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15. SUBJECTS OF NOTE

15.8 SHORT-TERM AND LONG-TERM TRAINING AND EMPLOYMENT

15.8.1 Introduction

The Expansion Project would provide employment opportunities for northern Aboriginal and NWT residents during the construction and operational phases of the Project. The Project has a defined length and many of the employment opportunities would be of a seasonal nature. Most of the employment opportunities would occur during the two- to three-year construction phase. In addition, there would be a limited number of skilled jobs available once construction is completed and the Project begins the operational phase. Nevertheless, Dezé is a majority-owned Aboriginal partnership that is committed to optimizing opportunities for northern Aboriginal and NWT residents to participate in the Project (Déze, Cambria Gordon, & Solstice Consulting Services 2007). Dezé would introduce a Project procurement policy with specific employment and contracting objectives aimed at building skills and capacities for the future as described in Section 3.4 – Developer.

Securing personnel for Project activities would depend upon identifying and attracting interested and qualified individuals. The availability of labour in the NWT is somewhat limited given the small and dispersed population and relatively high employment figures in larger communities. These circumstances are expected to continue throughout the planned Project construction period. While the Project emphasizes employment priority for northern Aboriginal and NWT residents in affected communities it may be necessary to source other workers with suitable expertise from the broader NWT region and outside of the NWT. This would be particularly true for specialized positions associated with both the construction and the operational phases of the Project.

The first priority is identifying personnel for the Project within the labour force of northern Aboriginal residents, with Akaitcho and Métis members receiving preference within this demographic. Another priority is for other Aboriginal populations and NWT residents of affected communities followed by NWT residents generally. Understanding current labour force dynamics in the NWT is important for implementing an employment policy. Table 15.8.1 highlights some of the key features of the NWT labour force that could influence Project activities.

Table 15.8.1 — South Slave Region Labour Force Characteristics

Characteristic	NWT	Fort Smith	Fort Resolution	Hay River	Łutsel K'e
Population 15 and over	31,341	1,898	415	2,694	303
Employed	21,241	1,188	185	1,875	164
Unemployed	2,454	107	42	206	28
Not in Labour Force	7,646	603	188	613	111

Source: GNWT Bureau of Statistics, 2007

Available data for the South Slave region suggest that labour force participation rates in Hay River and Fort Smith are generally similar to the NWT level. Participation



rates in smaller communities are significantly lower, likely as a result of limited local job availability.

A total of 383 individuals are identified as unemployed in the South Slave region with a further 1,515 identified as not in the labour force (GNWT Bureau of Statistics, 2007). Those available to participate in Project employment include those identified as currently unemployed, which by definition means that they are looking for work, and possibly some of those that are categorized as currently not in the labour force. This latter group includes individuals who have ceased to look for work. In many smaller communities people may be listed as "not in the labour force" because they have stopped looking for work as there are no jobs to find. When jobs do become available, it is expected that some of those in this category would once again begin looking for work.

As indicated by the information in Table 15.8.2, interest in rotational work is strongest in communities with the lowest number of employment opportunities. This is demonstrated in Table 15.8.2, in which nearly 74% of the unemployed in Fort Resolution and nearly 61% of the unemployed in Łutsel K'e indicate an interest in rotational work.

Table 15.8.2 — Potential Available Labour Supply (Unemployed Residents)

Labour Supply	NWT	Fort Smith	Fort Resolution	Hay River	Łutsel K'e
Number of unemployed	2,454	10 <i>7</i>	42	206	28
Per cent willing to do rotational work	70.3	44.9	73.8	49.5	60.7
Per cent male	64.4	57.9	73.8	53.9	82.1
Per cent Aboriginal population	77.3	83.2	100.0	75.7	100.0
Per cent less than high school diploma	52.3	33.6	50.0	52.9	85. <i>7</i>

Source: GNWT Bureau of Statistics, 2007

Limited educational background is a limiting factor for job seekers. This becomes apparent when examining the employment rate of residents who do not possess a high school diploma or its equivalent. Of those unemployed in the South Slave region, 50.3% have not completed the necessary studies to receive a high school diploma (GNWT Bureau of Statistics, 2007).

Historically, lack of educational achievement has been a significant limiting factor in employment and advancement of northern workers within the NWT's labour force. This challenge is illustrated by examining the statistics on employment rates of individuals with different levels of education. Table 15.8.3 provides information regarding employment rates for selected communities in the South Slave region. The overall employment rate for the South Slave region is, at 64.2%, only slightly lower than the NWT rate of 67.8%. However, the employment rate for South Slave residents who have not yet received a high school diploma is significantly lower at 40.7% (GNWT Bureau of Statistics, 2007).



Table 15.8.3 — Employment Rates by Education Level: South Slave

Education Level	NWT	Fort Smith	Fort Resolution	Hay River	Łutsel K'e
Lower than high school diploma	38.8	32.9	30.0	49.0	38.0
High school diploma or higher	81.7	73.1	60.9	78.8	79.3

Source: GNWT Bureau of Statistics, 2007

In developing its plans for employment and training, the Project has established several key principles to guide its policies and practices. These are:

- safety and security of Project staff is a primary concern at all times;
- northern Aboriginal residents who are qualified, or who successfully complete actions to become qualified for work on the Project, would receive priority consideration;
- roles and responsibilities of the federal, Aboriginal, and territorial governments and their agencies with respect to employment, education, and training would be recognized and respected;
- the Project would identify and provide early notification of training and employment opportunities; and
- skill development of workers would be promoted over the Project's term.

These principles have been used as the basis to design general and specific strategies related to education, training, and employment associated with the Project and are set out in the Project procurement policy.

15.8.2 **Valued Components**

Employment and training valued components were identified earlier in this report. Identified valued components and the employment and training assessment endpoints are repeated in Table 15.8.4 for reference.

