	245	734	24.5
	2016	84,651	995	919	12	145	1036	10.7
Kitimat-Stikine C (Part 2) RDA	2011	-	-	-	-	-	-	-
	2016	-	-	-	-	-	-	-
Kitimat-Stikine E RDA	2011	55,236	1230	580	10.6	445	811	47.8
	2016	67,072	1275	837	10.2	435	931	36.8

TABLE 7.8.22 2011-2016 SHELTER COSTS AND HOUSEHOLDS SPENDING GREATER THAN 30% OF INCOME ON SHELTER COSTS

	Year	Median Income of Households	Owner-Occupied Dwellings			Tenant-Occupied Dwellings		
			Households	Median monthly payments ($)	Percent (%) spending 30% or more of income on shelter costs	Households	Median monthly payments ($)	Percent (%) spending 30% or more of income on shelter costs
Prince Rupert CY	2011	54,375	2,980	953	16.1	2,000	662	36.6
	2016	73,284	2,940	1,055	12.6	1,980	815	31.6
Port Edward DM	2011	-	-	-	-	-	-	-
	2016	78,848	135	987	-	50	782	-
Skeena-Queen Charlotte A RDA	2011	-	-	-	-	-	-	-
	2016	56,960	20	166	-	0	286	-
Skeena-Queen Charlotte C RDA	2011	-	-	-	-	-	-	-
	2016	52,864	40	375	-	0	371	-
Lax Kw'alaams 1	2011	-	-	-	-	-	-	-
	2016	33,664	-	-	-	-	-	-
S1/2 Tsimpsean 2	2011	-	-	-	-	-	-	-
	2016	41,984	-	-	-	-	-	-
Dolphin Island 2	2011	28,745	-	-	-	-	-	-
	2016	30,208	-	-	-	-	-	-
Kulkayu (Hartley Bay) 4	2011	-	-	-	-	-	-	-
	2016	-	-	-	-	-	-	-

TABLE 7.8.22 2011-2016 SHELTER COSTS AND HOUSEHOLDS SPENDING GREATER THAN 30% OF INCOME ON SHELTER COSTS

	Year	Median Income of Households	Owner-Occupied Dwellings			Tenant-Occupied Dwellings		
			Households	Median monthly payments ($)	Percent (%) spending 30% or more of income on shelter costs	Households	Median monthly payments ($)	Percent (%) spending 30% or more of income on shelter costs
British Columbia	2011	60,333	1234710	1023	23.8	524995	903	45.3
	2016	69,995	1242600	1149	20.7	592825	1036	43.3

NOTE:

- Data not available

SOURCE: CMHC 2021, Statistics Canada 2019c

In 2019, The District of Kitimat retained CitySpaces Consulting to update its 2015 Housing Action Plan. Since the development of the 2015 Housing Action Plan, the area has seen substantial growth and development associated with the LNG Canada Export Terminal Project and upward trends in housing prices (CitySpaces Consulting 2020). The report fulfills housing report requirements under the *Local Government Act*. The purpose of the report is to identify populations most vulnerable to changes in the supply and affordability of housing, and most at risk of not securing adequate, affordable housing, as well as to propose actions to address housing needs.

The report incorporated quantitative and qualitative data from primary and secondary sources. Key themes from consultation conducted as part of the study that related to housing affordability are as follows (CitySpaces Consulting 2020):

- Concern that living-out-allowances paid by industry are contributing to upward pressure on rental prices
- Year-over-year changes in median sales prices of homes illustrate effects of 'boom-bust' cycles on the affordability of housing
- Speculation is/has led to inflated hosing prices and "renovictions"
- With upward pressure on housing prices low-income earners are being displaced with limited availability of affordable housing alternatives
- The supply of non-market/subsidized housing remain fairly constant but demand has increased. Homelessness in the area grows as rental prices increase

The Greater Terrace Housing report was commissioned in May 2020 by the City of Terrace and Regional District of Kitimat-Stikine in conjunction with adjacent First Nations and completed by M'akola Development Services and Turner, Drake and Partners Ltd. with funding provided by the Union of British Columbia municipalities. The report fulfills housing report requirements under the *Local Government Act*.

The purpose of the report is to provide staff, the regional board, participating municipalities, and community members with an understanding of local housing needs for the period 2020–2025. The objectives of the report were to provide baseline demographic and housing stock information, conduct a housing scan of adjacent Indigenous, identify gaps in the existing housing stock, review best practices and solutions to address housing needs, and provide recommendations/action plans to address current and future housing needs/housing affordability (M'akola et al. 2020).

The report incorporates quantitative and qualitative data from primary and secondary sources. Key themes from consultation conducted as part of the study related to housing affordability are as follows (M'akola et al. 2020):

- Industrial expansion is placing increased pressure on the supply and affordability of housing
- Employers are finding it difficult to attract and retain staff due to limited housing availably and housing affordability
- Traditional careers that provided stable middle-class incomes are not keeping pace with housing prices
- Households with children are more likely to fall within low-income brackets—19% of children below the age of 18 live in households with lower-than-average income
- Much of the existing housing stock is in poor condition

- Low vacancy rates create instability for renters. The private rental market is not meeting existing demand; measures of core housing need may underestimate affordability.
- Tight housing market has displaced renters and owners due to changes in affordability
- There is a need to increase the supply of non-market housing

Gross Domestic Product

Table 7.8.23 provides a summary of provincial and territorial GDP between 2016 and 2020. GDP estimates are not available at the LAA or RAA level. In 2020 the GDP of British Columbia was estimated at $242.4 billion, down from $246.0 billion in 2018 and $252.1 billion in 2019.

TABLE 7.8.23 PROVINCIAL/TERRITORIAL GDP ESTIMATES, 2016-2020

Geography	2016	2017	2018	2019	2020
Newfoundland and Labrador	31,282.0	31,674.0	30,568.6	31,802.5	30,127.9
Prince Edward Island	5,393.8	5,635.9	5,783.1	6,076.8	5,896.4
Nova Scotia	35,489.1	36,213.8	36,899.5	37,808.1	36,591.0
New Brunswick	29,546.0	30,243.0	30,381.6	30,720.8	29,580.9
Quebec	347,197.7	357,097.0	367,980.1	377,811.3	357,828.5
Ontario	692,620.8	711,695.1	732,426.3	747,589.4	710,048.9
Manitoba	59,966.8	61,965.3	62,970.5	63,279.0	60,243.9
Saskatchewan	79,317.5	81,121.1	82,091.9	81,383.6	77,189.6
Alberta	314,599.4	327,996.2	334,345.3	334,470.8	307,125.7
British Columbia	**230,763.5**	**239,205.8**	**246,016.9**	**252,063.8**	**242,410.6**
Yukon	2,487.6	2,536.9	2,632.3	2,650.7	2,678.9
Northwest Territories	4,570.3	4,736.6	4,763.8	4,376.4	3,920.1
Nunavut	2,479.2	2,806.3	2,946.0	3,136.3	3,247.2
SOURCE: Statistics Canada 2021h					

Government Revenue and Expenditures

For the fiscal year ended March 31, 2021, the Province of British Columbia posted revenues of $62.2 billion (MOF 2021). Over half of British Columbia's 2020–2021 revenue ($34.2 billion) came from taxation (MOF 2021). This was followed by contributions from the federal government ($10.0 billion) and fees and licences ($4.7 billion) (MOF 2021). Total expenses for the Province of British Columbia were $64.6 billion with health ($25.6 billion) and education ($14.9 billion) the largest expense items (MOF 2021). 2019–2020 Government revenue and expenditure data for the year ended March 31, 2020, for the District of Kitimat and City of Terrace is presented in Table 7.8.24. 2019–2020 revenue and expenditure data for the Regional District of Kitimat-Stikine and the North Coast Regional District is presented in Table 7.8.25. 2019–2020 revenue and expenditure data for Haisla Nation, Kitselas First Nation and Kitsumkalum First Nation are presented in Table 7.8.26, Table 7.8.27, and Table 7.8.28, respectively.

Taxation (or grants in lieu) was the greatest single source of revenue for both the District of Kitimat ($28.7 million) and City of Terrace ($16.6 million) in 2020–2021. For the District of Kitimat this was followed by the sale services ($6.2 million), whereas provincial government transfers ($10.5 million) represented the second greatest source of revenue for the City of Terrace. Because regional districts cannot directly tax proprieties requisitions (taxation on behalf of regional districts) are levied by member municipalities or the Provincial Surveyor of Taxes. Requisitions represented the greatest single source of revenue for the Kitimat-Stikine Regional District ($10.3 million) and the North Coast Regional District ($1.8 million) in 2020–2021. The second greatest source of revenue for the Kitimat-Stikine Regional District was the sale of services ($6.3 million) whereas provincial government transfers ($10.5 million) represented the second greatest source of revenue for the North Coast Regional District.

For both Kitimat and Terrace protective services ($7.3 million and $7.2 million, respectively) were the greatest expense items for the 2020–2021 fiscal year. This was followed by transportation and transit expenses ($7.3 million and $4.3 million, respectively). For both the Kitimat-Stikine Regional District and solid waste management and recycling ($4.7 million) and general government expenses ($2.5 million) were the greatest line items. For the North Coast Regional District solid waste management and recycling expenses ($1.9 million) and debt payments for member municipalities ($1.2 million) were the greatest.

For the 2020–2021 fiscal year the greatest source of revenue for Haisla Nation was that of funds received from the Ottawa Trust for a lease agreement ($18.6 million) followed by investment income from business entities ($12.0 million). For Kitselas First Nation, the greatest source of revenue came from a grant from the sale of Ridley Terminal ($4.2 million). This was followed by funding received from Indigenous Services Canada ($2.9 million). For Kitsumkalum First Nation, funds received from the Province of British Columbia ($16.5 million) was the greatest source of revenue followed by funds received from Indigenous Services Canada ($5.2 million).

The greatest expense items for Haisla Nation in 2020–2021 was economic development ($14.6 million) followed by Indigenous Services Canada administration and general administration (each $3.8 million). For Kitselas First Nation the greatest expense item was administration ($2.0 million) followed by land and resource management ($1.7 million). The greatest expense item for Kitsumkalum First Nation was administration ($2.0 million) followed by economic development ($1.7 million).

TABLE 7.8.24 MUNICIPAL GOVERNMENT (LAA) REVENUE AND EXPENSES, 2020

Revenue/Expense Item	Kitimat	Terrace
Revenue		
Total Own Purpose Taxation and Grants in Lieu	28,652,507	16,639,245
Sale of Services	6,246,101	4,239,541
Federal Government Transfers	2,018,455	0
Provincial Government Transfers	1,694,970	10,488,821
Regional and Other Governments Transfers	6,747,045	2,670,240
Investment Income	750,129	1,305,721
Income from Government Business Enterprise	0	-642,890
Developer and Other Contributions/ Donations	78,143	30,000
Gain on Sale of Assets	21,030	0
Other Revenue	0	528,024
Total Revenue	**46,208,380**	**35,258,702**
Expenses		
General government	5,703,899	2,401,080
Protective services	7,315,565	7,193,175
Soil waste management and recycling	1,012,451	1,359,769
Health, Social Services and Housing	129,366	0
Development Services	2,349,761	2,279,195
Transportation and Transit	7,250,753	4,329,488
Parks, Recreation and Culture	6,832,475	3,951,225
Water Services	1,738,369	875,491
Sewer Services	913,702	684,986
Other Services	134,355	79,310
Amortization	2,774,423	4,135,942
Loss on Disposition of Assets	0	14,109
Other Adjustments	0	0
Total Expenses	36,155,119	**27,303,770**

SOURCE: Ministry of Municipal Affairs (MMA) 2021a, 2021b.

