

**OIL AND GAS EDUCATION AND TRAINING  
IN BRITISH COLUMBIA:**

**PLANNING TODAY FOR  
TOMORROW'S PROSPERITY**

BRITISH COLUMBIA OIL AND GAS EDUCATION AND TRAINING  
CONSORTIUM

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## **EXECUTIVE SUMMARY**

### **The Consortium and its Mandate**

In May 2004, the provincial government created the BC Oil and Gas Education and Training Consortium (the Consortium), to provide advice and recommendations to the Ministry of Advanced Education (AVED) and the Ministry of Energy, Mines and Petroleum Resources (MEMPR) regarding a comprehensive and coordinated approach to meeting the education and training needs of the oil and gas industry and increase the number of British Columbians employed in the industry.

### **The Challenge**

British Columbia is Canada's second largest natural gas producer and fourth largest crude oil producer. Against a backdrop of rising prices and increasing demand for energy, the provincial government's revisions to regulatory and royalty policies in recent years have contributed to a major boom in oil and gas exploration and production activity in North East BC. As a consequence of this rapid and sustained growth and an increasingly competitive labour market, the industry has struggled to maintain an optimal level of exploration and production.

### **Current Initiatives**

Despite a range of recent initiatives intended to address the industry's labour needs and increase the employment of British Columbians, there are already growing gaps between labour supply and demand and reasons to believe that the situation will worsen. An increasingly competitive labour market, expansion of oil sands production in Alberta, initiation of major pipeline projects, and exploration and production beyond the North East will further exacerbate labour shortages in the industry unless steps are taken now.

### **The Consortium's Approach to Developing Recommendations**

The Consortium established four function-related working groups; Exploration; Drilling; Production, and, Education which provided a series of recommendations and priorities to the Consortium. This Report is based on the recommendations of the working groups and collective input from the Consortium members.

### **A Centre of Excellence Board**

The Consortium believes that a lean and efficient overarching structure is needed to lead and sustain the implementation of the recommendations. The proposal is to formally establish an Oil and Gas Centre of Excellence Board as a planning and coordinating body to oversee a provincial approach to oil and gas education, training and applied research and that would operate out of the new Fort St. John training centre. The constituencies currently represented on the Consortium would be invited to contribute membership to the Board.

The Centre of Excellence Board should be provided with adequate funding by government and take the lead on the **Education, Training and Research** recommendations outlined below. Government and industry would take the lead on the **Promotion, Recruitment and Retention** and the **Other Non-training related Policy Issues** recommendations as appropriate.

### **Education, Training and Research**

- *Expand training programs to address immediate and emerging skills shortages;*
- *Implement programs that orient students to and prepare prospective employees for careers in the oil and gas industry;*
- *Enhance the alignment of K-12 and post-secondary education and training programs with industry practices to best meet industry needs;*
- *Expand current initiatives to achieve an appropriate level of applied research programs including interdisciplinary research in geological and geochemical surveying, land use planning, biology and geoscience that address conditions and challenges found in BC;*
- *Strengthen arrangements among industry, educators, Aboriginal organizations and government for more effective engagement of Aboriginal peoples; and,*
- *Increase the level of common industry standards for trades training across jurisdictions.*

### **Promotion, Recruitment and Retention**

- *Build awareness and understanding, at all ages, of the social and economic importance of the oil and gas industry in British Columbia;*
- *Encourage more British Columbians to seek out career opportunities in the oil and gas industry;*
- *Increase participation of immigrants by facilitating foreign credential recognition and providing more English as a Second Language training; and,*
- *Implement strategies that contribute to improved employee retention.*

### **Other Related Non-training Policy Issues**

- *Develop new policies and programs to further encourage industry to reduce the seasonality of its activities and develop oil and gas resources in unexplored areas of the province; and,*
- *Harmonize, where possible, across jurisdictions and Ministries, oil and gas industry-related policies and programs.*

In conclusion, the Consortium observed that investment in the education and training needs of British Columbia's oil and gas industry is requisite to ensuring the Province continues to lead Canada in job creation and economic growth.