Table 15.8.4 — Valued Component: Employment

Valued Component Selected	Rationale	Valued Component Assessment Endpoint
Employment of northern residents	The employment and income levels in Łutsel K'e, Fort Resolution, and Fort Smith are below those of the NWT. Therefore, increasing employment and income opportunities is valued	Direct and indirect jobs and income created as a result of the Project
Contracting opportunities for northern businesses	Northern businesses and their associated employment depend on a small market for their incomes. Therefore, it is important to capture as much income as possible from every northern project	Increased business income and employment



Valued Component Selected	Rationale	Valued Component Assessment Endpoint
Benefits to the South Slave area's economy including increased revenue flows and economic opportunities	The Project uses natural resources in the South Slave region and it is reasonable to expect benefits from use of the resource to flow back into the South Slave region	Increased amount of money in the South Slave regional economy, and more economic opportunities
Economic life choices. Being free to choose the extent to which one pursues traditional and non-traditional economic pursuits	People should have the choice to pursue the lifestyle and economic pursuits they wish, and not be constrained to choose one over the other	Diversity of economic and employment opportunities and participation in traditional economic pursuits

Assuming appropriate organization and coordination, Project employment as well as education and training associated with employment would be a direct benefit to northern Aboriginal residents and the parties identified in the Project procurement policy. Increased employment would provide increased income to employees and their families. In addition, increased employment income would result in workers and their families having increased lifestyle choices. The additional income could be used, by those who wish to do so, for the purchase of equipment (boats, tents, snowmobiles, motors, firearms) and supplies (fuel, groceries) to engage in traditional lifestyle pursuits.

15.8.2.1.1 **Project Employment Opportunities**

The Proponent's preferred approach to construction phase activity is set out in the Project procurement policy, which outlines how the Dezé Procurement Committee would approach the employment and contracting process. It is currently envisioned that two qualified and suitable contractors would be required to organize and deliver the Project's construction. One contractor would be responsible for construction of the civil works including the control structures and new generating plant, while the other would construct the transmission system. Contractors would be required to meet standards and conditions established by the Proponent. Contract(s) for the operation of the generation and control facilities and transmission line would be established once construction is completed.

The Proponent's current estimates indicate that the Project would result in direct employment positions of approximately 500-700 construction jobs during the initial phase of Project facilities and transmission line development. Virtually all of these employees would be contractors for the Project, rather than Dezé employees. These estimates are preliminary, but provide a good basis for examining the types of positions and the expectations for employment of northern Aboriginal and NWT residents as defined in the Project procurement policy. The job figures would be defined with greater certainty as the design for the Project is finalized and would likely be higher when all ancillary and support positions are defined. The length of these jobs is variable, lasting from one or two months to two years. These jobs would result in approximately 4,950 person-months of work or approximately 412 personvears of activity. Job estimates are based on feasibility level studies undertaken for new generation and control facilities as well as transmission line and substation construction. Notional estimates for Project employment activity are shown in Table 15.8.5.



Table 15.8.5 —Estimated Employment Levels: Project Construction

Site and Activity	Number of Employees	Duration of Work (Months)	Total Person Months of Work
Twin Gorges Plant			
Camp Logistics and Management	31	24	744
Excavation and Civil Works	258	Variable	800
Specialized Mechanical and Electrical	72	12	864
Mobilization / Demobilization	26	4	96
Subtotal	387	>40	2,504
Nonacho Lake			
Camp Logistics and Management	6	12	72
Excavation and Civil Works	44	Variable	200
Specialized Mechanical and Electrical	10	8	80
Subtotal	60	>20	352
Transmission Line			
Camps and Logistics	12-17	23	1,077
Clearing	14-28	8.5	121
Foundations	6-48	8.5	150
Structure Assembly	18-36	3.5	301
Structure Erection	6-12	3	31
Conductor Stringing	25	6.5	185
Subtotal	81-166	53	1,865
Substations			
Clearing and Foundations	12-36	4.5	96
Installation and Testing of Electrical Equip.	12-48	4.5	126
Subtotal	24-84	9.0	222
Construction Phase – Totals	522-697	>98	4,953

Notably, construction phase activities would occur over a two- to three-year period. Employment patterns would follow the construction schedule.

Employment during the Project's operational phase would be limited. Modern technology permits the consolidation of plant and transmission line control on a remote basis. It is anticipated that 8 to 10 person-years would be required on an annual basis to operate the Project. Almost all of these would be skilled positions.

Based on the Project plan, position titles for the available jobs during the Project's construction and operational phases are outlined in Table 15.8.6.



Table 15.8.6 — Direct Employment Opportunities

Job Type	Specific J	ob Titles
Skilled	Project Manager Foreperson Camp Superintendent Plant Superintendent Human Resource Manager Financial Manager Heavy Equipment Operator Helicopter Pilot Diamond Drill Operator Power System Lineperson Journeyperson Lineman Construction Blaster	Heavy Equipment Mechanic Electrical Control Technician Electrical Engineer Carpenter Engineering Inspector Power System Electrician Power Station Electrician Structural Ironworker Stationary Engineers Surveyor Camp Cook
Semi-skilled	Security Officer Community Liaison Officer First Aid Attendant Apprentice Power System Electrician Apprentice Lineperson Truck Driver Administrative Clerk Human Resource Clerk	Payroll Clerk Cook Helper Heavy Equip Mechanical Assistant Security Officer Safety Officer Surveyor's Assistant First Aid Attendant Finance Clerk
Unskilled	Housekeepers Construction Camp Attendant Construction Labourer General Labour	

The jobs outlined in Table 15.8.6 are divided into three general categories: skilled, semi-skilled, and unskilled jobs. While most of the operational phase jobs fall into the skilled job category, with many positions requiring trades certification or completion of post-secondary studies, the construction phase is expected to provide a broader range of employment opportunities.

Skilled positions generally require professional or vocational certification and in some cases, extensive experience (GNWT Department of Education, Culture and Employment [DECE], 2006). Credentials may include a university degree or professional or journeyperson certification. With the exception of some specific job areas (e.g. heavy equipment operators), it is generally difficult to fill skilled jobs from the existing labour pool unless they are drawn from other employers. While this might occur in some cases, it is not the intention of the Project to source personnel from other regional and territorial employers. Examples of jobs that would be classified as skilled positions include % management positions, equipment operators, certified electricians, certified linespersons, inspectors, certified cooks, heavy equipment mechanics, surveyors, and pilots.

Semi-skilled jobs may require at least a high school diploma and many would also require a college certificate or diploma (GNWT DECE, 2006). Generally, positions of this nature require some field work experience. Jobs in the semi-skilled category



include apprentices, safety and security officer, first aid attendant, and surveyor and mechanics assistants.