TABLE 7.8.25 REGIONAL DISTRICT GOVERNMENT (LAA) REVENUE, 2020

Revenue/Expense Item	Regional District of Kitimat-Stikine	North Coast Regional District
Revenue		
Electoral Area and Local Government Requisitions	10,272,612	1,835,128
Grants in Lieu	35,050	146,413
Sale of Services	6,257,488	1,653,879
Federal Government Transfers	9,930	0
Provincial Government Transfers	3,374,357	931,609
Investment Income	258,894	99,694
Developer and Other Contributions/Donations	293,748	0
Member Municipality MFA Debt Payment	729,331	1,236,595
Total Revenue	**21,231,410**	**5,903,318**
Expenses		
General Government	2,482,894	1,119,013
Protective Services	2,220,348	96,682
Solid Waste Management and Recycling	4,704,134	1,885,428
Health, Social Services and Housing	0	0
Development Services	1,005,961	72,180
Transportation and Transit	731,633	0
Parks, Recreation and Culture	2,260,974	601,422
Water Services	913,935	83,226
Sewer Services	108,294	0
Other Services and Adjustments	0	4,222
Amortization	2,013,213	152,055
Loss on Disposition of Assets	0	0
Debt Payments for Member Municipality	729,331	1,236,595
Total Expenses	**17,170,717**	**5,250,823**

SOURCE: MMA 2021c, 2021d

TABLE 7.8.26 HAISLA NATION, 2020

Haisla Nation	
Revenue	
Indigenous Services Canada	7,087,942
Province of British Columbia	1,072,115
First Nations Health Authority	6,024,363
Fisheries and Oceans Canada	269,122
Canada Mortgage and Housing Corporation	177,700
Canada Post	19,940
Funds from Ottawa Trust – lease agreement	18,584,145
Investment income from business entities	11,994,236
Interest and investment income	11,008,815
Rio Tinto Alcan	468,681
Social Housing rental income	220,642
First Nations Education Steering Committee	396,309
Property taxes	3,020,624
Rental income	99,390
Fees and other income	8,452,742
Total Revenue	**68,896,766**
Total Expenses[1]	**42,874,711**

NOTE:

[1] Expenses are as follows: Haisla Forest/Range Agreement ($4,988); Environment ($308,969); Administration-ISC ($3,868,540); Administration ($3,826,975); Social Assistance ($689,996); Community Facilities and Services ($3,158,536); Language and Culture ($25,519); Education ($3,009,297); Family Violence ($10,051); Haisla Elementary ($1,304,071); Economic Development ($14,561,132); Haisla Gas Station ($477,068); Community Health Services ($2,780,374); Band Housing ($429,750); Fisheries ($610,146); Child Care ($549,985); Department of Fisheries and Oceans ($78,811); Land Use Administration ($1,226,142); Land Management Code ($263,555); Elder's Programs ($219,291); Emergency Planning & Training ($3,081); LNG Canada Capacity ($1,637,062); HN DL 99 ($96,736); LNG Job Training ($324,689); Fish Habitat Restoration Agreement ($23,431); Coast Climate Change ($28,756); Active Measures ($259,672); LNGC Delay Funds ($573,825); Enrich Low Income ($8,613); Nutrition Low Income ($66,497); Education Minor ($227,329); Joint Venture Agreements ($-4,780); Capital Fund repairs and maintenance ($196,457); Social Housing Fund ($322,784); Haisla Investments ($750,815); Haisla Capacity Development Society ($4,935); Haisla Trust Society ($951,564); Haisla Business Operation ($49).

SOURCE: BDO Canada 2020

TABLE 7.8.27 KITSELAS FIRST NATION REVENUE, 2020

Kitselas First Nation	
Revenue	
Indigenous Services Canada	2,886,615
Province of British Columbia	1,656,429
First Nations Health Authority	993,624
Fisheries and Oceans Canada	441,787
Canadian Mortgage and Housing Corporation	216,311
Natural Resources Canada	62,499
Income from government business enterprises	769,612
British Columbia Indigenous Gaming Revenue Sharing LP	403,847
The Tsimshian Treaty Society	959,364
Grant from sale of Ridley Terminal	4,200,000
Proponent funding	958,403
Rental	454,185
Other	1,588,173
Total Revenue	**15,590,849**
Expenses	
Administration	1,975,930
Capital projects	300,996
Community health	1,215,336
Economic development	92,686
Education	1,458,166
Housing rentals	991,564
Land and resource management	1,665,272
Municipal services	653,121
Social development	548,533
Treaty process	844,543
Total Expenses	**9,746,147**
SOURCE: Carlyle Shepherd & Co 2020	

TABLE 7.8.28 KITSUMKALUM FIRST NATION REVENUE, 2020

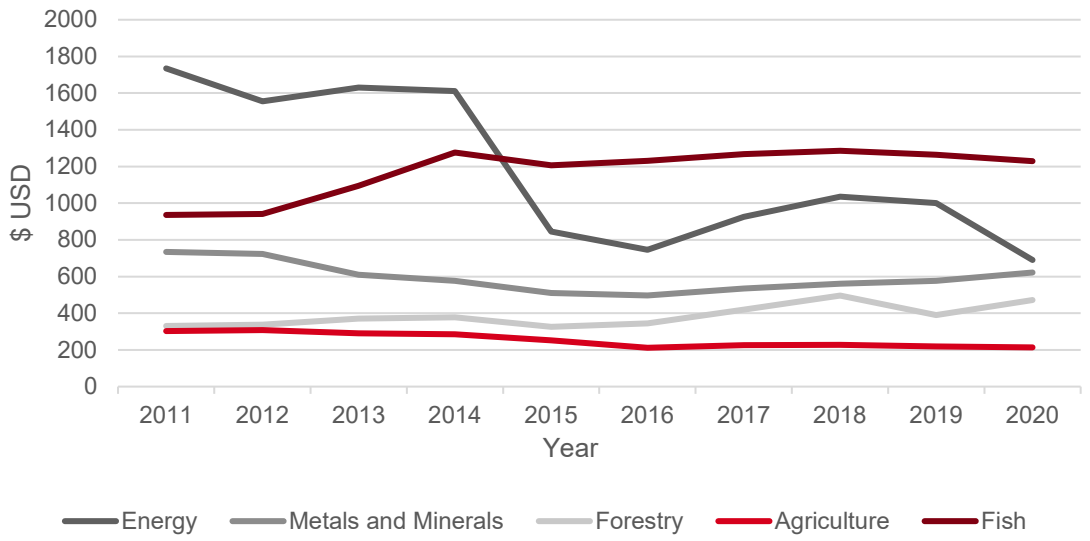
Kitsumkalum First Nation	
Revenue	
Indigenous Services Canada	5,180,761
Province of British Columbia	16,516,495
First Nations Health Authority	947,719
Fisheries and Oceans Canada	330,123
Canada Mortgage and Housing Corporation	186,610
Transport Canada	4,600,000
Earnings from investments in government business enterprises	597,875
Economic activities	2,433,343
Investment income	347,230
Rental income	247,968
Other revenue	2,160,234
Total Revenue	**33,548,358**
Expenses	
Administration and governance	1,966,654
Social development	495,359
Public works	786,714
Education	2,626,478
Consultations and impact benefits	1,513,147
Economic development	1,705,222
Fisheries	1,381,504
Health services	778,639
Capital projects	10,463
Social housing	481,179
Cultural/title/rights	1,563,252
Total Expenses	**13,308,611**
SOURCE: MNP 2020	

Natural Resource Valuations

Given multiple pricing mechanisms and frequent variation in valuations, market prices for commodities are often best presented through commodity price indices that group and weight various commodities together to track price changes over established time intervals. The Bank of Canada's Commodity Price Index (BCPI), a chain Fisher price index of spot or transition prices (USD), groups 26 commodities into 5 component categories (energy, minerals and metals, forestry, agriculture, and fish) and can be used to show the performance of commodities over time (BOC 2021). Additional information on forest- and fishery-related natural resource valuations is provided in Section 7.9 (Land and Resource Use) and 7.10 (Marine Use).

BCPI component indices from 2011 to 2020 (the most recent dataset available from the Bank of Canada) are presented in Figure 7.8.10. As illustrated in Figure 7.8.10, between 2011 and 2020 energy, agriculture, and metals and minerals commodity index prices trended downward whereas forestry and fish commodity index prices trended upward. In terms of the energy component index, commodity prices were highest in 2008 at $1,985.8 USD (BOC 2021b).

FIGURE 7.8.10 BCPI COMPONENT INDICES 2011-2020



SOURCE: Bank of Canada 2021

Recent pricing information for energy commodities (e.g., electricity, crude oil, and natural gas) are available through the Canada Energy Regulator's 'Energy Commodity Indicators' dashboard. Information on natural gas prices taken from the Canada Energy Regulator's dashboard are summarized in Table 7.8.29. Pricing information for other energy commodities have not been reproduced.

TABLE 7.8.29 CANADA ENERGY REGULATOR'S ENERGY COMMODITY INDICATORS

	Price	Percent Change (year over year)
Henry Hub Spot Price (March 30, 2021)	$3.14 GJ	N/A
Alberta monthly reference price (January 2021)	$2.32 GJ	12.62%
Average monthly import price (January 2021)	$2.28 GJ	21.03%
Average monthly export price (January 2021)	$3.19 GJ	9.25%

NOTE:

N/A = not applicable

SOURCE: CER 2021

7.8.6 Project Interactions on Employment and Economy

Table 6.6.1, Section 6.6 (Project Interactions), identifies the potential interactions between the Project's components and physical activities and employment and economy; these interactions are consistent with Table 6.4.1 of the AIR. Interactions that have been identified (ranked as 1 or 2) are carried forward and assessed in this section. Where a ranked interaction has been identified, Table 7.8.30 identifies the potential effects on employment and economy. Each of the effects identified are discussed in detail, in the context of effects pathways, mitigation/enhancement, and residual effects in Section 7.8.7.

TABLE 7.8.30 POTENTIAL PROJECT INTERACTIONS AND EFFECTS ON EMPLOYMENT AND ECONOMY

Project Activities and Physical Works	Potential Project Effects		
	Change in regional employmen	Change in regional business	Change in regional economy
Construction			
Procurement of labour, goods, and services	1/+	1/+	1/+
Operation			
Procurement of labour, goods, and services	1/+	1/+	1/+
Decommissioning			
Procurement of labour, goods and services	1/+	1/+	1/+

Key:

1 = Potential adverse effect requiring additional mitigation; warrants further consideration.

2 = Key interaction resulting in potential adverse effect of particular importance or concern; warrants further detailed consideration

+ = Potential positive effect that can be enhanced; warrants further consideration.

NOTE:

Only activities with an interaction of 1, 2 or + for at least one effect are shown

Based on input provided by Indigenous Nations, regulators, community members and current understanding of the conceptual project design, Cedar ranked all the potential effects on employment and economy as 1 (i.e., resulting in potential adverse or positive effects requiring additional mitigation or enhancement and warranting further consideration).

7.8.7 Assessment of Effects on Employment and Economy

The assessment of potential effects on employment and economy considers change in regional employment, regional business, and regional economy. This section describes project pathways with potential to result in effects to employment and economy, mitigation or enhancement measures to manage adverse or positive effects, and a characterization of project-specific residual effects.

7.8.7.1 ASSESSMENT METHODS

This section begins by describing the assessment methods, specifically the residual effects characterization terms, the key residual effect threshold, and the likelihood of residual effects categories. These sections are the framework for the assessment of the potential effects on employment and economy.

Analytical Assessment Techniques

Direct, indirect, and induced economic impacts of project construction and operation were estimated at the provincial level through a custom run of Statistics Canada's Interprovincial Input-Output Model (IPIOM) based on an onshore capital cost estimate of $205.8 million and an annual operation cost of $79.6 million. Direct, indirect, and induced economic impacts of project decommissioning were not estimated as cost estimates were not available at the time of assessment. Capital and operation costs used as inputs to the IPIOM are based on 2021 Canadian dollars and are Pre-FEED Class IV estimates. Costs do not include contingency, estimates of risk, allowance for funds used during construction, escalation, interest during construction, or land costs. For construction, only onshore (i.e., excludes costs for the FLNG facility) costs were used to model economic impacts because offshore costs occur in foreign markets. Costs associated with pipeline-related work are also not included, as the pipeline is not within the scope of this Application. Operation costs do not include natural gas costs as the LNG terminal are expected be operated as a tolling facility with the offloader responsible for gas supply. All costs will be refined as the project design is refined.

Economic impacts associated with decommissioning and turnarounds (part of project operation) were not quantified because cost estimates were not available at the time of writing (November 2021). Project effects stemming from the procurement of labour, goods and services during decommissioning and turnarounds are qualified where relevant.

Where possible, economic impacts estimated for construction and operation are described in terms of direct, indirect, and induced effects, where:

- Direct effects result from labour, materials and services demand from Cedar and its contractors during project construction (e.g., construction labour, project management)
- Indirect effects result from contractor expenditures on goods and services (e.g., employment with suppliers/manufacturers of materials used during construction)
- Induced effects result from spending by direct and indirect workers on consumer goods and services (e.g., restaurant servers, retail positions)

Limitations of Statistics Canada's IPIOM

Statistics Canada's IPIOM assumes fixed technological coefficients and therefore does not take into account economies of scale, constraint capacities, technological change, externalities, or price changes. As such, results of the IPIOM are less accurate when used to estimate long-term impacts (i.e., technological coefficients become outdated) (EAO 2020). The IPIOM also estimates resource allocations associated with a given change or "shock" but does not consider whether resources are readily available or would need to be diverted from other uses. Finally, the IPIOM does not include variables related to price inflation or interest rates (EAO 2020).

Residual Effects Characterization

Table 7.8.31 presents definitions and criteria that are used to characterize the residual effects on employment and economy. Disproportionate residual effects for diverse subgroups have been considered as they relate to identity factors (e.g., sex) for those subgroups, as determined through a GBA+ assessment prepared in consideration of federal guidance. Disproportionate residual effects for diverse subgroups are characterized under the "affected populations" criteria and are described as being evenly distributed or disproportionately distributed (Table 7.8.31). Effects may be evenly distributed and could be experienced by any or all subpopulations. Alternatively, the effects could be disproportionate and experienced only by certain subpopulations or experienced more acutely by certain subpopulations.