The ***Planning Today for Tomorrow's Prosperity*** report provides the start and guide for both the Centre of Excellence Board and the Province.

# 1. INTRODUCTION

## 1.1 The Consortium and its Mandate

In May 2004, the Government of British Columbia created the British Columbia Oil and Gas Education and Training Consortium (the Consortium) - a partnership among industry, educators, Aboriginal<sup>1</sup> organizations and government - to develop a comprehensive and coordinated approach to meeting the education and training needs of the oil and gas industry and increase the number of British Columbians employed in the industry.

The Consortium's mandate as outlined in its Terms of Reference (see Appendix 1) is to provide advice and recommendations to AVED and MEMPR regarding an overall strategic direction for oil and gas education and training. While the primary focus of the Consortium has been on North East BC, it has also considered the emerging human resource needs associated with the major pipeline projects in the offing as well as exploration and production in other regions.

## 1.2 The Nature of the Oil and Gas Industry

British Columbia is Canada's second largest natural gas producer and fourth largest crude oil producer. The province currently yields just over one trillion cubic feet a year of natural gas and 14 million barrels of oil per year. In 2003, direct employment in the industry in British Columbia accounted for 11,400 jobs. This number is expected to grow significantly over the coming years.

British Columbia is considered to have enormous resource potential with its relatively under-explored portion of the Western Canada Sedimentary Basin and additional unexplored basins both onshore and offshore. It is one of the few jurisdictions in North America where the amount of marketable gas is increasing and will continue increasing over the coming years.

In 2005, there were 1,418 wells drilled in the province and the forecast for 2006 is for 1,600 wells. There is an estimated 115 trillion cubic feet of natural gas, 90 trillion cubic feet of coal bed methane, and approximately 18 billion barrels of oil. The Geological Survey of Canada estimates hydrocarbon potential at 9.8 billion barrels of oil and 43.4 trillion cubic feet of gas in four offshore basins off the west coast.

In addition to the exploration and production activity there are a number of major pipeline construction projects scheduled for the province including: the Alaska Highway Pipeline, which will be the world's largest capital project at \$12 to \$20 billion in construction, and is likely to start after 2010 with 23,000 person years of employment and \$1 billion of employment income in BC; the \$4.0 billion 1,150 km Gateway Project from Edmonton to Kitimat with over 60 percent of cost for the BC portion of the line and construction expected to start in 2008; and finally, the

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<sup>1</sup> Aboriginal is defined as a person who is one of the "Aboriginal peoples of Canada" (Indian, Inuit and Métis) as defined under Section 35 (2) of the Constitution Act, 1982. "Indian" includes status and non-status Indians.

+\$4 billion, 1,020 km Trans Mountain Pipeline, with the most significant phase of the project scheduled to begin in 2008. Collectively, these projects will result in over \$10 billion invested in the province.

The majority of the conventional oil and gas development in British Columbia is currently occurring in North East BC, an area still considered to be in the early stages of its development cycle. Potential oil, gas and coal bed methane reserves are present throughout other regions of the province including Vancouver Island. Because extraction is difficult and expensive, exploration and development in these other areas is limited at present.

A moratorium on offshore oil and gas activity means that development of these reserves is also limited at the current time. However, the lifting of the moratorium and emergence of an offshore industry in British Columbia is seen as a viable possibility in the not-too-distant future.

### **1.3 The Challenge**

Against a backdrop of increasing demand for energy and rising energy prices, the provincial government's revisions to regulatory and royalty policies in recent years have contributed to a major boom in oil and gas exploration and production in North East BC. As a consequence of this sustained growth in activity and an increasingly competitive provincial, national and (in the case of oil and gas), international labour market, the oil and gas industry has struggled to maintain an optimal level of exploration and production.