Unskilled positions have variable academic requirements and include labourers, housekeepers and camp attendants (GNWT DECE, 2006).

Sourcing individuals to fill jobs in all employment categories would require matching skills and knowledge of applicants with the requirements of each position. The Expansion Project intends to do this on a case-by-case basis while ensuring that all employees can meet minimum standards related to job performance and work, as well as work site and camp safety.

Estimates at this point suggest that about half of the jobs on the Project would be classified as skilled while one-quarter would be semi-skilled and one-quarter would be unskilled. The Project expects to have greater success hiring regional and territorial residents to fill the semi-skilled and unskilled jobs on the Project.

Based on available labour force information for the South Slave region, it is estimated that there are 392 unemployed individuals. Of this group, 52% have indicated a willingness to do rotational work (GNWT Bureau of Statistics, 2007). As a result, a pool of approximately 205 of these individuals may be considered to be in the labour pool for this Project. However, just under half of this group is women and recruitment of women for construction projects has not, in the past, resulted in employment that is representative of the number of women in the labour force. As a result, the actual labour pool available from the unemployed category may be closer to 130 to 140 individuals.

Of the 1,543 South Slave residents not in the workforce (GNWT Bureau of Statistics, 2007), it can be estimated that between 12 and 15% would return to the workforce to seek employment. This increases the potential regional labour pool by a further 185 to 230 workers. Including the available unemployed and those returning to the labour force, a total potential labour pool of South Slave residents from which the Project may draw its employees is between 315 and 435 workers. However, an estimated 50.3% (GNWT Bureau of Statistics, 2007) of this group has not completed high school, thus likely limiting their job opportunities to unskilled and possibly semiskilled jobs.

At the Territorial level, there are approximately 2,500 unemployed people. Of these, just over 670 are in the Yellowknife area, the closest large centre to the Project. Among this group, 59.4% indicate that they are prepared to do rotational work and just over 30% have an education level lower than a high school diploma (GNWT Bureau of Statistics, 2007).

Accessing unemployed people from outside the South Slave region is an option for the Project, should the Project be unable to fill available positions from the South Slave region's labour force. The residents of the Deh Cho and the Tlicho regions are geographically closest to these opportunities, but unemployed individuals from other NWT regions may also decide to pursue employment on the Project. It can also be expected that the Project would access some people holding specialized skills from Yellowknife either through the general contractor or through sub-contracts.



Should there be strong public interest in job opportunities offered by the Project, estimates suggest that northern Aboriginal residents, other Aboriginal residents, and Territorial residents would fill all of the unskilled positions and half of the semi-skilled positions on the Project. As well, northern Aboriginal and Territorial residents would fill an estimated 10% of the skilled positions.

In addition to direct employment, the Project is also expected to result in indirect and induced employment both in the communities close to the Project activities as well as in the territorial commercial centre of Yellowknife. Employment resulting from subcontracting or increased economic activities associated with income earned by employees on the Project may include work in the following areas:

- accommodation and food services,
- air services,
- banking, communications, and administration services,
- building and industrial supplies,
- camp and catering services,
- cleaning and janitorial services,
- engineering and environmental services,
- fuel, water, sewage, and solid waste services,
- general contracting,
- ground transportation services,
- logistics,
- marine services,
- surveying,
- trades services, and
- travel services.

15.8.2.1.2 Project Assessment Using Input/Output Modelling

In addition to assessing employment requirements based upon examination of specific position requirements, the Proponent also assessed the Project based on the NWT Input/Output (IO) Model. The model is based on data collected and analyzed by Statistics Canada. This model can be used to estimate employment and income based on the experience in similar economic activities across Canada. Current data tables supporting the model are from the 2004 calendar year.

Modelling, based on preliminary Project design and costing work and the business experience in the Electric Power Engineering Construction Sector, yields results in employment and labour income outlined in Table 15.8.7.



Table 15.8.7 — Input / Output Modelling for the Expansion Project

Job Type	Employment (Person Years)	Labour Income (\$000)
Direct Jobs	530	76,367
Indirect Jobs	232	16,243
Induced Jobs	253	18,332
Total	1,014	110,943

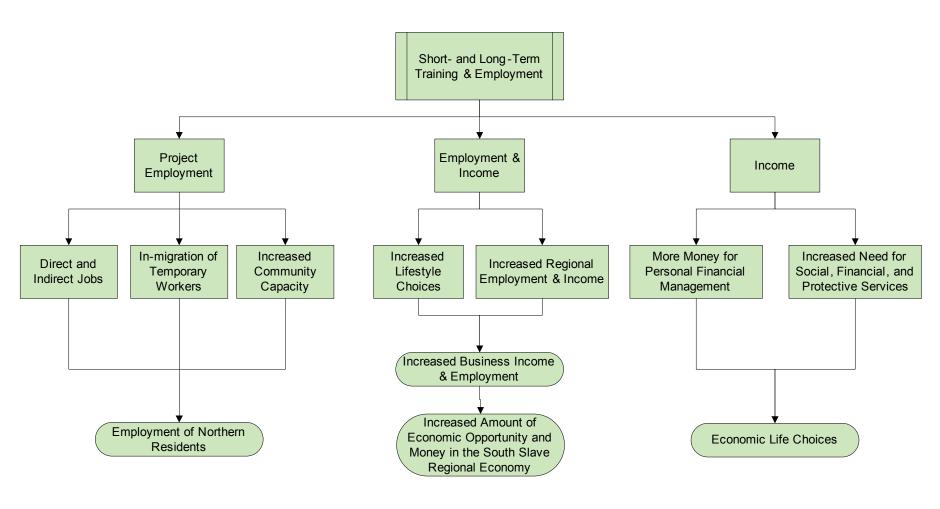
Source: Derived from information provided by the Bureau of Statistics, Government of the NWT

Use of the Input/Output model is helpful to assess planned activity against the national experience. However, refinement of the estimates cannot occur until Project planning and associated costing are further advanced.

15.8.3 Potential Pathways

To conduct the effects assessment for employment and training, pathways and endpoints were identified based on potential Project interactions with the existing environment, community consultation, and MVEIRB scoping sessions. The pathways and endpoints related to employment and training are shown in Figure 15.8.1 and Table 15.8.8.