TABLE 7.8.31 CHARACTERIZATION OF RESIDUAL EFFECTS

Characterization	Description	Quantitative Measure or Definition of Qualitative Categories
Direction	The long-term trend of the residual effect	**Positive**—a residual effect that moves the measurable parameters related to the effect in a beneficial direction relative to baseline **Adverse**—a residual effect that moves the measurable parameters related to the effect in a detrimental direction relative to baseline **Neutral**—a residual effect that results in no net change in measurable parameters relative to baseline
Magnitude	The amount of change in measurable parameters or the valued component relative to existing conditions	**No Measurable Change**—no measurable change in the effect can be detected **Low**—a measurable change but residual effects cannot be distinguished from existing conditions within a normal range of variability (based on existing conditions) **Moderate**—measurable change but less than high; effects are not likely to pose a serious risk or benefit to employment or economy **High**—measurable change that is likely to pose a serious risk or benefit to employment and economy
Extent	The geographic area in which a residual effect occurs	**Project footprint**—residual effects are restricted to the project footprint **LAA**—residual effects extend into the LAA **RAA**—residual effects extend into the RAA

TABLE 7.8.31 CHARACTERIZATION OF RESIDUAL EFFECTS

Characterization	Description	Quantitative Measure or Definition of Qualitative Categories
Duration	The time required until the measurable parameter or the valued component returns to its existing condition, or the residual effect can no longer be measured or otherwise perceived	**Short-term**—the residual effect is restricted to no more than the duration of the construction phase (four years) or the duration of the decommissioning phase (12 months) **Medium-term**—the residual effect extends through the operation phase (40 years) **Long-term**—the residual effect extends beyond the operation phase (>40 years)
Reversibility	Pertains to whether a measurable parameter or the valued component can return to its existing condition after the project activity ceases	**Reversible**—the residual effect is likely to be reversed after activity completion and reclamation **Irreversible**—the residual effect is unlikely to be reversed after activity completion and reclamation
Frequency	How often the residual effect occurs and how often during the Project or in a specific phase	**Single event**—effect occurs once **Multiple irregular event**—occurs at no set schedule **Multiple regular event**—occurs at regular intervals **Continuous**—occurs continuously
Affected Populations	The distribution of the effect amongst the population of affected people	**Evenly distributed**—the effect will be experienced by any or all subpopulations **Disproportionally distributed**—the effect will be experienced only by certain subpopulations or experienced more acutely by certain subpopulations
Risk and Uncertainty	The level of uncertainty of the residual effect	**Underestimated**—the effects assessed are predicted to be an underestimate quantitively or qualitatively **Overestimated**—the effects assessed are predicted to be an underestimate quantitively or qualitatively

Likelihood and Context of Residual Effects

The likelihood of a residual effect occurring was also assessed for each potential effect. Likelihood is the probability of an adverse residual effect occurring to employment and economy. Likelihood is determined based on an understanding of the potential effect and the likely effectiveness of available mitigation or enhancement measures to reduce, avoid or enhance the residual effect. The categories and definitions for the likelihood of a residual effect on employment and economy occurring are:

- **Low**—adverse or positive interactions between the Project and employment and economy can largely be avoided or mitigated (adverse) and adverse and/or positive residual effects are unlikely to occur.
- **Medium**—adverse or positive interactions between the Project and employment and economy may be difficult to avoid or mitigate (adverse) or may be enhanced through management measures (positive), and adverse and/or positive residual effects are likely to occur.
- **High**—adverse or positive interactions between the Project and employment and economy cannot be practically avoided or mitigated or can easily be enhanced through management measures and adverse and/or positive residual effects are highly likely to occur.

The context of each residual effect is described using qualitative and/or quantitative information, including:

- Effects of past and present projects and activities
- Potential trends in condition
- Vulnerability and resiliency

Key Residual Effects Threshold

Substantial adverse residual effects for employment and economy are ones that are:

- Distinguishable[5] from current conditions and trends and cannot be managed or mitigated through adjustments to programs, policies, plans, or through other mitigation; or
- Local or municipal government revenue is unable to cover their project-related expenditures without raising taxes to other parties

7.8.7.2 ASSESSMENT OF CHANGE IN REGIONAL EMPLOYMENT

This section describes the pathways, mitigation measures, predicted residual effects, and likelihood of predicted residual effects as they pertain to change in regional employment.

Project Pathways

Project demand for labour has the potential to result in positive and adverse effects on regional employment. Positive effects stem from increased local employment and income during construction and operation while adverse effects result from wage inflation caused by increased demand and competition for labour. Based on existing labour force conditions positive effects may not be equitably distributed across subpopulations.

Mitigation and Enhancement Measures

Mitigation and enhancement measures were selected based on provincial and federal regulations and policies, on management practices and guidelines, and relevant peer-reviewed literature. Mitigations and enhancements were selected to address project interactions that affect regional employment during all project phases. Table 7.8.32 provides a summary of these management measures for change in regional employment.

[5] "Distinguishable" means that the adverse effect is measurable, predictable, and attributable to one or more project or cumulative interactions (i.e., it is not within the boundaries of normal variation of the measurable parameter under baseline conditions).

TABLE 7.8.32 MITIGATION AND ENHANCEMENT MEASURES PROPOSED FOR CHANGE IN REGIONAL EMPLOYMENT

Mitigation and Enhancement Measure/Mechanism	Rationale for Selection	Expected Success/Risks and Uncertainty	Timing	Management and/or Compensation Plans
Enhancement Measure: Inform local residents and Indigenous Nations of job and procurement opportunities during all project phases. Develop work packages that consider the capacity and capabilities of local and regional businesses. **Mechanism:** Increase local content and enhance positive effects of the Project on local communities.	The use and effectiveness of local content strategies targeted at increasing local participation and procurement as well as other benefits is well understood and practical (see the World Bank's Study – Local Content Policies in the Oil and Gas Sector [Tordo et al. 2013]) and aligns with The Global Oil and Gas Industry Association of Environmental and Social Issues guidance document Social Responsibility – Local Content Strategy (2011).	**Expected Success:** There is a medium to high likelihood that this enhancement measure will be effective. Cedar and its contractor(s) have control over the purchase of many goods and services (within reason and as influenced by practicality and cost-effectiveness). Therefore, there is a high likelihood that the enhancement will be effective at increasing local procurement. With respect to labour, due to the short duration of construction activities Cedar can only inform local populations of job opportunities and required skill sets and educational attainment required for project-related work. Should individuals choose not to work for the Project or have insufficient skills or education, the ability of the Project to employ local workers is lowered. Therefore, there is a medium degree of likelihood that the enhancement will be effective at increasing local participation with the Project. **Risk and Uncertainty:** There is moderate uncertainty over the success of this enhancement, because it does not guarantee that local and regional workers/firms will be willing to compete for or be successful in obtaining project-related employment/contracts.	**Project Phase:** All phases **Effectiveness:** Effective over the short to long term once implemented	N/A

TABLE 7.8.32 MITIGATION AND ENHANCEMENT MEASURES PROPOSED FOR CHANGE IN REGIONAL EMPLOYMENT

Mitigation and Enhancement Measure/Mechanism	Rationale for Selection	Expected Success/Risks and Uncertainty	Timing	Management and/or Compensation Plans
Enhancement Measure: Identify potential shortages of workers with specific skill requirements and training, and work with the Haisla employment department, local and regional Indigenous employment centers, local and regional training and education facilities, and communities to increase opportunities for Indigenous and local community members to obtain training required for project participation. **Mechanism:** Enhance local benefits by working with stakeholders to understand and address gaps in skills and training needed to gain employment with the Project	Best management practice for working with local communities and educational institutions to enhance the capacity of a local workforce	**Expected Success:** There is a medium to high likelihood that this enhancement measure will be effective because it will increase the number of Indigenous community members and local residents with the skills needed to obtain employment on the Project. **Risk and Uncertainty:** There is moderate uncertainty over the success of this enhancement measure because success will depend on cooperation and capacity of training and education facilities, as well as willingness of individuals to complete training programs	**Project Phase:** All phases **Effectiveness:** Effective over the short to long term once implemented	N/A
Enhancement Measure: Provide information to local and Indigenous employment agencies and economic development organizations to help them plan for increased demand for labour. **Mechanism:** Provide employment agencies and economic development organizations with early information on project-influenced periods of increased labour demand.	The Government of Canada (e.g., Job Bank), the Government of British Columbia (e.g., WorkBC) as well as the City of Terrace, District of Kitimat and the Kitimat-Stikine Regional District use workforce projections provided by proponents, among other sources, to aid in developing workforce projections and assist in the development of plans and initiatives. This enhancement measure facilitates proactive communication with these organizations.	**Expected Success:** There is a high degree of likelihood that the enhancement measure will be effective as it will be partially achieved through the submission of this Application to the EAO. **Risk and Uncertainty:** There is moderate uncertainty over the success of this enhancement measure, because success depends on how government agencies develop and implement policies that address labour supply	**Project Phase:** All phases **Effectiveness:** Effective over the short to long term once implemented	N/A

TABLE 7.8.32 MITIGATION AND ENHANCEMENT MEASURES PROPOSED FOR CHANGE IN REGIONAL EMPLOYMENT

Mitigation and Enhancement Measure/Mechanism	Rationale for Selection	Expected Success/Risks and Uncertainty	Timing	Management and/or Compensation Plans
Enhancement Measure: Implement a Gender Equity and Diversity Policy that focuses on hiring Haisla Nation members, local and Indigenous persons, and women to increase project employment among underrepresented populations. **Mechanism:** Enhance local benefits among underrepresented populations by specifically targeting select populations and working to reduce employment barriers.	Increase benefits of the Project within Haisla Nation, other Indigenous Nations, and among underrepresented groups in the oil and gas industry.	**Expected Success:** There is a medium degree of likelihood that the enhancement measure will be effective because success will partially depend on the extent to which target populations choose to engage and seek employment with the Project). **Risk and Uncertainty:** There is low risk because the enhancement measures are well understood and easy to implement.	**Project Phase:** All Phases **Effectiveness:** Effective over the short to long term once implemented	N/A
Enhancement Measure: On-the-job training programs and apprenticeship opportunities will be made available. **Mechanism:** Enhance local benefits by providing necessary occupational training to under-skilled and underexperienced workers.	Insufficient education is a recognized barrier to securing employment among certain subpopulations in the LAA and RAA. This enhancement measure will enhance local employment and facilitate the upskilling of workers otherwise qualified for project work.	**Expected Success:** There is a medium degree of likelihood that the enhancement measure will be effective because success will partially depend on the extent to which target populations choose to engage and seek employment with the Project. **Risk and Uncertainty:** There is low risk because the enhancement measures are well understood and easy to implement.	**Project Phase:** All Phases **Effectiveness:** Effective over the short to long term once implemented	N/A

TABLE 7.8.32 MITIGATION AND ENHANCEMENT MEASURES PROPOSED FOR CHANGE IN REGIONAL EMPLOYMENT

Mitigation and Enhancement Measure/Mechanism	Rationale for Selection	Expected Success/Risks and Uncertainty	Timing	Management and/or Compensation Plans
Mitigation Measure: Workers (not inclusive of summer students) 19 years and younger will be required to have completed high school or have an appropriate equivalency to work on the Project. **Mechanism:** Remove incentive for young people to leave school prematurely.	Insufficient education is a recognized barrier to securing employment among certain subpopulations in the LAA and RAA. This mitigation measure will encourage young people to complete their education but would allow for older workers who have not completed high school to seek employment with the Project.	**Expected Success:** There is a high degree of likelihood that the mitigation measure will be effective as the mitigation measure will be a condition of employment. **Risk and Uncertainty:** There is low risk because the mitigation measures are well understood and easy to implement.	**Project Phase:** All Phases **Effectiveness:** Effective over the short to long term once implemented	N/A

Project Residual Effects Economic Impact and Direct Workforce Estimates

Based on cost estimates provided in Section 7.8.7.1, project construction is expected to result in 561 full-time equivalents (FTEs) of direct labour and operation of the Project is estimated to result in 270 FTEs of direct annual labour. All direct employment effects are anticipated to occur in British Columbia. Estimates of direct labour (FTEs) income impacts from construction and operation of the Project are summarized in Table 7.8.33.

TABLE 7.8.33 ESTIMATES OF DIRECT EMPLOYMENT (FTES) AND LABOUR INCOME (UNDISCOUNTED)

	FTEs	Labour Income/FTE ($)
Construction	561	88,203
Operation	270	87,105

Given direct employment (FTE) estimates and preliminary workforce planning, Cedar estimates that an average workforce size of 230 to 315 persons will be required over the four-year construction period. It is anticipated that the annual construction workforce will peak between 350 to 500 workers beginning in year two and will be sustained (annually) for roughly eight months (anticipated to occur between Q2 through Q4). An average annual operation workforce of 100 persons is expected over the 40-year life of the Project. In addition to the regular operation workforce, a turnaround workforce of 100 persons is also anticipated to be required every three to five years to perform scheduled shutdown and maintenance work on the FLNG facility and supporting infrastructure. Detailed cost and engineering estimates are not available for project decommissioning; however, based on other projects, Cedar anticipates that the decommissioning workforce will peak at 100 to 150 workers. Direct workforce estimates are summarized in Table 7.8.34. Estimates of local (LAA) hire have not been prepared. To enhance local benefits of the Project, mitigation and enhancement measures targeted at increasing the Project's local content (see Table 7.8.32) will be implemented.