Specifically, in 2004/05, shortages of skilled labour had the following direct impact in western Canada: During industry's most active drilling season (December to February), it is estimated that over 300 drilling days were lost because crews were not available. Drilling operations had proceeded but without sufficient crews to operate continuously on a 24/7 basis and consequently were temporarily suspended to allow for time-off. This loss of productivity resulted in a proportionate loss of productivity in related service industries, such as trucking, service rigs, etc. More specifically, labour shortages were identified as the main factor limiting growth by 50 percent of 40 randomly selected service sector companies surveyed in August 2005 in Fort Nelson, Fort St. John, Taylor, Dawson Creek, Chetwynd, Tumbler Ridge and Pouce Coupe. While 84 percent of companies reported business growth in the preceding year, difficulty in finding and retaining experienced, qualified workers was becoming an increasing concern, with some companies choosing not to expand rather than deal with additional recruitment/retention challenges.

Oil and gas operations in BC have traditionally been able to rely on substantial numbers of workers from Alberta and elsewhere largely because of the mobile nature of the workforce which is due in part to the seasonal nature of the work. The Province wants to ensure that more British Columbians are employed in the industry and the industry is extremely supportive of increasing the level of employment of British Columbians as both sound business practice and good corporate citizenry.

Natural gas is now the single largest source of provincial revenue derived from any natural resource owned by British Columbians. In 2004/05, government revenue generated directly from the production of oil and gas in British Columbia was \$1.9 billion and the forecast for 2005/06 is \$2.2 billion.

#### **1.4 Current Initiatives**

In recent years, a variety of stakeholders and agencies have embarked on a range of initiatives to address the oil and gas industry's labour needs and to increase the employment of British Columbians, including Aboriginal people.

**Northern Opportunities** is an innovative North East BC partnership of the Fort Nelson, Peace River North, and Peace River South school districts, Northern Lights College (NLC), First Nations and industry with a common goal: to provide young people in North East BC with a seamless learning pathway from secondary school to post-secondary trades/technology training and careers. Northern Opportunities was initiated by Duke Energy in support of Canada's Innovation Strategy.

As part of the Province's Oil and Gas Development Strategy (OGDS), MEMPR established the **Education and Training Initiative**. Under this Initiative, beginning in 2003/04, government and industry are jointly investing a total of \$3 million in oil and gas training programs over a three-year period. These training programs help to strengthen the British Columbia oil and gas service sector and ensure British Columbia's communities and workers benefit from the increased activity and revenues of the oil and gas industry.

AVED also announced, as part of its **Strategic Investment Plan** commitment to add 25,000 seats to the post-secondary system, the creation of 250 new student spaces at NLC by 2010. NLC is a leader in oil and gas education and training and contributes to the economy and diversity of North East B C. NLC is planning to use 180 of the new funded seats to expand oil and gas related programs.

In February 2005, the government announced that it was partnering with industry to build a new \$12 million **Oil and Gas Centre of Excellence** training facility at the NLC Fort St. John campus that will allow NLC to more than double the number of students training for jobs in the oil and gas industry. Although NLC has made significant progress in developing programs that meet the needs of the oil and gas industry, the demand for the programs is outpacing the capacity to deliver skilled workers.

Government established the **Industry Training Authority (ITA)** in 2004 with a mandate to implement a more flexible industry training model in the province in order to address the shortage of skilled trades workers. The ITA has already exceeded 2005/06 targets and overall has increased the number of trainees in industry training programs by 70 percent (from March 2004 to December 2005). For the Peace River

Region, the increase in apprentices is from 621 to 1,016. In addition, the ITA has recently announced three new Oil and Gas Rig Technician trades certifications as specified by industry, which means for the first time these industry workers can be fully trained in BC. New entries into these programs are not reflected in the trainee totals above.