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Table 15.8.8 — Potential Pathways

Project Component	Pathway	Pathway Duration	Valued Components
Project employment	Increased employment levels	Construction Operations	Employment of northern residents
Project employment	Temporary in-migration of workers to the Project site	Construction	Employment of northern residents
Project employment	More community capacity through workers with greater skills and education gained through employment and training opportunities	Construction Operations	Employment of northern residents
Project employment	Workplace conflict and discrimination	Construction	Employment of northern residents
Employment income	Increased lifestyle choices (including spending habits, behaviour, participation in community and traditional activities) as a result of engagement in the wage economy	Construction Operations	Economic life choices
Employment income	Direct and indirect Project employment opportunities resulting in increased regional employment, income, and expenditures	Construction Operations	The Project uses natural resources in the South Slave region and it is reasonable to expect benefits from use of the resource to flow back into the South Slave region
Employment and income	Increased division between those that have employment and income, and those that do not	Construction	Economic life choices
Employment and income	Increased employment and economic activity would help retain population in small communities	Construction Operations	Benefits to the economy of the South Slave area including increased revenue flows and economic opportunities
Income	More money to spend and choices regarding personal and financial management. This can have both positive and negative effects (e.g. a positive effect may be improved hunting and trapping equipment; a negative effect may be increased spending on addictive substances)	Construction Operations	Economic life choices
Income	Increased need for social, financial, and protective services resulting from expenditure of employment income on unhealthy lifestyle choices	Construction	Economic life choices

15.8.4 Mitigation and Project Design Features

The Project must operate within a context of fiscal viability and performance and it has a stated goal of optimizing the benefits of the Project first for northern Aboriginal residents with Akaitcho and Métis members as preferred parties. Secondary target groups are other resident Aboriginals and NWT residents in affected communities followed by NWT residents generally. Proposed Project mitigation/enhancement actions are summarized in Table 15.8.9.



Table 15.8.9 — Project Design Features Related to Employment and Training

Pathway	Pathway Duration	Proposed Mitigation/Enhancement
Increased employment levels	Construction Operations	Recruitment and employment strategies
Temporary in-migration of workers to the Project site	Construction	Employment training programs
More community capacity through workers with greater skills gained through employment and training opportunities	Construction Operations	Recruitment and employment strategies
Workplace conflict and discrimination	Construction	Cultural awareness programs and conflict resolution policies
Increased lifestyle choices (including spending habits, behaviour, participation in community and traditional activities) as a result of engagement in a waged economy	Construction Operations	Recruitment, employment strategies, training, and education
Direct and indirect Project employment opportunities resulting in increased regional employment, income, and expenditures	Construction Operations	Recruitment and employment strategies
Increased division between those that have employment and income, and those that do not	Construction	Recruitment and employment strategies
Increased employment and economic activity would help retain population in small communities	Construction Operations	Recruitment and employment strategies and northern business incentive policy
More money to spend and choices regarding personal financial management. This can have both positive and negative effects (e.g. a positive effect may be improved hunting and trapping equipment; a negative effect may be increased spending on addictive substances)	Construction Operations	Cultural awareness programs; employee assistance programs; support of work and life skills training in advance of Project initiation
Increased need for social, financial, and protective services resulting from expenditure of employment income on unhealthy lifestyle choices.	Construction	Cultural awareness training; zero tolerance towards alcohol and substance abuse; health and safety training

Based on the identification of valued components and the analysis of associated pathways, the Project has developed strategies and associated actions in pursuit of its goals. The strategies relate to education, training, and employment.

The Project recognizes its leadership role with respect to advancement of its activities and the securing of suitable and qualified staff for the Project, but it does so within the context of the responsibility it shares with governments, educational institutions, and individuals. For example, governments possess the responsibility for funding and delivery of public education and post-secondary education. Individuals have personal responsibilities for their actions regarding education and employment.



15.8.4.1.1 Education and Training

In addition to implementing and monitoring a Project procurement policy, Dezé would work to ensure that Project employment benefits are optimized by collaborating with public and Aboriginal governments, schools, and Aurora College in the following ways:

- distribute information on industry and Project job types and promote careers for northerners in Project-related areas;
- provide briefings and presentations on the Project and its employment plans and policies to interested groups;
- participate in local and regional career fairs;
- promote the identification and development of courses and programs at the high school and post-secondary level that prepare northern Aboriginal and NWT residents with the skills and knowledge required for employment on the Project;
- provide advice to educators on potential course and program content;
- participate with education and training planners to identify priorities for training;
- identify opportunities for student work placements or internships on the Project;
- work collaboratively with public and Aboriginal governments to support the efficient use of available training funds in support of the development of potential Project workers;
- meet with interested groups of college students to discuss employment opportunities;
- promote high school completion and the completion of high school equivalency for adult students;
- monitor student progress in related training to identify potential employees;
- collaborate with Aboriginal Human Resource Development Agreement (AHRDA) holders' groups and the governments of NWT and Canada and their agencies to identify available funding to support education and training in advance and during the construction phase of the Project; and
- support government agencies, professional associations, and chambers of commerce in the delivery of small business management training for interested individuals and northern small businesses.

The Project would also:

- direct the delivery of safety training for all Project workers;
- provide cultural awareness training to all Project supervisory personnel;
- in cooperation with the NWT Trades Qualification and Occupation Certification Board, establish processes and mechanisms for registration, documentation of work experience, and monitoring of apprentice performance on the Project;
- ensure, where feasible, that members of disadvantaged groups can access training and educational opportunities to prepare for employment opportunities associated with the Project;
- require key contractors to provide access to Aboriginal and northern residents to training and employment opportunities that could lead to sustainable employment in the longer term, would support the development of transferable skills, and/or would offer an opportunity for advancement;
- identify on-the-job training opportunities for Project employees;



- use northern trainers, where feasible, to deliver Project training;
- provide ongoing support services at the work site for Project employees with a goal of building life skills; and
- during the operational phase of the Project, establish career development plans with all Project personnel.

Implementing education and training actions would provide mechanisms for those requiring enhanced skills and knowledge to compete for Project positions. A number of the identified activities would begin following Project approval, but before the initiation of the construction phase. As well, the Proponent recognizes the training and educational efforts are a continuing element of Project activity throughout the construction and operational phases. Given the relatively short-term nature of the Project, some education and training efforts, particularly those of a pre-employment nature, would be reduced as the construction phase advances. Other training activities, such as safety training and training responsibilities associated with apprentices, would continue throughout construction and some may also continue into the operational phase of the Project.