TABLE 7.8.34 ESTIMATES OF DIRECT WORKFORCE SIZE

	Construction		Operation (Annual)		Decommissioning
	Average	Peak	Average	Turnaround (every 3-5 years)	Peak
Direct workforce (persons)	230–315	350–500	100	100	100–150

Labour Force Availability

Detailed information regarding the composition of the Project's construction and operation workforces by occupation is unavailable; however, Canadian industry average workforce compositions are available through Energy Safety Canada's Petroleum Labour Market Information (PetroLMI) division. Table 7.8.35 provides a summary of average workforce composition, by broad occupational classification (NOC), for the construction of a typical natural gas pipeline[6] and a two-train LNG facility[6] as well as for the operation of an LNG facility. PetroLMI has not published information on the composition of turnaround or decommissioning workforces at the same level of detail as for construction and operation workforces; however, summary information shows that the composition of turnaround and decommissioning workforces are generally similar to that of LNG facility construction workforces (PetroLMI 2020). Based on PetroLMI data, occupations falling in NOC 7 "trades, transport and equipment operators" account the greatest proportion (greater than 95%) workforces required to construct natural gas pipelines and LNG facilities while occupations falling in NOC 9 "manufacturing and utilities" account for the greatest proportion (greater than 43%) of LNG facility operation workforces.

Project construction activities are planned to start the second half of 2023 with peak construction anticipated between spring 2024–2025. As such, project construction is anticipated to coincide with completion of the Coastal GasLink Pipeline (anticipated completion in 2023) and ramping down of the main construction phase for the LNG Canada Export Terminal (see Section 1.7). As such, labour demand from the Project is expected to partially offset job losses associated with completion of the Coastal GasLink Pipeline and ramping down of the main construction phase of the LNG Canada Export Terminal.

[6] Because Project construction is not perfectly represented by either 'natural gas pipeline construction' or 'two-train LNG facility construction' industry average workforce compositions for these activities are taken together (range) and used as proxy for the potential range of occupations likely required to construct the Project.

TABLE 7.8.35 INDUSTRY AVERAGE COMPOSITION OF CONSTRUCTION WORKFORCES BY PRIMARY NOC

NOC Broad Occupational Classification	Natural Gas Pipeline Construction[1]		Two-Train LNG Facility Construction[1]		LNG Facility Operation	
	NOC Unit Groups (Name and Code)	Composition of Workforce (%)	NOC Unit Groups (Name and Code)	Composition of Workforce (%)	NOC Unit Groups (Name and Code)	Composition of Workforce (%)
0: Management	Construction managers (0711); purchasing manager (0113)	0.7	Construction managers (0711); facility operation and maintenance managers (0714); purchasing manager (0113)	0.5	Facility operation and maintenance managers (0714)	8.7
1: Business, finance and administration	Purchasing agent and officers (1225); administrative assistants (1241)	0.7	Administrative assistants (1241); purchasing agent and officers (1225)	1.4	Purchasing agent and officers (1225); administrative assistants (1241)	8.7
2: Natural and applied sciences	Construction inspectors (2264); non-destructive testers and inspectors (2261); land surveyors (2154); drafting technologist and technician (2253); project engineers (variety of engineering disciplines); inspectors in public and environmental health and safety (2263); mechanical engineers (2132); civil engineers (2131); electrical/instrumentation engineers (2133); instrumentation technicians (2243)	3.9	Civil engineers (2131); construction inspectors (2264); drafting technologist and technician (2253); electrical/instrumentation engineers (2133); inspectors in public and environmental health and safety (2263); instrumentation technicians (2243); land surveyors (2154); mechanical engineers (2132); non-destructive testers and inspectors (2261); project engineers (variety of engineering disciplines)	3.2	Instrumentation technicians (2243); electrical/instrumentation engineers (2133); mechanical engineers (2132); chemical engineers (2134)	21.7

TABLE 7.8.35 INDUSTRY AVERAGE COMPOSITION OF CONSTRUCTION WORKFORCES BY PRIMARY NOC

NOC Broad Occupational Classification	Natural Gas Pipeline Construction[1]		Two-Train LNG Facility Construction[1]		LNG Facility Operation	
	NOC Unit Groups (Name and Code)	Composition of Workforce (%)	NOC Unit Groups (Name and Code)	Composition of Workforce (%)	NOC Unit Groups (Name and Code)	Composition of Workforce (%)
7: Trades, transport and equipment operators	Construction trades helpers and labourers (7611); welders (7265); steamfitters and pipefitters (7252); truck drivers (7411); crane operators and hoisting equipment (7371) including riggers; heavy equipment operators (except crane) (7521); concrete finishers (7282); contractors and supervisors, trades (7212, 7213, 7214, 7215, 7216, 7217); iron workers (7264) including scaffolders; insulators (7293); construction millwrights and industrial mechanics (except textile) (7311); heavy-duty equipment mechanics (7312); carpenters (7271); industrial electricians (7242) and electricians (7241); bricklayer (7281); glazier (7292); refrigerator and air conditioning mechanics (7313)	94.8	Boilermaker (7234); bricklayer (7281); carpenters (7271); concrete finishers (7282); construction millwrights and industrial mechanics (except textile) (7311); construction trades helpers and labourers (7611); contractors and supervisors, trades (7212, 7213, 7214, 7215, 7216, 7217); crane operators and hoisting equipment (7371) including riggers; glazier (7292); heavy equipment operators (except crane) (7521); heavy duty equipment mechanic (7312); industrial electricians (7242) and electricians (7241); insulators (7293); iron workers (7264) including scaffolders; refrigerator and air conditioning mechanics (7313); steamfitters and pipefitters (7252); truck drivers (7411); welders (7265)	94.7	Construction millwrights and industrial mechanics (7311); industrial electricians (7242)	17.4

TABLE 7.8.35 INDUSTRY AVERAGE COMPOSITION OF CONSTRUCTION WORKFORCES BY PRIMARY NOC

NOC Broad Occupational Classification	Natural Gas Pipeline Construction[1]		Two-Train LNG Facility Construction[1]		LNG Facility Operation	
	NOC Unit Groups (Name and Code)	Composition of Workforce (%)	NOC Unit Groups (Name and Code)	Composition of Workforce (%)	NOC Unit Groups (Name and Code)	Composition of Workforce (%)
9: Manufacturing and utilities	-	-	Industrial painter (9536)	0.2	Petroleum, gas, chemical process operators (9232); power engineers and power systems operators (9241)	43.5

NOTES:

- data not available

[1] Because project construction is not perfectly represented by either 'natural gas pipeline construction' or 'two-train LNG facility construction' industry average workforce compositions for these activities are taken together (range) and used as proxy for the potential range of occupations likely required to construct the Project. This assumption is also applied to turnaround and decommissioning workforces.

SOURCE: PetroLMI 2016

In 2016, the LAA had an existing labour force of 13,350 persons (see Table 7.8.3). While the availability of the existing labour force to respond to project labour demands is unknown, assuming a similar annual unemployment rate (for 2019) as the North Coast and Nechako Economic Region (4.3%, see Section 7.8.5.2), an estimated labour force of approximately 870 persons may be available to respond to the Project's demand for direct labour (this assumption discounts additional available labour associated with the completion of Coastal GasLink Project and ramping down of the main construction phase of the LNG Canada Export Terminal). Extending this calculation to the RAA an estimated labour force of 1,045 persons (based on a labour force of 24,380 persons; see Table 7.8.3) may be available. Applied to occupational classifications (assuming workforce compositions similar to that published by PetroLMI), a sufficient supply of labour may be available in the LAA and other parts of the RAA to meet project labour demands (construction, operation and turnarounds) across NOCs, 0, 1, 2 and 9. Project labour demand for NOC 7 occupations (trades, transport and equipment operation) during construction and turnarounds likely exceeds available supply (sufficient supply may be available to meet operation labour demands). Table 7.8.36 provides a comparison between existing labour force availability (LAA and RAA) and project demand for labour across NOCs 0, 1, 2, 7, and 9. Given the timing of project decommissioning (40 years into the future) a quantitative analysis of labour supply and demand has not been completed.

TABLE 7.8.36 ESTIMATES OF LAA AND RAA LABOUR FORCE AVAILABILITY (BY NOC) COMPARED TO PROJECT WORKFORCE REQUIREMENTS

	Existing Labour Force		Estimated Available Labour Force[1]		Project Workforce			
	LAA	RAA	LAA	RAA	Construction[2]		Operation	
					Average[3]	Peak[4]	Annual	Turnaround
0: Management	1,155	2,190	50	94	1-2	2-3	9	1
1: Business, finance and administration	1,615	2,825	69	121	2-3	4-5	9	1
2: Natural and applied sciences	780	1,280	34	55	8-11	12-18	22	4
7: Trades, transport and equipment operators	2,910	5,735	125	247	218-298	332-474	17	95
9: Manufacturing and utilities	625	1,045	27	45	1	1	44	0

NOTES:

[1] Estimates are based off 2016 labour force employment data by broad occupational category and the 2019 annual average unemployment rate for the North Coast and Nechako Economic Region (see Section 7.8.5.2).

[2] Workforce estimates based on average workforce composition of constructing both a typical natural gas pipeline and a two-train LNG facility (as shown in Table 7.8.35). Estimate provided as a range

[3] Based on an average workforce range of 230 to 315 workers.

[4] Based on a peak employment range of 350 to 500 workers.

Given the above analysis and taking into consideration labour market projections for the region (Section 7.8.5.2) it is likely that, despite mitigation and enhancement measures, a percentage of the Project's direct workforce (construction and operation [including turnaround]) will be comprised of non-local workers; in particular, specialized labour. Other factors, including contractor use of preferred labour and the degree to which workers choose to seek employment with the Project will also affect the final composition of project workforces.

Employment and Income Equality

Within the LAA, non-Indigenous persons account for the largest percentage of the existing labour force with occupations (NOC 0, 1, 2, 7 and 9) most likely to provide direct labour to the Project (89.5%; see Table 7.8.8 and Table 7.8.9) and account for the greatest percentage of the population with an apprenticeship or trades certificate or diploma (81.7% of the population). Non-Indigenous males alone account for 59.4% of the existing LAA labour force with NOC 0, 1, 2, 7 and 9 occupations and 66.3% of the population with an apprenticeship or trades certificate or diploma. Comparatively, Indigenous females account for only 4.9% of the existing labour force with NOC 0, 1, 2, 7 and 9 occupations and 6.0% of the existing population with an apprenticeship or trades certificate or diploma. In terms of income, both mean and median income earned by males is greater than that earned by females and is greater among the non-Indigenous population than the Indigenous population.

While employment and income inequity is evident in the LAA and RAA similar (albeit not as pronounced) differences are also seen across sexes and Indigenous and non-Indigenous persons across the province (Section 7.8.5.2). To address project contributions to employment and income inequality mitigation and enhancement measures identified in Table 7.8.32 targeted at increasing local content and participation among underrepresented groups (e.g., women and persons of Indigenous identity) within the oil and gas industry will be implemented.

Despite mitigation and enhancement measures, given existing employment conditions it is likely that more males, specifically more non-Indigenous males, than females will be employed by the Project. While mitigation and enhancement measures are expected to have a positive effect on employment and income equality at the project level, given the size of the Project's construction and operation workforces relative the size of the LAA and RAA labour force the Project is not expected to measurably reduce employment and income inequality between sexes and persons of Indigenous and non-Indigenous identity across the LAA.

Transition from Project Construction through Decommissioning

As the Project transitions from construction through decommissioning demand for labour will fluctuate. The transition from construction to operation will see a reduction in employment; however, this loss of labour will be known and anticipated by project workers as the four-year construction phase will be communicated at early stages. As the Project transitions from operation into decommissioning an increase in labour demand will likely occur. Detailed cost and engineering estimates are not available for project decommissioning; however, based on other projects, Cedar anticipates that the decommissioning workforce will peak at 100 to 150 workers., The workforce is anticipated to be comprised of occupations similar to those required during construction and is estimated to be required for 12 months. It is anticipated that a percentage of operation positions will transition into decommissioning, but given differences in decommissioning and operation activities, it is likely that some positions will not be required. Following the completion of decommissioning, labour demand from the Project will cease, and as with the transition from construction to operation, will be known and anticipated by project workers.

Overall, gained labour income, skills and experience realized by workers while employed with the Project are expected to mitigate losses in employment. In the case of gained skills and experience, these improved qualifications will aid with securing employment on future projects within the LAA, other RAA communities and British Columbia.