The North East Native Advancing Society (NENAS) holds the **Aboriginal Human Resource Development Agreement** (AHRDA) for North East BC. NENAS coordinates employment and training programs and services to First Nation Status, Non-status and Inuit peoples living on-and off-reserve in North East BC. In the 2005/2006 fiscal year, NENAS assisted over 650 individuals and committed 27 percent of its total budget to oil and gas training and related initiatives which included:

- Skills Development in Heavy Equipment Operator, Class 1 Drivers, Grandfathered Fallers Re-certification, Safety Tickets, Oil and Gas Operation, Steamfitter/Pipefitter, Welding and Power Engineer;
- Financial Assistance for individuals to purchase occupational health and safety equipment and supplies;
- 30 apprentices registered;
- Discovery, Awareness and Literacy programs, and
- Employment Assistance Services for job seekers.

The Métis Nation British Columbia (MNBC) holds the **Métis Human Resource Development Agreement** (MHRDA) in British Columbia and has the primary responsibility to deliver employment and training counseling services to Métis people in the province. The MNBC has seven regions and provides services to roughly 41 Métis communities. The MHRDA program delivers employment and training services to over 1000 clients annually throughout the seven regional Métis service centers. The MNBC supports program such as:

- Employment Assistance Services;
- Targeted Wage Subsidies;
- Individual Training Interventions;
- Career Placement/Work Experience Programs;
- Self-Employment Assistance; and,
- Job Creation Partnerships.

In 2004 and 2005, the MNBC invested approximately \$1.07 million to provide funding for Métis clients to gain employable skills in the oil and gas sector. Roughly 30 percent of this funding was invested to address growing demands for safety tickets. The MNBC has also developed and implemented a province wide strategy based on direct industry relations. As a result, the MHRDA program will contribute an additional \$200,000 for the Pre-Employment Floorman (Roughneck) Program commencing in 2006 as part of a three-year project. The goal of the project will be employment for an additional 100 Métis clients.



Despite all of these efforts, the increasing level of activity in the North East and the increasingly competitive labour market are outstripping the supply of workers available to the industry. Furthermore, the increasingly competitive labour market, the expansion of oil sands production in Alberta, the initiation of major pipeline projects and expansion of exploration and production beyond the North East will further exacerbate labour shortages in the oil and gas industry unless steps are taken now.

### **1.5 The Consortium's Approach to Developing Recommendations**

In preliminary meetings, the Consortium reviewed recent labour market analyses as well as an 'Education and Training Information Paper', which outlined current labour market supply, demand and skills gaps (see Bibliography).

The Consortium determined that the most effective way to develop a comprehensive strategy that reflected contemporary industry and community needs was to establish four function-related working groups: Exploration; Drilling; Production; and, Education. Working group members are identified in Appendix 2. The Consortium asked the working groups to address a standard set of issues and themes and identify short, medium and long-term priorities for consideration by the Consortium.

The working groups met throughout the summer and fall of 2005 and presented their recommendations to the Consortium on December 15, 2005 (Appendix 3). The Consortium would like to thank working group members for their work in developing these recommendations which form the basis of the Consortium's Report.

In addition to the specific recommendations, the Consortium believes that an overarching structure to lead and sustain the implementation of the recommendations is needed. The proposal, which is elaborated below, is to formally establish an Oil and Gas Centre of Excellence Board as a planning and coordinating body to oversee a provincial approach to oil and gas education, training and applied research that would operate out of the new Fort St. John training centre. The constituencies currently represented on the Consortium would be invited to contribute membership to the Board.

## **2. RECOMMENDATIONS FOR ACTION**

### **2.1 A Centre of Excellence Board**

#### **Recommendation**

*Establish the Oil and Gas Centre of Excellence Board as a planning and coordinating body to oversee a provincial approach to oil and gas education, training and applied research and that would operate out of the new Fort St John oil and gas training centre and function at arm's length from NLC, with a mandate to:*

- Develop strategic direction for oil and gas education, training and research;

- Identify the education and training requirements (including learning outcomes) of the oil and gas industry;
- Advise on the scope and delivery models of education and training programs;
- Provide advice on the need for applied research, particularly on issues of special relevance to the BC oil and gas industry;
- Provide advice on a full range of workforce development issues and challenges;
- Act as a hub for coordinating cross jurisdictional discussions on innovative industry models and responses to specific short and long-term training needs;
- Act as a repository of oil and gas labour force research conducted by other agencies and identify need for additional workforce development research;
- Identify best practices to ensure innovative and cost effective initiatives;
- Deliver programs and initiatives as required; and
- Promote and facilitate implementation of the Consortium recommendations within the Centre of Excellence Board mandate and advocate for recommendations outside the COE mandate.