Close cooperation would be required with organizations and agencies that have the mandate and responsibility for the delivery of adult and post-secondary education programming. Aurora College is the primary public adult and post-secondary education institution in the NWT and, as a result, the Project would need to work closely with the institution to support it in its program delivery. The Project would have a direct interest in advising the College and the College's funders regarding specific programs that could be delivered to prepare students for work on the Project. In some cases the College may already deliver courses that would be suitable to the Project's purposes. Examples of current programs that would support the Project include apprenticeship training, Trades Access, and the Camp Cook Program offered at the Thebacha Campus. As well, pre-employment offerings at the College's campuses and in some courses and programs could be delivered in the communities of the South Slave region should funding be available (Aurora College, 2008).

Close cooperation with Aurora College's Community Learning Centres in the South Slave communities would also be important. These centres provide Adult Basic Education and life and work skills programming that can assist residents improve their academic preparation, thus improving access to available jobs (Aurora College, 2008). Ensuring that the College's learning centre staff is well informed of the Project's job opportunities would assist in ensuring that interested adult students are aware of the importance and value of their studies. Table 15.8.10 highlights the types of existing training activities that could be linked to unskilled, semi-skilled, and skilled positions that are expected to be created by the Project.



Table 15.8.10 — Northern Adult and Post-secondary Programming Related to Project Employment

Job Categories	Relevant Training for Employment
	Literacy
	Adult basic education
	Trades access
	Chain saw safety
Unskilled Jobs	Small engine repair
	First Aid / CPR
	WHMIS
	Camp cook
	Northern most host
	Heavy equipment operator
	Pre-employment cooking
Semi-skilled Jobs	Pre-employment carpentry
Semi-skillea Jobs	Pre-employment heavy duty mechanic
	Driver training (various levels)
	Apprenticeship training (various)
Skilled	Pre-technology diploma
Skilled	Management Studies diploma

Source: Aurora College, 2008

As well, coordination with the governments and organizations that fund adult and post-secondary programs would be necessary. Discussions would be needed with the AHRDA holders; the Department of Education, Culture, and Employment; Human Resource and Social Development Canada; and the NWT Mine Training Society. These would be useful in determining how training needs associated with the Project may be worked into the overall plans for the South Slave region and NWT training. Collaborative models such as those exhibited by regional training (planning) committees could provide the forum for these discussions.

15.8.5 Workforce Barriers Created by Drug and Alcohol Abuse

Limitations on the size of the potential labour pool for the Project are also influenced, to some degree, by the prevalence of unhealthy lifestyle choices among the population. Participation in unhealthy lifestyles such as alcohol consumption, illicit drug use, or gambling may not immediately limit access to employment or the advancement or retention potential of an individual. However, excessive unhealthy behaviour or participation in behaviours that are not permitted at a Project worksite may result in an individual not being able to fulfill work expectations.

The GNWT has developed extensive data on alcohol, drug, and tobacco use by residents. Information on gambling activities is also available. The data, most recently published in *The 2006 Northwest Territories Addictions Report* (July 2008), highlight current behaviours as well as trends that can be found among the NWT's population. The survey, conducted in 2006, included 1,235 residents surveyed by telephone or through personal interviews.



Consumption of alcohol in the NWT remains quite high with 78% of the population indicating that they have consumed alcohol at least once in the twelve months prior to the survey (GNWT Department of Health and Social Services [DHSS], 2008). As well, 50% of the Aboriginal population that consume alcohol and 24% of the non-Aboriginal population that consume alcohol have engaged in heavy drinking (consumption of five or more drinks at a single sitting) during the year preceding the survey (GNWT DHSS, 2008). In addition, the report noted that 45% of current alcohol consumers have five or more drinks on a single occasion at least once per month (GNWT DHSS, 2008). Based upon application of the Alcohol Use Disorder Identification Test (AUDIT) which identifies hazardous drinking patterns and provides an indication of alcohol dependency, 37% of current alcohol consumers 15 years of age and older scored at a level at which drinking is viewed as harmful/hazardous (GNWT DHSS, 2008).

The survey examined the types of harm caused by alcohol consumption. Fully 21% of current alcohol consumers reported experiencing one or more types of harm as a result of their own drinking. Harms identified included harm to friendships, physical harm, harm to home and marriage, or harm to their financial position. Six per cent of current alcohol consumers reported harm to their work or studies.

The 2006 Northwest Territories Addictions Report also provides information regarding residents' illicit drug use. The report noted that caution is needed in interpreting the information collected in the survey because of sampling variability (GNWT DHSS, 2008). This being said, the report noted that about 20% of the territorial population reported using cannabis during the 12 months prior to the survey (GNWT DHSS, 2008). The prevalence of cannabis usage appears to be relatively stable at this point but there are significant variations between different demographic groups in the population. Use of other illicit drugs (cocaine, crack cocaine, hallucinogens, amphetamines, methylenedioxymethamphetamine (MDMA), and heroin) has increased somewhat between 1996 and 2006 rising from 2% to 4% but on a year-to-year basis is relatively consistent (GNWT DHSS, 2008).

In the NWT, 72% of the population reports having participated in some form of gambling activity at least once in the past year (GNWT DHSS, 2008). However, regular gambling, defined as participating at least once per week, is declining. Among the Aboriginal population regular gambling has declined from 39% to 29% between 1996 and 2006. Among the non-Aboriginal population regular gambling has declined from 22% to 16% (GNWT DHSS, 2008).

Individuals would come to the Project from a wide variety of backgrounds. The Project expects to assess each person applying for a job on his or her skills, abilities, and demonstrated suitability of the position for which they are applying. The Project anticipates that the responsible governments would, at a minimum, continue their current health and social programs for NWT resident that address unhealthy lifestyles. Through these programs and services, individuals and families who have concerns about their personal lifestyle choices should be able to access required assistance in advance of their application to work on the Project. The Project would be prepared to support these efforts by circulating information produced by governments and their agencies at Project work sites.



In addition, the Project would establish policies to ensure that its camps are free from alcohol and drug usage, and an employee assistance program for its employees. This program would provide support for employees and their families who may require assistance as a result of unhealthy behaviours.