Summary

With the implementation of mitigation and enhancement measures the Project is expected to result in positive effects with regional gains in employment and labour income that are moderate in magnitude given workforce estimates (construction, operation [including turnarounds] and decommissioning), existing regional conditions and the 10-year labour market outlook of the North Coast and Nechako Economic Region (9,900 jobs [not including the Project] are anticipated to be added to the region by 2029). Effects extend beyond the RAA (insufficient labour supply exists to fully satisfy the Project's demand for labour) and are short-term in duration during construction and decommissioning and medium-term during operation. Positive effects are reversible following the completion of each phase (construction, operation, and decommissioning). Effects occur continuously throughout each phase of the Project. Positive effects are disproportionately distributed with non-Indigenous males anticipated to realize a disproportionate proportion of project employment (based on existing labour force and educational conditions). Risk and uncertainty are overestimated.

Likelihood and Context of Residual Effect

There is a medium likelihood of effects occurring as assessed as positive effects in the form of direct, indirect, and induced employment will occur and can be enhanced through proposed management measures. Imperfect information, including gaps in existing data (namely the timeliness of data), uncertainty related to the extent to which local residents will seek and secure employment with the Project, and known limitations in the effectiveness of mitigation and enhancement measures limit a potential high likelihood characterization. Economic impacts modeled through Statistics Canada's IPIOM are based on Pre-FEED estimates, which are subject to change and methodological limitations of the IPIOM (see Section 7.8.7.1), which further limit a potential high likelihood characterization. A conservative approach that overestimates the magnitude of adverse effects and underestimates the magnitude of positive effects has been applied to the assessment.

Residual effects occur within a socio-economic context shaped through the cumulative effects of century long ties to industrial development and "boom-and-bust" cycles that accompany resource development (see Section 23 Summary of Effects to Current and Future Generations). Recently, a 'bust' has occurred with the closure of the Methanex plant in 2006, resulting in a loss of 127 jobs, and closure of the Eurocan pulp and paper mill in January 2010, resulting in a loss of an additional 535 jobs. The combined number of jobs in Kitimat from the Rio Tinto Aluminum Smelter, pulp and paper mill, and methanol plant in the 1980s was over 2,650 but today is less than 950 (i.e., approximately 64% of the industrial jobs in Kitimat were lost between the mid-1980s and 2015). Renewed industrial interest in the region from proponents of LNG projects has reinvigorated the economic climate of the LAA creating a 'boom' but has also resulted in uncertainty with various LNG projects having been proposed only to be cancelled or delayed. Since 2018, the positive final investment decision by joint venture participants in the LNG Canada Export Terminal and commencement of that project's construction, in addition to other major projects such as the Coastal GasLink Project, have been the primary drivers to this 'boom'. The $40 billion investment by LNG Canada is the largest in Canada's history. LNG Canada and Coastal GasLink have provided substantial economic opportunity for the LAA, RAA and British Columbia.

With Cedar planning to start construction in late 2023 with clearing work (see Section 1.7), coinciding with the completion of construction activities on Costal GasLink and ramping down of the main construction phase of the LNG Canada Export Terminal, the Project is well positioned to leverage local labour. The timing of project construction activities means that labour demand from the Project will partially offset employment losses associated with completion/ramping down of the aforementioned construction phases mitigating the potential of a regional economic 'bust'.

7.8.7.3 ASSESSMENT OF CHANGE IN REGIONAL BUSINESS

This section describes the pathways, mitigation measures, predicted residual effects, and likelihood of predicted residual effects as they pertain to change in regional business.

Project Pathways

Project expenditures on materials, equipment and services have the potential to result in positive and adverse effects on regional business. Positive effects include increased business revenue, which can support capital investment and hiring, thereby increasing capabilities and capacity among local businesses. Spending of income by direct and indirect workers contributes to positive effects on local businesses, primarily within the service sector, resulting in induced employment effects. Adverse effects relate to project contributions to labour drawdown (i.e., workers leave current employers to secure employment with the Project due to wage differentials or a desire to work on the Project) and wage inflation (i.e., to attract and retain workers local employers may increase compensation paid to workers).

Mitigation and Enhancement Measures

Mitigation and enhancement measures were selected based on provincial and federal regulations and policies, on management practices and guidelines, and relevant peer-reviewed literature. Mitigations and enhancements were selected to address project interactions that affect regional business during all project phases. Table 7.8.37 provides a summary of the mitigation and enhancement measures for regional business.

TABLE 7.8.37 MITIGATION AND ENHANCEMENT MEASURES PROPOSED FOR CHANGE IN REGIONAL BUSINESS

Mitigation and Enhancement Measure/Mechanism	Rationale for Selection	Expected Success/Risks and Uncertainty	Timing	Management and/or Compensation Plans
Enhancement Measure: Engage with the Haisla Nation and Indigenous, local, and regional economic development departments and organizations to discuss procurement opportunities during all project phases. Develop work packages that prioritize local and regional businesses. **Mechanism:** Increase local content and enhance positive effects of the Project on local communities.	The use and effectiveness of local content strategies targeted at increasing local participation and procurement as well as other benefits is well understood and practical (see the World Bank's Study – Local Content Policies in the Oil and Gas Sector 2013) and aligns with The Global Oil and Gas Industry Association of Environmental and Social Issues guidance document Social Responsibility – Local Content Strategy (2011).	**Expected Success:** There is a medium to high likelihood that this enhancement measure will be effective. Cedar and its contractor(s) has control over the purchase of many goods and services (within reason and as influenced by practicality and cost-effectiveness). Therefore, there is a high likelihood that the enhancement measure will be effective at increasing local procurement. With respect to labour, due to the short duration of construction activities the Cedar and its contractor(s) can only inform local populations of job opportunities and required skill sets and educational attainment required for project-related work. Should individuals choose not to work for the Project or have insufficient skills or education, the ability of the Project to employ local workers is lowered. Therefore, there is a medium degree of likelihood that the enhancement measure will be effective at increasing local participation with the Project. **Risk and Uncertainty:** There is moderate uncertainty over the success of this enhancement measure, because it does not guarantee that local and regional workers/firms will be willing to compete for, or be successful in obtaining, project-related employment/contracts.	**Project Phase:** All phases **Effectiveness:** Effective over the short- to long-term once implemented	N/A

TABLE 7.8.37 MITIGATION AND ENHANCEMENT MEASURES PROPOSED FOR CHANGE IN REGIONAL BUSINESS

Mitigation and Enhancement Measure/Mechanism	Rationale for Selection	Expected Success/Risks and Uncertainty	Timing	Management and/or Compensation Plans
Enhancement Measure: Provide information to employment agencies and economic development organizations to help them plan for increased demand for labour. **Mechanism:** Provide employment agencies and economic development organizations with early information on project-influenced periods of increased labour demand.	The Government of Canada (e.g., Job Bank), the Government of British Columbia (e.g., WorkBC) as well as the City of Terrace, District of Kitimat and the Regional District of Kitimat-Stikine use workforce projections provided by proponents, among other sources, to aid in developing workforce projections and assist in the development of plans and initiatives. This enhancement measure facilitates proactive communication with these organizations.	**Expected Success:** There is a high degree of likelihood that the enhancement measure will be effective as it will be partially achieved through the submission of this Application to the EAO. **Risk and Uncertainty:** There is moderate uncertainty over the success of this enhancement measure, because success depends on how government agencies develop and implement policies that address labour supply	**Project Phase:** All phases **Effectiveness:** Effective over the short- to long-term once implemented	N/A
Enhancement Measure: Cedar will include Haisla businesses, and Indigenous, local, regional and businesses and contractors in its corporate database. **Mechanism:** Enhance local benefits by increasing visibility to, and access to information on, local businesses and contractors.	Increase benefits of the Project within Haisla Nation and among underrepresented groups in the oil and gas industry.	**Expected Success:** There is a medium degree of likelihood that the enhancement measure will be effective because success will partially depend on the extent to which target populations choose to engage and seek contracting opportunities with the Project. **Risk and Uncertainty:** There is low risk because the enhancement measures are well understood and easy to implement.	**Project Phase:** All phases **Effectiveness:** Effective over the short- to long-term once implemented	N/A

TABLE 7.8.37 MITIGATION AND ENHANCEMENT MEASURES PROPOSED FOR CHANGE IN REGIONAL BUSINESS

Mitigation and Enhancement Measure/Mechanism	Rationale for Selection	Expected Success/Risks and Uncertainty	Timing	Management and/or Compensation Plans
Enhancement Measure: Cedar will, and will require its contractor(s) to, adopt and implement policies and practices for providing opportunities to local businesses and contractors (or to provide a contractor's local involvement plan). **Mechanism:** Enhance local benefits by making selection criteria of contracts transparent and accessible to local businesses.	Increase local benefits of the Project and among underrepresented groups in the oil and gas industry.	**Expected Success:** There is a medium degree of likelihood that the enhancement measure will be effective because success will partially depend on the extent to which target populations choose to engage and seek contracting opportunities with the Project. **Risk and Uncertainty:** There is low risk because the enhancement measures are well understood and easy to implement.	**Project Phase:** All phases **Effectiveness:** Effective over the short- to long-term once implemented	N/A
Enhancement Measure: Cedar will look for opportunities over the life of the Project to enable Haisla and Indigenous, local and regional businesses and contractors to have repeated or ongoing contracts. **Mechanism:** Enhance long-term benefits of project spending by actively planning for the participation of local businesses and contractors in repeat and ongoing contracts.	Increase local benefits of the Project and among underrepresented groups in the oil and gas industry.	**Expected Success:** There is a medium degree of likelihood that the enhancement measure will be effective because success will partially depend on the extent to which target populations choose to engage and seek contracting opportunities with the Project. **Risk and Uncertainty:** There is low risk because the enhancement measures are well understood and easy to implement.	**Project Phase:** All phases **Effectiveness:** Effective over the short- to long-term once implemented	N/A

TABLE 7.8.37 MITIGATION AND ENHANCEMENT MEASURES PROPOSED FOR CHANGE IN REGIONAL BUSINESS

Mitigation and Enhancement Measure/Mechanism	Rationale for Selection	Expected Success/Risks and Uncertainty	Timing	Management and/or Compensation Plans
Mitigation Measure: Workers will be paid wages consistent with the Western Canadian labour market. **Mechanism:** Reduces the possibility that the Project will contribute to wage inflation within the RAA.	Economic theory regarding the supply of and demand for labour is well understood. Increased demand for a scare resource (i.e., skilled labour) tends to increase price (i.e., cost of labour). This mitigation measures represents the extent to which Cedar and its contractor(s) can manage the Project's contribution to wage inflation while enhancing local benefits (e.g., employment) of the Project.	**Expected Success:** There is an unknown degree of success as the extent to which this mitigation measure is effective in reducing competition for labour and wage inflation in the RAA is unknown (wage inflation is subject to numerous other macroeconomic factors). **Risk and Uncertainty:** There is moderate uncertainty that this measure will be successful as fair market wages for workers (construction, operation and decommissioning phase) within western Canada will likely exceed average labour rates in the RAA.	**Project Phase:** All phases **Effectiveness:** Effective over the short- to long-term once implemented.	Part of human resources and procurement planning.

Project Residual Effect

Economic Impact of Regional Spending

Project expenditures represent economic potential for local and regional businesses, not limited to supply and service contracts and goods and service provision to direct and indirect workers. Based on pre-FEED level information, estimates of local spending were not available but ultimately, the degree to which LAA and RAA businesses will benefit from contracting and supply opportunities throughout the Project's lifecycle depends on several factors, including their size, capability, and capacity to accommodate Project and workforce (consumer) requirements. Where businesses are successful in securing contracting opportunities with the Project or are able to secure additional business as a result of increased consumer spending from the Project's workforce, beneficial effects on revenues could occur.

In addition to beneficial effects on revenues, increased regional spending can lead to increased regional employment through indirect and induced effects. Modelled through Statistics Canada IPIOM, regional spending is estimated to result in 694 FTEs of indirect labour (65.3% occurring in British Columbia) and 354 FTEs of induced labour (65.0% occurring in British Columbia) over the Project's four-year construction period. A total of 270 FTEs (64.8% occurring in British Columbia) of annual indirect labour and 144 FTEs (64.6% occurring in British Columbia) of annual induced labour are estimated to occur over its 40-year operation phase. Economic impacts stemming from project turnarounds and decommissioning were not estimated (Section 7.8.7.1). Table 7.8.38 provides a summary of indirect and induced employment estimates during project construction and operation.

TABLE 7.8.38 ANNUAL AVERAGE ESTIMATES OF INDIRECT AND INDUCED EMPLOYMENT (FTES) AND LABOUR INCOME (UNDISCOUNTED)

Category	British Columbia		Other Parts of Canada		Total	
	FTEs	Labour Income/FTE	FTEs	Labour Income/FTE	FTEs	Labour Income/FTE
Construction						
Indirect	453	85,193	241	82,684	694	84,322
Induced	230	66,669	124	71,935	354	68,512
Operation						
Indirect	175	80,651	95	84,155	270	81,888
Induced	93	66,457	51	71,064	144	68,081

In terms of indirect employment, project spending on goods and services would only be expected to result in 'net new' (i.e., creation of) indirect employment if businesses become established or expand (by increasing workforces) to meet project demands. Similarly, consumer spending on the part of direct and indirect workers to the Project would only be expected to result in 'net new' induced employment if existing businesses expanded or new businesses were established in response to increased demand.