The Centre of Excellence Board's governance structure should include the constituencies currently represented on the Consortium including industry, other post-secondary institutions, school districts and Aboriginal human resource organizations.

Government should provide the Centre of Excellence Board with an adequate level of funding so that it can take the lead on the Education, Training and Research Recommendations outlined in Section 2.2.

*Priority: High, Short-term*

## **2.2 Education, Training and Research**

### **Challenges**

Meeting the challenge of an increased demand for skilled workers will require the planning and implementation of relevant education, training and research initiatives. Projecting the appropriate scope and nature of expanded or improved training and research is crucial and will require partnerships among government, industry, educators and Aboriginal organizations. Specific challenges include:

- Students and other potential recruits to industry have difficulty accessing oil and gas related training in or near their home communities;
- Employed and under-employed workers have difficulty accessing education and training on evenings, weekends and between shift rotations;
- Equipment used by industry is often more technologically advanced than equipment used for training;
- Some industry occupational standards and requirements are not well aligned with the actual competency and certification needs for that occupation;
- The graduation rate is often lower than the provincial average in communities with high levels of industry activity, as secondary school students choose high wages over high-school completion; and,

- There is a need for a greater level of applied research, including interdisciplinary research in the areas of geological and geochemical surveying, land use planning, biology and geoscience that specifically address the conditions and challenges found in British Columbia.

### **Desired Results**

The Consortium believes that in responding to these challenges the Province, industry, educators and the Aboriginal community should work toward the following results:

- All British Columbians enjoy access to oil and gas career-related education and training including professional level programs;
- British Columbia is recognized as a leader in meeting the education and training needs of the oil and gas industry; and,
- Occupational competency requirements and industry regulatory requirements are aligned.

### **Recommendations**

1. *Expand training programs to address skills shortages as they are identified, with the following skills shortages to be addressed in the short-term:*

- instrumentation technicians;
- steam fitters and gas fitters;
- oil and gas well drillers, including the more junior positions on drilling rig crews (floorhands, motorhands and derrickhands);
- welders;
- engineers (particularly mechanical, electrical and electronics);
- geologists and geophysicists;
- heavy duty mechanics;
- heavy equipment operators and truck drivers; and,
- geological technicians and surveyors.

*Priority: High, Short-term*

2. *Implement programs that orient students to and prepare prospective employees for careers in the oil and gas industry.*

#### *Strategies*

- a) NLC, in consultation with Enform and industry, should work with school districts, other post-secondary institutions, and Aboriginal educational organizations to expand delivery of the "Safety Training Boot Camp" industry orientation program that provides new entrants to the oil and gas industry with the five basic entry-level courses essential to employment in the industry (H2S Alive; Workplace Hazardous Materials Inventory System; Occupational

First Aid with Transportation Endorsement; General Oilfield Driver Improvement, and Transportation of Dangerous Goods).

*Priority: High, Short-term*

- b) Industry should continue to sponsor scholarship programs and/or initiatives that increase graduation rates and link the employment of K-12 school students to graduation in order to ensure that students see that the immediate benefit of high wages for unskilled labour is outweighed by the long-term benefit of career opportunities open to more educated workers.

*Priority: High, Short-term*

- c) Industry should expand opportunities for apprenticeships and provide supports to promote completion of apprenticeships.