15.8.5.1.1 <u>Employment</u>

The majority of employment would occur during the construction phase of the Project. In planning its employment strategies, the Proponent would work collaboratively with existing public and Aboriginal governments to provide employment opportunities for northern Aboriginal and NWT residents as per the Project procurement policy.

Employment actions carried out in cooperation with public and Aboriginal governments or their agencies with respect to employment would include:

- work with public and Aboriginal government employment offices and agencies to identify potential qualified Aboriginal and northern residents for the Project;
- develop information on job opportunities for circulation to all South Slave regional communities;
- develop, where appropriate, equivalencies for academic and credentials required for Project jobs; and
- post job listings using available employment and career centres and electronic means.

In addition, the Proponent would:

- establish an employment office for the Project in the South Slave region;
- require contractors and sub-contractors to establish Aboriginal and northern resident employment plans, policies, and practices, as well as monitoring and reporting systems that comply with the Proponent's commitments and agreements;
- develop procedures that permit, with the agreement of a job applicant, the Proponent to assess the risk to the Project of hiring an applicant with a criminal record;
- work with Aboriginal and community governments to develop plans to address accommodation needs of temporary workers brought in or through communities to Project work sites;
- minimize, where possible, the accommodation of non-resident temporary workers in South Slave regional communities;
- work with contractors to reduce the number of students leaving school for shortterm work:
- establish mechanisms to transport workers, at the Project's cost, from South Slave regional communities to remote work sites;
- to the extent possible, establish work rotation practices that permit workers in remote locations to return home on a regular basis;
- establish an employee-assistance program to assist Project employees and their families;
- provide employment priority for qualified Aboriginal and northern residents,



- provide mechanisms for workers to communicate with their families when they are in remote locations; and
- implement policies to:
 - o establish safety as a primary priority on all Project work sites,
 - o ensure that all Project camps are alcohol and drug free,
 - o establish conflict-resolution processes that are accessible to all workers, and
 - o recognize and respect workplace diversity.

Enhancement and refinement of the specific planned actions related to employment, education, and training would continue throughout the Project's development and design. This would permit the Proponent to be responsive to changing needs in employment and training as well as permitting the Project to take advantage of emerging technologies and processes related to these particular fields.

The Proponent is planning to work cooperatively with existing organizations and agencies in planning employment support activities. Increasingly, coordination of activities and services between remote work sites and employees' home communities has proven beneficial. This model of collaborative effort is one that the Project would propose to support while ensuring that employee confidentiality is protected at all times. Such support may take the form of referral to existing government services or the referral of potential employees by community agencies to the Project's human resources offices.

15.8.5.1.2 <u>Supporting Small Business Development</u>

The Project is committed to providing opportunities for Aboriginal and NWT businesses to participate. The Proponent's intentions with respect to contracting policies, processes, and procedures are discussed elsewhere in this document. However, the Proponent's approach to contracting can be seen as linked to education and training efforts because, in both cases, the Project's interest is to optimize northern and Aboriginal residents involvement in Project activities.

The Proponent proposes to take a number of actions to build an understanding of potential opportunities for small businesses. These actions would include early notification of contract opportunities; identifying material, service, and supply contracts that can be sized to meet the capacity of small businesses; providing briefings related to contracting opportunities and procedures; and ensuring that contract documents are clear and direct in their structure and content.

In addition, the Proponent proposes to support interested small business owners by referring them to governments and other public agencies that have a mandate for providing technical and financial assistance and advice. The Project would support the existing efforts of the governments of the NWT and Canada in their programming targeted toward small business owners. Assistance by the Project staff would include referring small business owners to the appropriate government economic development staff, the Business Development and Investment Corporation, and other appropriate agencies as well as the distribution of relevant information and materials. In addition, should a small business owner be interested in adult and post-secondary programming, the Project staff would refer them to Aurora College, which offers a range of credited management studies, financial management, accounting, and related courses through its continuing education programming.



Pathway Validation 15.8.6

Examination of the potential pathways and assessment of the validity of the pathways have been carried out and the results of this work are presented in Table 15.8.11.

Table 15.8.11 — Pathway Validation Table for Project Employment and Training

Project Component	Pathway	Pathway Validation
Project employment	Increased employment levels	Valid: Project would create significant short-term employment and negligible direct long-term employment
Project employment	Temporary in-migration of workers to the Project site	Valid: Specialized skills and trades needed for construction of the Project may not be available in the NWT; there may be insufficient NWT labour in some job categories
Project employment	More community capacity through workers with greater skills and education gained through employment and training opportunities	Valid: Short- and long-term employment opportunities should impart workers with greater skills and education
Project employment	Workplace conflict and discrimination	Invalid: Cultural awareness programs and conflict resolution policies and procedures provide mitigation
Employment income	Increased lifestyle choices (including spending habits, behaviour, participation in community and traditional activities) as a result of engagement in the wage economy	Valid: Wage employment, and all it imparts, should provide people with further lifestyle choices
Employment income	Direct and indirect Project employment opportunities resulting in increased regional employment, income, and expenditures	Valid: The more disposable income individuals have, the more they dispose of it
Employment and income	Increased division between those that have employment and income, and those that do not	Invalid: The three-year construction period should preclude the development, or exasperation, of divisions among community residents
Employment and income	Increased employment and economic activity would help retain population in small communities	Invalid: The three-year construction period may forestall population losses in the short-term
Income	More money to spend and choices regarding personal financial management. This can have both positive and negative effects (e.g. a positive effect may be improved hunting and trapping equipment; a negative effect may be increased spending on addictive substances)	Valid: Individuals have discretion about how they choose to spend their income



Project Component	Pathway	Pathway Validation
Income	Increased need for social, financial, and protective services resulting from expenditure of employment income on unhealthy lifestyle choices	Valid: Increased community income during the three-year construction phase makes it possible to spend employment income on unhealthy lifestyle choices

15.8.6.1 INVALID PATHWAYS

Several of the identified pathways were determined not to be Valid. These are:

- Increased disparity between those that have employment and income and those that do not is a reality in most communities. Based on experiences of recent diamond mine development in the NWT it is likely that the Project would decrease income disparity at the community level. In any case, the effect would be limited by the three-year construction period, and thus limiting any long-term increase in income disparity among community residents.
- Increased employment and economic activity would help retain population in small communities. The three-year construction period may forestall population losses in the short-term and provide a basis for retaining community population at least during the period of the construction phase of the Project. After the construction phase of the Project communities can expect to return to baseline conditions.
- Workplace conflict and discrimination. Mitigation practices should be sufficient to address issue of this nature. Conflicts and disputes do occur in the workplace and established policies and practices can be established to address and resolve issues as they arise.