Estimates of local spend (e.g., within the LAA) on materials, goods and services are not available based on Pre-FEED level information; however, given current and anticipated economic activity in the LAA, and considering that the LAA is largely oriented towards the utilities, manufacturing, construction and mining, quarrying and oil and gas extraction (these sectors account for greatest percentage of employment in the LAA and form the economic base of the LAA as calculated through LQs; see Section 7.8.5.2, Table 7.8.7), it is likely that a percentage of project spending will flow to local businesses. To increase benefits of the Project, mitigation and enhancement measures will be implemented that aim to increase local content and participation in project contracting opportunities by underrepresented groups (e.g., Indigenous-owned businesses).

Despite enhancement measures, several major cost items such as line pipe and fittings and costs associated with the FLNG facility occur offshore and are not included in the economic impact assessment completed for the Project. These items comprise a major percentage of material costs for the Project and their procurement from outside the LAA would be expected to reduce the magnitude of indirect employment effects (positive and adverse) within the LAA.

Labour Scarcity and Increased Labour Costs

Potential adverse effects of project spending and increased economic activity on regional businesses include contributions to labour scarcity and increased labour costs. Table 7.8.39 provides a comparison of existing employment income in the LAA with projected project-case wages and salaries.

TABLE 7.8.39 EXISTING EMPLOYMENT INCOME AND PROJECTED PROJECT-RELATED WAGES/SALARIES, LAA

Phase	Existing Mean Employment Income ($)[1]	Mean Project-Case Direct Wages/Salaries[2]
Construction	56,201	88,203
Operation		87,105

NOTES:

[1] Mean employment income is presented for the total population (aggregate of Indigenous and non-Indigenous labour force) presented in Table 7.8.15.

[2] Based on IPIOM modelling results

Wages paid to the Project's direct workforce show a measurable variance from existing conditions in the LAA. Construction phases wages are estimated to be 56.9% greater than existing mean wages in the LAA while operation phase wages are estimated to be 55.0% greater. While project wages are measurably greater than existing conditions, they are expected to align with annual average wages paid to British Columbia workers in sectors engaged in pipeline construction and operation.

Higher wages paid to the direct project workforce (construction and operation) combined with the potential for project-related employment to be perceived as being more desirable than other forms of employment could lead to increased difficulty for local businesses to recruit or retain qualified workers. In the extreme, increased competition to attract and retain qualified workers can lead to upward pressure on wages. Given the short duration of construction (four years) and the relatively small size of the project workforce (350 to 500 persons during construction and approximately 100 persons during operation) in comparison to the existing labour force (13,350 persons), upward pressure on wages across the LAA as a result of the Project is expected to be negligible.

Transition from Project Construction to Operation

As the Project transitions from construction through to decommissioning project spending on materials, goods and services will fluctuate. The transition from construction to operation will see a reduction in spend followed by intermediate increases associated with project turnarounds (anticipated every three to five years). Spend will likely increase as the project transitions into decommissioning but ultimately will result in the cessation of project spending. Although project construction will likely result in increased revenues for businesses within the LAA, due to the relatively short construction period (four years) it is unlikely that new businesses will become established specifically in response to project-related spending. Comparatively, given the long-term duration of operation it is possible that businesses could become established as a result of project spending. In either case, it is expected that LAA businesses will seek to diversify their customer base, thereby increasing their resilience to fluctuations in economic activity, and decrease dependence on one source of revenue; businesses are generally considered responsive to market conditions. Ultimately, earned revenues and increased capacities and capabilities realized by businesses that responded to project opportunities will likely prove beneficial to better position local businesses to competitively respond to future opportunities in the LAA.

Summary

With the implementation of mitigation and enhancement measures and in consideration of current and anticipated economic conditions project residual effects on regional business are expected to be positive in direction and moderate in magnitude. Effects extend beyond the RAA (specialised goods, materials and services will likely be sourced from outside the RAA) and occur over the short-term during construction and decommissioning and medium-term during operation. Positive effects are reversible following the completion of each phase (construction, operation, and decommissioning). Effects occur continuously throughout each phase. Positive effects are disproportionately distributed with non-Indigenous businesses likely to realize a greater share of project contracting opportunities. Risk and uncertainty are overestimated. Project residual adverse effects related to labour drawdown and increase labour costs are expected to be negligible at the LAA level.

Likelihood and Context of Residual Effect

There is a medium likelihood of effects occurring as assessed as project spending will result in indirect and induced business activity (positive effects), which can be enhanced through management measures. Imperfect information, including gaps in baseline data, uncertainty related to the extent to which local businesses and contractors will seek and secure contracts with the Project, and known limitations in the effectiveness of mitigation and enhancement measures limit a potential high likelihood characterization. Economic impacts modeled through Statistics Canada's IPIOM are based on pre-FEED cost estimates, which are subject to change and methodological limitations of the IPIOM (see Section 7.8.7.1), which further limits a potential high likelihood characterization. A conservative approach that overestimates the magnitude of adverse effects and underestimates that of positive effects has been applied to the assessment.

Similar to Section 7.8.7.2, residual effects occur within a socio-economic context shaped through the cumulative effects of century long ties to industrial development and "boom-and-bust" cycles that accompany resource development. Given the timing of construction activities (beginning in late 2023 with clearing work) the Project is well positioned to leverage businesses that will likely have extra capacity (project construction coincides with the completion of construction activities on Costal GasLink and the ramping down of the main construction phase of LNG Canada Export Terminal) to meet project demand

for materials, goods, and services. The timing of project construction activities means that demand for materials, goods and services from the Project will partially offset losses in regional spending from Costal GasLink and LNG Canada Export Terminal mitigating the magnitude of a potential regional economic 'bust'.

7.8.7.4 ASSESSMENT OF CHANGE IN REGIONAL ECONOMY

This section describes the pathways, mitigation measures, predicted residual effects, and likelihood of predicted residual effects as they pertain to change in regional employment.

Project Pathways

Project expenditures during construction and operation will result in economic activity (e.g., GDP) in the LAA, RAA, British Columbia and beyond. During operation, the Project will also pay income and property taxes to various governments contributing to the local, regional and provincial tax base. Economic activity and increased demand for labour has the potential to drive up wages and increase business costs. Increased business costs could result in the need for businesses to raise prices resulting in increases in the cost of consumables.

Large differentials between existing employment income and estimated project workforce wages (Section 7.8.7.3) could result in upward pressure on wages in the LAA, increasing labour costs and potentially driving up prices of local goods and services. Should the Project rely heavily on a non-local workforce, in-migrating workers could increase demand for housing and accommodations contributing to upward pressure on the price of housing and accommodations. Potential increases in the cost of consumables (i.e., local goods and services) and changes in the cost of housing could result in an overall increase in the cost of living.

Mitigation and Enhancement Measures

Mitigation and enhancement measures identified in Sections 7.8.7.2 (Table 7.8.32) and 7.8.7.3 (Table 7.8.37) also apply to the assessment of change in regional economy. They are not reproduced in this section.

Project Residual Effect

Economic Impact

Project spending is estimated to result in $257 million in GDP contributions over the four-year construction phase, comprised of $107 million in direct effects (100% occurring in British Columbia), $94 million in indirect effects (63.8% occurring in British Columbia), and $56 million in induced effects (67.9% occurring in British Columbia). Over the 40-year operation life of the Project, annual GDP contributions are estimated at $85 million, comprised of $24 million in direct effects (100% occurring in British Columbia), $39 million in indirect effects (64.1% occurring in British Columbia), and $22 million in induced effects (68.2% occurring in British Columbia). Project GDP contributions are presented in Table 7.8.40. GDP contributions stemming from project turnarounds and decommissioning were not estimated (Section 7.8.7.1).

TABLE 7.8.40 ESTIMATED GDP CONTRIBUTIONS ($ MILLIONS), CONSTRUCTION AND OPERATION (ANNUAL)

Impact	British Columbia	Rest of Canada	Total
Construction			
Direct	107	0	107
Indirect	60	34	94
Induced	38	18	56
Total	205	52	257
Operation (annual)			
Direct	24	0	24
Indirect	25	14	39
Induced	15	7	22
Total	64	22	85

Gross domestic product contributions at the LAA level have not been estimated; however, increased economic activity is inherently beneficial to the economy of the LAA. Project mitigation and enhancement measures will be implemented (Table 7.8.32 and Table 7.8.37) with the aim of increasing local content and economic impacts. Because GDP is a measure of overall economic activity, the magnitude of effect at the LAA and RAA level is represented through the additive effect of project-related changes in regional employment and business. As such, a moderate magnitude positive effect on the GDP of the LAA is estimated during construction, operation, and decommissioning phases of the Project.

In addition to GDP contributions, the Project will have a beneficial effect on government tax revenues. Contributions to government tax revenues as estimated through Statistics Canada's IPIOM are presented in Table 7.8.41. The IPIOM estimates of tax revenue are limited to taxes on products and production associated with construction and operation spending. They do not include income tax (corporate or personal) or taxes on the final sale of goods and services. Estimates of corporate income tax and property tax were unavailable at the time of writing (November 2021). Presented in Table 7.8.41, federal tax contributions are estimated at $4.6 million over the Project's four-year construction period while provincial and municipal tax contributions are estimated at $19.4 million ($17.2 million generated in British Columbia) and $7.7 million ($5.8 million generated in British Columbia), respectively. During operation, annual federal tax contributions are estimated at $2.4 million while annual provincial and municipal tax contributions are estimated at $7.0 million ($5.6 million generated in British Columbia) and $4.2 million ($2.6 million generated in British Columbia) respectively. Tax contributions stemming from project spending on turnarounds and decommissioning were not estimated (Section 7.8.7.1).

Tax contributions at the LAA level have not been estimated; however, as with GDP contributions, increased tax payments are inherently beneficial to local and regional governments. Based on quantitative estimates of tax contributions within British Columbia, and because quantitative estimates of changes in municipal government revenues at the LAA level have not been quantified, effects are conservatively characterized as being moderate in magnitude.

TABLE 7.8.41 ESTIMATED GOVERNMENT TAX CONTRIBUTIONS ($ MILLIONS)

Level of Government	Category	British Columbia			Other Parts of Canada			Total		
		Direct and Indirect	Induced	Total	Direct and Indirect	Induced	Total	Direct and Indirect	Induced	Total
Construction										
Federal	Taxes on products	0.7	2.9	3.6	0.1	0.8	0.9	0.8	3.7	4.5
	Taxes on production	0.0	0.0	0	0.0	0.0	0	0.0	0.1	0.1
	Total	0.7	3.0	3.7	0.2	0.8	1	0.8	3.8	4.6
Provincial	Taxes on products	5.6	8.9	14.5	0.3	1.2	1.5	5.9	10.1	16
	Taxes on production	0.9	1.7	2.6	0.2	0.6	0.8	1.2	2.2	3.4
	Total	6.6	10.6	17.2	0.5	1.8	2.3	7.1	12.3	19.4
Municipal	Taxes on products	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.2
	Taxes on production	2.0	3.6	5.6	0.5	1.3	1.8	2.6	4.9	7.5
	Total	**2.1**	**3.7**	**5.8**	**0.6**	**1.3**	**1.9**	**2.6**	**5.1**	**7.7**
Operation (annual)										
Federal	Taxes on products	0.4	1.3	1.7	0.1	0.4	0.5	0.6	1.7	2.3
	Taxes on production	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	**0.5**	**1.4**	**1.9**	**0.1**	**0.4**	**0.5**	**0.6**	**1.8**	**2.4**
Provincial	Taxes on products	1.5	2.9	4.4	0.2	0.6	0.8	1.7	3.5	5.2
	Taxes on production	0.4	0.7	1.1	0.2	0.4	0.6	0.7	1.1	1.8
	Total	**2.0**	**3.6**	**5.6**	**0.4**	**1.0**	**1.4**	**2.4**	**4.6**	**7.0**
Municipal	Taxes on products	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Taxes on production	1.0	1.6	2.6	0.6	0.9	1.5	1.5	2.5	4.0
	Total	**1.0**	**1.6**	**2.6**	**0.6**	**0.9**	**1.5**	**1.6**	**2.6**	**4.2**

Cost of Living

Assessed in Section 7.8.7.3, differentials between existing wages and that of the Project's direct workforce could lead to increased competition for labour and upward pressure on wages; however, given existing conditions this is not expected to lead to wage inflation. Considering that the Project's peak construction workforce (500 persons) would represent 2.5% of the existing LAA labour force (13,350 persons) and the operation workforce 0.5%, the Project's contribution to upward pressure on wages across the LAA is expected to be negligible. As such, the Project is expected to have negligible effects on increased prices due to increased labour costs within the LAA.