*Priority: High, Short-term*

- d) Ministry of Education (MEd) and the ITA should continue to promote and provide adequate financial resources to help meet the expanding and evolving skill requirements of industry through programs such as Secondary School Apprenticeship, ACE IT, "Yes 2 It", and articulated programs utilizing advanced standing and dual credit to provide K-12 school students with alternative career pathways that are relevant and engaging.

*Priority: High, Long-term*

- 3. *Enhance the alignment of K-12 and post-secondary education and training programs and content with industry practices to best meet industry needs.*

#### *Strategies*

- a) MEd, AVED, school districts, post-secondary institutions, ITA, Aboriginal human resource organizations and industry should partner to provide diverse learning opportunities within the regular school year and during the summer, to enable K-12 and post-secondary school students to obtain training on oil and gas equipment and gain first-hand experience of the industry's work environment. These on-site learning opportunities should be supplemented with distance learning opportunities that utilize web casts and video conferencing.

*Priority: High, Short-term*

- b) Post-secondary institutions and industry should collaborate to provide more courses for current employees to be delivered in the evenings and weekends and aligning where possible course offerings with the industry's 'off season'.

*Priority: High, Short/medium-term*

- c) MEd should promote policies to allow experienced trades persons and technologists to obtain endorsed instructional certificates and receive credit for their industry experience that is recognized on the salary grid, as a means

of addressing the critical shortage of trades and technical instructors at the K-12 level.

*Priority: High, Long-term*

- d) Provincial government, post-secondary institutions, school districts and industry should ensure that students are trained on up-to-date equipment (through partnerships, tax credits and lease returns).

*Priority: Medium, Medium-term*

- e) Post-secondary institutions should develop new professional programs and enhance existing programs related to resource development such as geology and surveying.

*Priority: High, Medium-term*

- f) The ITA and industry should review and improve training programs for heavy equipment operators and truck drivers to ensure that graduates have the right skill levels to meet oil and gas industry requirements.

*Priority: Medium, Medium-term*

4. *Expand current initiatives to achieve an appropriate level of applied research programs including interdisciplinary research in geological and geochemical surveying, land use planning, biology and geoscience that address the conditions and challenges found in BC.*

*Priority: Medium, Medium-term*

5. *Strengthen arrangements among industry, educators, Aboriginal organizations and government for more effective engagement of Aboriginal peoples.*

### *Strategies*

- a) AVED, ITA, post-secondary institutions, Aboriginal organizations and industry, building on best practices and lessons learned in recruiting and retaining Aboriginal people, should identify and develop opportunities for companies and educational institutions to partner with Aboriginal organizations.

*Priority: High, Short-term*

- b) AVED, post-secondary institutions, Aboriginal organizations and industry should collaborate to provide culturally-sensitive pre-employment training necessary to obtain and maintain employment.

*Priority: High, Short-term*

- c) AVED, ITA, post-secondary institutions, Aboriginal organizations and industry should collaborate to provide training opportunities in Aboriginal communities where possible and develop mentorship programs for new Aboriginal recruits once the training is complete.

*Priority: High, Short/medium-term*

6. *Increase the level of common industry standards for trades training across jurisdictions and industries.*

*Strategies*

- a) ITA, MEMPR and industry should bring together various levels of government and jurisdictions to develop a shared vision that will standardize industry training programs and standards across the Western Canada Sedimentary Basin.

*Priority: High, Short-term*

- b) Post-secondary institutions, school districts and industry should explore opportunities for collaborating with other resource-based industries to develop transferable basic safety and skills standards.

*Priority: Medium, Medium-term*

### **2.3 Promotion, Recruitment and Retention**

#### **Challenges**

Competition with other industries for employees is one of the major challenges the oil and gas industry will face in British Columbia in the coming years. Potential sources of competition include: the Alaska Gas Pipeline; increased mining activity; the 2010 Olympics; and accelerated harvesting in the Province's forest industry due to pine beetle infestation. More specific challenges include:

- The majority of British Columbia residents have little awareness of the booming oil and gas industry in the North East part of the province;
- People considering career opportunities in the industry lack knowledge of the oil and gas industry's many career paths and opportunities;
- There are too few people in the North East region to meet the current and projected needs of industry;
- There is limited understanding of how much the industry has improved methods and equipment, lowered risks to workers and reduced impacts on the environment; and,
- Lack of preparedness for the challenging nature of the work and aspects of the industry culture contribute to an unacceptable rate of turnover.