15.8.6.2 VALID PATHWAYS

The following pathways would be analyzed in more detail in the effects analysis Section 15.8.7:

- Increased employment levels: The Project should create significant short-term employment for Aboriginal and northern residents in the South Slave region and NWT. Direct, long-term employment would be limited.
- Temporary in-migration of workers to the Project site: Specialized skills and trades needed for Project construction may not be available in the NWT, and there may be insufficient NWT labour for some job categories.
- More community capacity: Workers would develop greater skills and education gained through employment and training opportunities from the Project.
- Increased lifestyle choices (including spending habits, behaviour, and participation in community and traditional activities): Additional income would result from engagement in the wage economy. Wage employment, and all it imparts, should provide people with further lifestyle choices.
- Direct and indirect Project employment opportunities would result in increased regional employment, income, and expenditures. The more disposable income individuals have, the more they dispose of it.
- More money for residents to spend: This can have both positive and negative effects. (e.g. a positive effect may be improved hunting and trapping equipment;



- a negative effect may be increased spending on addictive substances). Individuals have discretion about how they choose to spend their income.
- Increased need for social, financial, and protective services resulting from expenditure of employment income on unhealthy lifestyle choices by some individuals. An increase in employment income makes it possible for individuals to spend income on unhealthy behaviors, should they make a personal choice to do so.

15.8.7 Residual Effects Analysis

Estimates of income generation for South Slave and other territorial residents are dependent upon the Project attracting and retaining available labour in suitable positions.

Based upon the information from the initial Input/Output Modelling and the estimated employment figures for the Project, income benefits are expected to be as outlined in Table 15.8.12.

Table 15.8.12 — Estimated Construction Income: South Slave and NWT Residents

Job Type	NWT Employment (Person-Years)	NWT Labour Income (\$000)
Direct Jobs	412	59,328
Indirect Jobs	232	16,243
Induced Jobs	253	18,332
Total	897	93,903

Source: Derived from information provided by the Bureau of Statistics, Government of the NWT

Benefits would accrue to communities over the three-year period during which construction employment would occur.

The most recent employment income data for the South Slave region (GNWT Bureau of Statistics, 2008) show an annual total of \$201.9 million (2006 calendar year). Income levels for communities for the same year are: Fort Resolution, \$7.2 million; Fort Smith, \$64.4 million; Hay River, \$125.9 million; and Łutsel K'e, \$4.3 million. As a result, particularly for the smaller communities, the increased employment income from the Project would result in a notable change during the construction period.

Decisions regarding income spending are, by their nature, personal. Increases in disposable income are likely to result in a wider range of financial decisions for Project workers. Increased equipment purchases to support traditional lifestyles, home renovations, vehicle purchases, and increased use of retail outlets are all decisions that are likely to occur. As well, it could be expected that some would choose to use additional income for the purchase of alcohol or illicit substances, or to support unhealthy lifestyle choices.

In its paper titled Resource Development Impacts: Updated Estimates of the Cumulative Impact of Resource Development on the GNWT Operational Expenditures (2007), the GNWT indicated that it expects that the labour market in



the NWT is currently active and would remain so for the foreseeable future. In all recent major construction projects proponents have had to source some of their employees from outside the NWT. This has resulted in the presence of temporary workers in, or passing through, communities. Depending on the strategies used by employers, the presence of these workers can have a benefit to some segments of the community and NWT economy. Specifically, support for the travel industry, commercial accommodations, arts and crafts, and food services industries has increased from this group of visitors. However, communities are concerned that temporary workers may also have a negative effect on communities' social climates. As a result, most major construction projects take steps to limit and mitigate the presence of temporary workers to reduce interaction with community residents.

The direct measurement of benefits associated with additional education and training is difficult. Immediate measures such as enrolment in training programs, student completions, and the linkage between program completion and work can be quantified and described. However, determination of the long-term effect of education, training, and additional work experience within the context of the South Slave region or even the NWT would be difficult to directly measure. That being said, some general indicators of earning power for individuals with varying academic backgrounds does exist and can provide at least a reference point for discussion of the benefits of education and training.

While information from the 2006 census has not yet been released, the Government of the NWT Bureau of Statistics and the Department of Education, Culture and Employment have previously published information from the 2001 census that highlights differences in the earning power resulting from varying educational achievement. This information is outlined in Table 15.8.13.

Table 15.8.13 — Earnings by Education Level

Education Level	Average Annual Wages Earned
Less than high school diploma	\$37,882
High school diploma	\$45,058
Trades certificate	\$52,419
College certificate or diploma	\$53,110
University degree	\$67,283

Source: GNWT DECE, 2004

Enhanced income related to Project employment would result in a number of the South Slave region's residents having additional income. As a result, these individuals would have choices to make with respect to the use of this income. Studies in the communities affected by the development of diamond mines in the Slave Geological Province suggest that choices are likely to be both positive and negative. The *Communities and Diamonds 2006 Annual Report* (GNWT Department of Industry Tourism and Investment, 2007) produced by the Government of the NWT notes that in smaller North Slave communities traditional activities such as hunting, fishing, and trapping have increased with incomes. Income disparity has also decreased in these communities. On the other hand, social changes such as increases



in communicable disease rates and the numbers of single-parent families have been noted. The proposed Expansion Project is much smaller and short-term when compared to, for example, diamond mining operations, but the information gained in the cases of communities affected by resource development may prove a useful reference.

15.8.8 Residual Effects Classification

Assessment of the Project components suggests generally beneficial effects in the communities in the South Slave region. These benefits extend beyond the region, particularly with respect to the employment aspects of the Project. A summary of the Project's effects is in Table 15.8.14.