With respect to housing costs, as assessed in Section 7.8.7.2, project demand for skilled labour during construction, and likely during turnarounds, is expected to exceed available supply. As such, the Project will partially rely on a non-local workforce to satisfy labour demands. Given the short duration of construction and intermittent turnaround schedules, non-local workers are expected to commute to/from their home communities and will be lodged in open accommodations rather than relocating to the LAA (see Section 7.11: Infrastructure and Services for the assessment of change in accommodation). Considering this and given Cedar's intention to hire local workers first, the Project's workforce is not expected to measurably increase demand for housing and other forms of accommodation. As such, the Project is expected to have a negligible effect on the cost of housing and accommodations.

In terms of operation labour (see Section 7.8.7.2) a sufficient supply may be available in the LAA to satisfy project demands; however, the need for specialized labour likely means that some of the labour force will be recruited from outside the RAA. Given the 40-year duration of operation it is likely that non-local workers (including their families) will choose to in-migrate to the LAA rather than commute. As with construction, Cedar intends to hire local workers first and anticipates that only a small percentage of the operation workforce will be comprised of non-local workers. As such, increased demand for housing and other forms of accommodation from in-migrating operation phase workers is not expected to measurably increase demand such that upward pressure on costs occur (see Section 7.11: Infrastructure and Services for the assessment of change in accommodation).

In consideration of existing and anticipated economic conditions within the LAA, the Project's contribution to increased labour costs and resultant increases in the price of consumables (no measurable change from existing conditions) and effects of in-migrating workers on the demand and cost of housing and other accommodations (no measurable change from existing conditions), the Project is expected to have a negligible impact on the cost of living within the LAA.

Summary

With the implementation of mitigation and enhancement measures and in consideration of current and anticipated economic conditions, project residual effects on regional economy are expected to be positive in direction and moderate in magnitude. Adverse effects on the cost of living across the LAA are expected to be negligible in magnitude. Effects extend beyond the RAA (specialised goods, materials and services will likely be sourced from outside the RAA) and occur over the short-term during construction and decommissioning and medium-term during operation. Positive effects are reversible following the completion of each phase (construction, operation, and decommissioning). Effects occur continuously throughout each phase. Positive effects are evenly distributed, and risk and uncertainty are overestimated.

Likelihood and Context of Residual Effect

There is a medium likelihood of effects occurring as assessed as economic activity (e.g., employment and business activity) related to project construction and operation will contribute to provincial and federal GDP and municipal, provincial, and federal government revenues. Imperfect information, including gaps in baseline data, uncertainty related to the extent to which local residents, businesses and contractors will seek and secure employment and contracts with the Project, and known limitations in the effectiveness of mitigation and enhancement measures limit a potential high likelihood characterization. Economic impacts modeled through Statistics Canada's IPIOM are based on pre-FEED cost estimates, which are subject to change and methodological limitations of the IPIOM (Section 7.8.7.1), which further limits a potential high likelihood characterization. A conservative approach that overestimates the magnitude of adverse effects and underestimates the magnitude of positive effects has been applied to the assessment.

As with Sections 7.8.7.2 and 7.8.7.3, residual effects occur within a socio-economic context shaped through the cumulative effects of century long ties to industrial development and "boom-and-bust" cycles that accompany resource development. Given the timing of construction activities (beginning in late 2023 with clearing work) the Project will partially offset declines in regional economic activity and losses in GDP and government revenue contributions associated with decreased spend on labour, goods and services from Coast GasLink and LNG Canada Export Terminal (project construction coincides with the completion of construction activities on Costal GasLink and the ramping down of the main construction phase of LNG Canada Export Terminal). As such, the Project will partially mitigate the magnitude of a potential regional economic 'bust'.

7.8.7.5 SUMMARY OF MITIGATION AND ENHANCEMENT MEASURES

Table 7.8.42 provides a summary of mitigation and enhancement measures for the assessment of employment and economy by potential effect.

TABLE 7.8.42 SUMMARY OF MITIGATION AND ENHANCEMENT MEASURES FOR THE ASSESSMENT OF EMPLOYMENT AND ECONOMY

Mitigation Measure	Potential Effects		
	Change in regional employment	Change in regional business	Change in regional economy
Inform local residents and Indigenous Nations of job and procurement opportunities during all project phases. Develop work packages that consider the capacity and capabilities of local and regional businesses.	✓	-	✓
Identify potential shortages of workers with specific skill requirements and training, and work with the Haisla employment department, local and regional Indigenous employment centers, local and regional training and education facilities, and communities to increase opportunities for Indigenous and local community members to obtain training required for project participation.	✓	-	✓
Provide information to local and Indigenous employment agencies and economic development organizations to help them plan for increased demand for labour.	✓	-	✓

TABLE 7.8.42 SUMMARY OF MITIGATION AND ENHANCEMENT MEASURES FOR THE ASSESSMENT OF EMPLOYMENT AND ECONOMY

Mitigation Measure	Potential Effects		
	Change in regional employment	Change in regional business	Change in regional economy
Implement a Gender Equity and Diversity Policy that focuses on hiring Haisla Nation members local and Indigenous persons, and other underrepresented populations including women to increase project employment among underrepresented populations	✓	-	✓
On-the-job training programs and apprenticeship opportunities will be made available.	✓	-	✓
Workers (not inclusive of summer students) 19 years and younger will be required to have completed high school or have an appropriate equivalency to work on the Project.	✓	-	✓
Engage with the Haisla Nation and Indigenous, local, and regional economic development departments and organizations to discuss procurement opportunities during all project phases. Develop work packages that prioritize local and regional businesses.	-	✓	✓
Provide information to employment agencies and economic development organizations to help them plan for increased demand for labour.	-	✓	✓
Cedar will include Haisla businesses, and Indigenous, local, regional and businesses and contractors in its corporate database.	-	✓	✓
Cedar will, and will require its contractor(s) to, adopt and implement policies and practices for providing opportunities to local businesses and contractors (or to provide a contractor's local involvement plan).	-	✓	✓
Cedar will look for opportunities over the life of the Project to enable Haisla and Indigenous, local and regional businesses and contractors to have repeated or ongoing contracts.	-	✓	✓
Workers will be paid wages consistent with the Western Canadian labour market.	-	✓	✓

NOTES:

✓ Check marks indicate the applicable effect to which the mitigation can be successfully applied.

- Indicate that the mitigation is not applicable to address the effect, i.e., the mitigation applies to some effects but not applicable to others.

7.8.7.6 SUMMARY OF PROJECT RESIDUAL EFFECTS

Table 7.8.43 summarizes the Project's anticipated residual effects on employment and economy, an overview of which is provided in the subsections below.

TABLE 7.8.43 PROJECT RESIDUAL EFFECTS ON EMPLOYMENT AND ECONOMY

Project Phase	Direction	Residual Effects Characterization Criteria							Likelihood of Residual Effects
		Magnitude	Extent	Duration	Reversibility	Frequency	Affected Populations	Risk and Uncertainty	
Change in regional employment									
Construction	P	M	RAA	ST	R	C	D	O	M
Operation	P	M	RAA	MT	R	C	D	O	M
Decommissioning	P	M	RAA	ST	R	C	D	O	M
Residual project effect for all phases	P	M	RAA	LT	R	C	D	O	M
Change in regional business									
Construction	P	M	RAA	ST	R	C	D	O	M
Operation	P	M	RAA	MT	R	C	D	O	M
Decommissioning	P	M	RAA	ST	R	C	D	O	M
Residual project effect for all phases	P	M	RAA	LT	R	C	D	O	M
Change in regional economy									
Construction	P	M	RAA	ST	R	C	E	O	M
Operation	P	M	RAA	MT	R	C	E	O	M
Decommissioning	P	M	RAA	ST	R	C	E	O	M
Residual project effect for all phases	P	M	RAA	LT	R	C	E	O	M

TABLE 7.8.43 PROJECT RESIDUAL EFFECTS ON EMPLOYMENT AND ECONOMY

Project Phase	Direction	Residual Effects Characterization Criteria							Likelihood of Residual Effects
		Magnitude	Extent	Duration	Reversibility	Frequency	Affected Populations	Risk and Uncertainty	
KEY See Table 7.8.31 for detailed definitions N/A: Not applicable **Direction:** P: Positive A: Adverse N: Neutral **Magnitude:** NMC: No Measurable Change L: Low M: Moderate H: High		**Geographic Extent:** PF: Project footprint LAA: Local Assessment Area RAA: Regional Assessment Area **Duration:** ST: Short-term MT: Medium-term LT: Long-term **Frequency:** S: Single event IR: Irregular event R: Regular event C: Continuous				**Reversibility:** R: Reversible I: Irreversible **Affected Populations:** E: Evenly Distributed D: Disproportionally Distributed **Risk and Uncertainty:** O: Overestimated U: Underestimated **Likelihood of Residual Effects:** L: Low M: Medium H: High			

Summary of Adverse Residual Effects

The Project is not expected to have a substantial adverse residual effect on regional employment, business or economy. In terms of cost of living (assessed under the effect “change in regional economy”), while notable differences between existing wages and that of the Project’s direct workforce could lead to increased competition for labour and upward pressure on wages, the extent to which local businesses would likely need to increase prices to cover increased labour costs is expected to be minor and as such the Project’s contribution to inflated prices of consumables across LAA is expected to be negligible. Implementing a hire local first policy, Cedar hopes to recruit most of its workforce (all phases) from LAA and RAA communities. Despite this, a non-local workforce will likely be required to fully satisfy the Project’s demand for labour, especially for highly skilled positions. Given the relatively short duration of construction and turnarounds and the Project’s relatively small operation workforce, incremental demand on housing and accommodations from non-local workers is not expected to measurably increase costs for housing and other forms of accommodation. As such, the Project is expected to have a negligible effect on the cost of housing and accommodations. No further characterizations are provided.

Summary of Positive Residual Effects

Change in Regional Employment

The Project is estimated to result in 561 FTEs of direct labour in British Columbia over the Project’s four-year construction phase and 270 FTEs of direct labour during its operation phase. Estimates of direct labour impacts created during project turnarounds (estimated to occur every three to five years) and decommissioning have not been prepared.

Based on preliminary workforce planning, Cedar anticipates that an average workforce size of 230 to 315 persons will be required over the four-year construction period. It is anticipated that the annual construction workforce will peak between 350 to 500 workers beginning in year two and will be sustained (annually) for roughly eight months (anticipated to occur between Q2 through Q4). The average annual workforce size over the Project’s 40-year operation life span is estimated at 100 persons with turnaround workforces (required every 3 to 5 years) estimated at 100 persons. Detailed cost and engineering estimates are not available for project decommissioning; however, based on other projects, Cedar anticipates that the decommissioning workforce will peak at 100 to 150 workers. Given existing conditions, project demand for occupations during construction and operation (workforce availability is not calculated for decommissioning) in trades, transport and equipment operation (NOC 7) are expected to exceed local supply and as such a non-local workforce will be required to satisfy labour demand. It is likely that non-local labour will also be used to satisfy demand for highly skilled positions and may also be used by contractors retained by the Project.

While an estimate of local hire has not been prepared, mitigation and enhancement measures will be implemented to increase local content and reduce employment and income inequity within the Project’s workforce. Despite this, it is likely that a large percentage of the Project’s workforce (construction and operation, including turnarounds) will be comprised of non-Indigenous males (based on existing conditions). Mitigation and enhancement measures are also not expected to measurably reduce employment and income inequality in the LAA or RAA.

As the Project transitions from construction through decommissioning fluctuations in labour demand will occur. Specifically, losses in demand, and subsequently project employment, will occur as the Project transitions from construction to operation and again following the completion of decommissioning. Periods of increased labour demand and employment are expected as project construction ramps up and as the Project transitions from operation to decommissioning. Mitigating losses in employment is the earned labour income and gained skills and experience realized by workers while employed with the Project.

With the implementation of mitigation and enhancement measures and in consideration of current and anticipated economic conditions, the Project is expected to result in positive effects with regional gains in employment and labour income that are moderate in magnitude given workforce estimates (construction, operation [including turnarounds] and decommissioning), existing regional conditions and the 10-year labour market outlook of the North Coast and Nechako Economic Region (9,900 jobs [not including the Project] are anticipated to be added to the region by 2029). Effects extend beyond the RAA (insufficient labour supply exists to fully satisfy the Project's demand for labour) and are short-term in duration during construction and decommissioning and medium-term during operation. Positive effects are reversible following the completion of each phase (construction, operation, and decommissioning). Effects occur continuously throughout each phase of the Project. Positive effects are disproportionately distributed with non-Indigenous males anticipated to realize a major proportion of project employment (based on existing labour force and educational conditions). Risk and uncertainty are overestimated.

With Cedar planning to start construction in late 2023 (clearing works), the Project is well positioned to leverage local labour made available from completion of the Coast GasLink Project and from the ramping down of main construction activities on the LNG Canada Export Terminal. Given the timing of construction activities the Project will partially mitigate the magnitude of a potential regional economic 'bust' associated with the completion of these projects.

Change in Regional Business

Project spending on materials, goods and services, and consumer spending on the part of the Project's workforce, will have a beneficial effect on LAA businesses. It is also estimated to result in 453 FTEs of indirect labour and 230 FTEs of induced labour in British Columbia over the Project's four-year construction period and 175 FTEs of annual indirect labour and 93 FTEs of annual induced labour over its 40-year operation life. The degree to which LAA and RAA businesses will benefit from project contracting and supply opportunities throughout the Project's lifecycle depends on several factors, including their size, capability, and capacity to accommodate project requirements.

Despite increased regional spending, net new employment (indirect and induced) would only be created where businesses expand or become established to respond to increased regional spending. Based on existing conditions and given current natural gas and LNG industry activity, the LAA is expected to have a well-established supply chain able to respond to project demands (specialized goods, materials and services are expected to be sourced from outside the RAA). While an estimate of regional spend has not been prepared, mitigation and enhancement measures will be implemented that aim to increase local content with specific attention paid to increasing participation among underrepresented groups (e.g., Indigenous-owned businesses).

Because direct project wages are expected to be greater than existing employment income it is possible that some local business may experience difficultly attracting and retaining skilled labour. This, combined with the possibility that project-related work could be viewed as more desirable than other forms of employment, could lead to increased competition for labour among LAA businesses. Despite this, given

the Project's demand for labour relative to existing regional conditions (e.g., construction and operation of LNG Canada Export Terminal) and the 10-year labour market outlook for the North Coast and Nechako Region (9,900 jobs [not including the Project] are anticipated to be added by 2029), the Project is not expected to lead to wage inflation within the LAA.

As the Project transitions from construction through decommissioning project spending on materials, goods and services will fluctuate. Specifically, losses in regional spend will occur as the Project transitions from construction to operation and again following the completion of decommissioning. Periods of increased spending are expected as project construction ramps up and as the Project transitions from operation to decommissioning. Ultimately, businesses are regarded as being responsive to market conditions and earned revenues and increased capacities and capabilities should prove beneficial in better positioning local businesses to competitively respond to future opportunities in the LAA.

With the implementation of mitigation and enhancement measures and in consideration of current and anticipated economic conditions, project residual effects on regional business are expected to be positive in direction and moderate in magnitude. Effects extend beyond the RAA and occur over the short-term during construction and decommissioning and medium-term during operation. Positive effects are reversible following the completion of each phase (construction, operation, and decommissioning). Effects occur continuously throughout each phase. Positive effects are disproportionately distributed with non-Indigenous businesses likely to realize a larger share of project contracting opportunities. Risk and uncertainty are overestimated.

With Cedar planning to start construction in late 2023 (clearing works), the Project is well positioned to leverage local businesses that are anticipated to have additional capacity stemming from the loss of regional expenditures on materials, goods and services from Coast GasLink and LNG Canada (project construction coincides with the completion of construction activities on Coastal GasLink and the ramping down of main construction activities on LNG Canada). Given the timing of construction activities the Project will partially mitigate the magnitude of a potential regional economic 'bust' associated with the completion of these projects.

Change in Regional Economy

Project spending is estimated to result in $257 million in GDP contributions over the four-year construction phase and $85 million annually over the 40-year operation life of the Project. Tax contributions from project spending during the four-year construction period are estimated at $4.6 million for the federal government, $19.4 million for provincial governments ($17.2 million for the province of British Columbia) and $7.7 million for municipal governments ($5.8 million for those in British Columbia). Over the 40-year operation life of the project tax contributions from annual spending are estimated at $2.4 million for the federal government, $7.0 million for provincial governments ($5.6 million for the Province of British Columbia), and $4.2 million for municipal governments ($2.6 million for those in British Columbia). Tax contributions stemming from project spending on turnarounds and decommissioning were not estimated (see Section 7.8.7.1).

Neither GDP or tax contributions at the LAA level have been estimated; however, increased economic activity and tax revenues is inherently beneficial to the economy of the LAA and local governments and regional governments. To increase benefits of the Project, mitigation and enhancement measures will be implemented with aim of increasing local content and economic impacts.

With the implementation of mitigation and enhancement measures and in consideration of current and anticipated economic conditions, project residual effects on regional economy are expected to be positive in direction and moderate in magnitude. Effects extend beyond the RAA and occur over the short-term during construction and decommissioning and medium-term during operation. Positive effects are reversible following the completion of each phase (construction, operation, and decommissioning). Effects occur continuously throughout each phase. Positive effects are evenly distributed, and risk and uncertainty are overestimated.

With Cedar planning to start construction in late 2023 (clearing works), the Project will partially mitigate losses in GDP and government revenue contributions and the magnitude of a potential regional economic 'bust' associated with the completion of construction activities on the Coastal GasLink project and from the ramping down of main construction activities on LNG Canada Export Terminal.

7.8.8 Assessment of Cumulative Effects on Change in Employment and Economy

The assessment of cumulative effects is initiated with a determination of whether two conditions exist:

- Project has residual adverse effects on employment and economy
- Residual effects could act cumulatively with residual effects of other past, present, or reasonably foreseeable future physical activities

If either condition is not met, further assessment of cumulative effects is not warranted because the Project does not interact cumulatively with other projects or activities. Because the Project is not expected to have a residual adverse effect on regional employment, business or economy further assessment of cumulative effects is not warranted.

7.8.9 Prediction Confidence

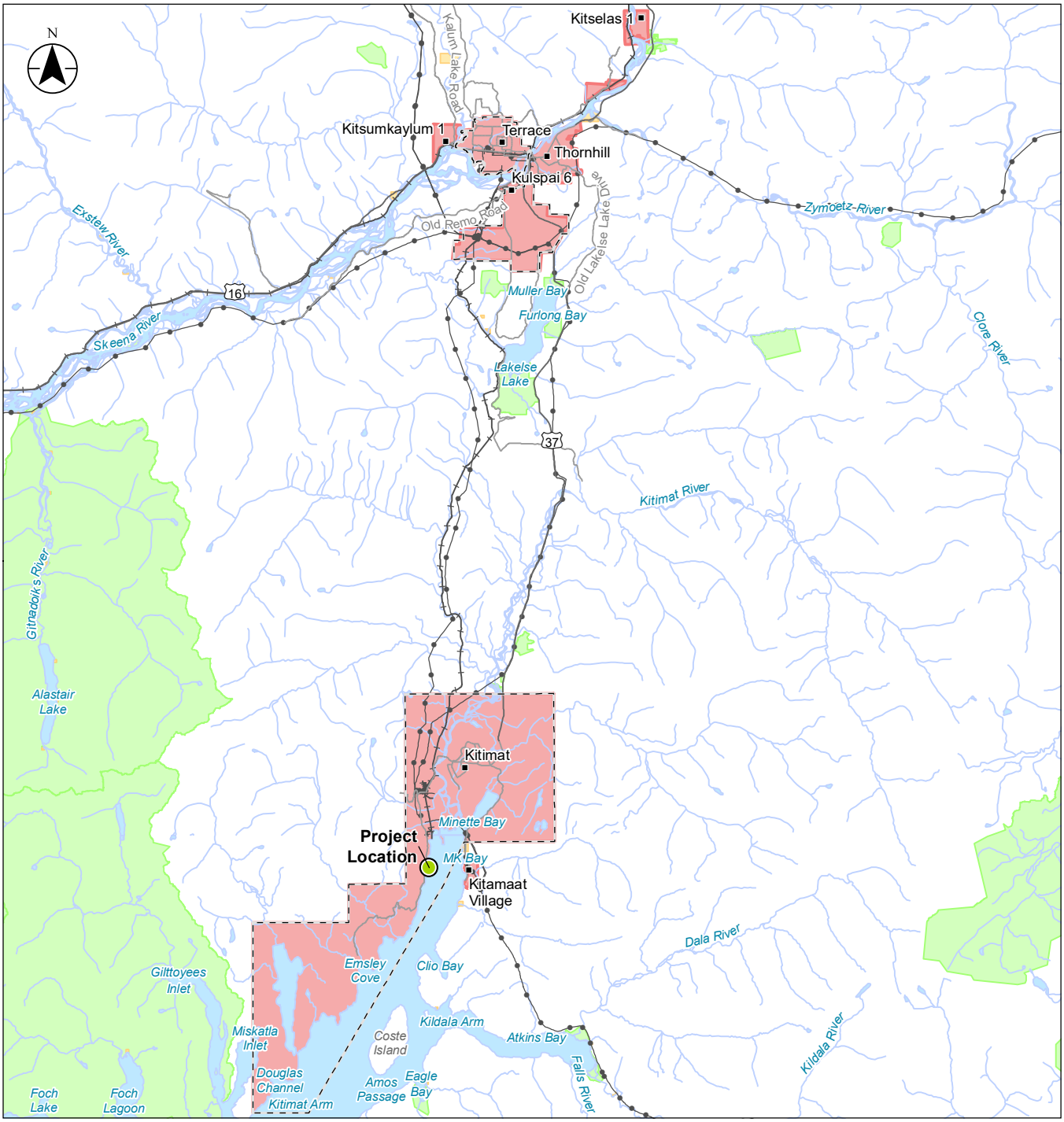
There is a moderate degree of confidence in the assessment of effects on employment and economy. The predication confidence in the conclusions for project residual effects is based on:

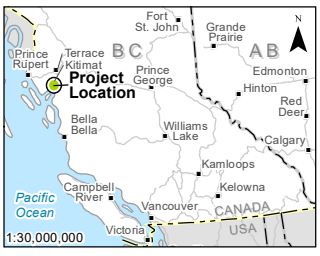
- Baseline data limitations—the description of exiting conditions is largely informed through data obtained from Statistics Canada's 2016 Census. Current (2021) baseline data is primarily limited to results of consultation and primary research.
- Pre-FEED cost estimates—cost estimates used to model economic impacts during construction and operation are subject to change as the Project progresses through the detailed engineering and design and procurement processes.
- Limitations of Statistics Canada's IPIOM—see Section 7.8.7.1.
- Uncertainty about future economic conditions—there always exists a certain level of economic uncertainty in future economic conditions and the extent to which local workers/business will be able to satisfy/be interested in securing employment/contracting opportunities with the Project. This is especially so given the COVID-19 global pandemic and its effect on the resiliency of local communities and business operating under restrictive public health orders.

7.8.10 Follow-Up Strategy

The Project is expected to have positive effects on regional employment, business and economy. Cedar will implement mitigation and enhancement measures to increase local and regional benefits (i.e., positive effects); however, the extent to which workers and business participate in project-related opportunities (e.g., the extent to which local workers seek employment with the Project and local business participate in procurement opportunities) is largely external to Cedar. Cedar will continue to work with Indigenous Nations and identified stakeholders to communicate project information, including employment and contracting opportunities, with the aim of increasing local benefits of the Project.

7.8.11 Figures





Notes
1. Coordinate System: NAD 1983 UTM Zone 9N
2. Data Sources: DataBC, Government of British Columbia; Natural Resources Canada; Canadian Hydrographic Service

- Highway
- Road
- Railway
- Transmission Line
- Watercourse
- Waterbody
- Reserve Land
- Park or Protected
- District of Kitimat Municipal Boundary
- Project Location

Employment and Economy
- Local Assessment Area

0 5 10 15 20 km
1:500,000 (at original document size of 8.5x11)

Stantec

CEDAR LNG

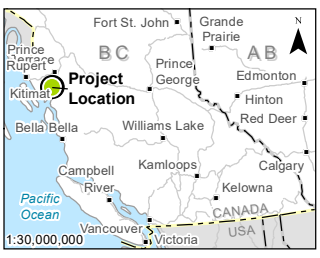
Project Location:
Kitimat,
British Columbia

Project Number 123221953
Prepared by WWU on 20211126
Discipline Review by SZABANI on 20211126
GIS Review by SFORTAIS on 20211126

Client/Project/Report
Cedar LNG Partners LP
Cedar LNG Project
Environmental Assessment Certificate Application

Figure No.
7.8.11

Title
Employment and Economy
Local Assessment Area



- Highway
- Road
- Ferry Route
- Watercourse
- Waterbody
- Reserve Land
- Treaty Lands
- Park or Protected Area
- Project Location
- Marine Shipping Route (Approximate Location)

Employment and Economy

- Regional Assessment Area

0 10 20 30 40 50 km

1:1,750,000 (at original document size of 8.5x11)

Notes
1. Coordinate System: NAD 1983 UTM Zone 9N
2. Data Sources: DataBC, Government of British Columbia; Natural Resources Canada; Canadian Hydrographic Service

Stantec

CEDAR LNG

Project Location: Kitimat, British Columbia

Project Number 123221953
Prepared by WWU on 20211126
Discipline Review by SZABANI on 20211126
GIS Review by TCARDINAL on 20211126

Client/Project/Report
Cedar LNG Partners LP
Cedar LNG Project
Environmental Assessment Certificate Application

Figure No.
7.8.12

Title
Employment and Economy Regional Assessment Area