Table 15.8.14 — Effects Classification Short-Term and Long-Term Employment

Project Component	<u>Pathway</u>	Direction	Magnitude	Geographic Extent	Duration	Reversibility	Frequency	Likelihood
Project employment	Direct and indirect jobs	Beneficial	High	Beyond regional	Medium-term	Reversible	Periodic	Highly likely
Project employment	In-migration of temporary workers	Beneficial and/or adverse	Moderate	Regional	Medium-term	Reversible	Periodic	Highly likely
Project employment	Increased community capacity	Beneficial	Moderate	Beyond regional	Medium- Term	Irreversible	Continuous	Highly likely
Employment income	Increased lifestyle choices	Beneficial	Moderate	Regional	Short-term	Reversible	Periodic	Highly likely
Employment and income	Increased regional employment and income	Beneficial	Moderate	Regional	Medium-term	Reversible	Periodic	Highly likely
Income	More money for personal financial management	Beneficial and/or adverse	Moderate	Regional	Short-term	Reversible	Periodic	Highly likely
Income	Increased need for social, financial, and protective services	Adverse	Low to moderate	Regional	Medium-term	Reversible	Periodic	Likely



Benefits of employment are primarily linked to the length of the construction phase. As indicated earlier, there would be limited employment during the Project's operational phase. However, there would be periodic opportunities for additional employment during maintenance initiatives such as additional clearing that would be required as re-forestation occurs near the transmission lines.

As suggested by the information contained in Table 15.8.14, there would be an ongoing beneficial direction for residents related to the additional skills, experience, and knowledge that they would gain as a result of participation in training and employment associated with the Project. These experiences and newly obtained skills and knowledge could be applied to other, future jobs, which may be created by new resource development projects or work in existing regional jobs.

15.8.9 Significance Rating

An assessment of the significance of Project activities in relation to the valued components, assessment endpoints, and pathways is outlined in Table 15.8.15.

Table 15.8.15 — Summary of Significance Ratings: Employment

Valued Component	Valued Component Assessment Endpoint	Pathways	Overall Significance
Employment of northern residents	Direct and indirect jobs and income created as a result of the Project	Increased employment levels Temporary in-migration of workers to the Project site. More community capacity through workers with greater skills and education gained through	High (short-term)
		employment and training opportunities	(long-term)
Contracting opportunities for northern businesses	Increased business income and employment		High (short-term) Low (long-term)
Benefits to the economy of the South Slave area including increased	Increased amount of money in the South Slave regional economy, and more	Direct and indirect Project employment opportunities resulting in increased regional employment,	High (short-term)
revenue flows and economic opportunities	economic opportunities	income, and expenditures	Medium (long-term)
Economic life choices	Diversity of economic and employment opportunities and participation in traditional economic pursuits	More money to spend and choices regarding personal financial management. This can have both positive and negative effects. (e.g. a positive effect may be improved hunting and trapping equipment; a negative effect may be increased spending on addictive substances) Increased need for social, financial and protective services resulting from	High (short-term)
		and protective services resulting from expenditure of employment income on unhealthy lifestyle choices	



15.8.10 Uncertainty

Projections for Project employment are influenced by a number of key variables. These include matters related to available statistical information as well as the relatively competitive labour market that the NWT currently enjoys, particularly with respect to skilled labour.

The availability of statistical information on the NWT labour market has improved significantly over the past decade. Considerable strides have been made in the development of additional data sets and to establish an information base that can demonstrate changes over time. However, the population of the NWT is quite small and collection of information and data, particularly at the community level, can have limited dependability. As a result, the risk of variance from projected values, such as the risks inherent in projecting the potential numbers of those currently outside the labour force re-entering the labour force when jobs become available, could be relatively high.

The same holds true with respect to the discussion of employment and income effects on social conditions at the community level. Recent studies of employment and income effects in communities affected by resource development provide useful information on potential trends, but it can be argued that assessment of effects over time remains open to some question.

A second key variable is the competitive nature of the labour market in the NWT. The demand for labour has grown substantially over the past decade, with employment levels and participation rates reaching some their highest levels ever in the history of wage economy in the NWT. Based on current projections and anticipated economic development activities it is expected that this trend would continue over the next five to ten years. This demand provides individuals with employment choices. While local and regional Project activities may be more attractive to people who do not wish to travel far from their families and home community, this competition for workers may give rise to some uncertainty in employment projections.

A final factor influencing predictability relates to the Project's interest in attracting unemployed individuals and those who are not currently in the labour force to participate in employment. A relatively high percentage of these groups have limited preparedness for employment. For example, weak academic backgrounds of a number of the unemployed suggest the requirement of education and training in advance of Project is important. This requirement in advance of the Project is dependent on a number of factors such as individual adults' willingness to participate, funding for programs and students, and program availability. While the Proponent can promote attention to these matters and work actively with public and Aboriginal governments, educational institutions, and others, they cannot directly control the results of these efforts. This situation of mutual dependence adds an element of uncertainty to the predictability of employment levels of Aboriginal and northern residents on the Project.



15.8.11 Monitoring

Monitoring of employment and associated training would form part of the follow-up program operated by the Proponent. Tracking information related to employment and training would be useful in determining the effectiveness of Project planning, policies, and practices; it would also provide an opportunity for the Proponent to make adjustments to its activities during the latter stages of the construction phase. A follow-up program for employment and training would include tracking and reporting on several key indicators. Reporting would occur on an annual basis. Reports would include both statistical and narrative information including:

- description of actions taken to recruit Aboriginal and northern resident employees,
- collaborative efforts with career centres and community agencies to distribute information on training and employment related to the Project,
- number of jobs and length of jobs during the reporting period,
- number of jobs occupied by Aboriginal and northern residents,
- home communities of Aboriginal and northern resident employees (adjusted to ensure that employee privacy is protected),
- types of jobs held by Aboriginal and northern resident employees,
- estimated employment income paid to Aboriginal and northern resident employees,
- employee turnover rates,
- relevant work site safety information,
- number of registered apprentices on the Project, including those of subcontractors,
- training programs offered by the Project including program title, length, and enrolment, and
- collaboration efforts with governments, schools, Aurora College, and others with respect to planning and delivery of training.

The Project is committed to supporting the GNWT in the Government's efforts to monitor economic and social change resulting from the Project. It would do so in a manner that respects the privacy of its employees and any proprietary business information of the Project and its contractors.