#### **Desired Results**

- British Columbians understand the social and economic importance of the oil and gas industry in the Province;
- Information about the industry, employment opportunities and career paths is relevant and easily available to potential employees in a timely manner; and,
- Improved levels of employee retention.

## Recommendations

7. *Build awareness and understanding, at all ages, of the social and economic importance of the oil and gas industry in British Columbia.*

### *Strategies*

- a) MEMPR together with industry and other relevant organizations should develop a multi-media advertising campaign to improve the awareness of the oil and gas industry.

*Priority: High, Short-term*

- b) Industry should continue to share best practices to promote a positive corporate image -- particularly in North East British Columbia, but also in other areas of potential oil and gas industry-related activity in the Province of British Columbia.

*Priority: Medium, Medium-term*

8. *Encourage more British Columbians to seek out career opportunities in the oil and gas industry.*

### *Strategies*

- a) The Oil and Gas Centre of Excellence Board, with AVED, ITA, MEMPR, MEd, Ministry of Economic Development (MED), Aboriginal human resource organizations and industry should take the lead on:

- creating more awareness of the career opportunities in the oil and gas industry to encourage more British Columbians to pursue a career in the industry;
- better informing entry-level recruits about the industry's career paths -- including the high level of transferability of skills to other industries -- by building on existing curriculum maps and information that show the skills required for each job, where to acquire those skills and the resources available; and,
- developing a campaign that could be used by appropriate agencies such as post-secondary institutions and AHRDAs to promote awareness of the career paths and opportunities within the industry with specific emphasis on reaching women and Aboriginal people.

*Priority: High, Short-term*

- b) MEMPR should continue to sponsor regional job fairs in partnership with industry.

*Priority: High, Short-term*

9. *Increase participation of immigrants by facilitating foreign credential recognition and providing more English as a Second Language training.*  
*Priority: High, Medium-term*
10. *Implement strategies that contribute to improved employee retention.*

#### *Strategies*

- a) As a pre-emptive measure, post-secondary institutions, school districts and industry should develop and deliver innovative pre-employment programs that familiarize prospective employees with the nature and challenges of the oil and gas workplace.  
*Priority: High, Short-term*
- b) AVED, post-secondary institutions and industry should develop and deliver innovative and flexible programs to provide employees with additional on-the-job and life skills training, including financial, business management, mentorship and drug awareness training.  
*Priority: High, Short-term*
- c) Industry and post-secondary institutions should develop and deliver programs that promote inclusivity, tolerance and diversity in the workplace.  
*Priority: High, Short-term*
- d) Industry and government should explore policies to increase availability of affordable housing and other social amenities that are highly correlated with employee retention.  
*Priority: High, Short-term*

## **2.4 Other Related Non-training Policy Issues**

### **Challenges**

The majority of conventional oil and gas development in British Columbia is currently taking place in the North East, an area still considered to be in the early stages of its development cycle. Many of the other potential energy reserves are present in relatively remote areas as well and the challenge in retaining people in the industry in such areas is that the communities in which they live lack many of the amenities that British Columbians living in the lower mainland have come to enjoy.

Policies and programs that relate to the oil and gas industry are often multi-jurisdictional or inter-Ministry in nature and include not only the Government of British Columbia but also local governments and the Government of Canada. The policies and programs of one of these parties may conflict with, or mitigate the effect or intent of another.

Specific policy and program challenges include the following:



- While government has recently expanded regional services including health services, it is crucial that local infrastructure, including land available for affordable housing, fiber optics, telephone services, community services and amenities continue to keep pace with an expanding population and record growth of North East BC industry and business activity;
- The oil and gas industry is changing rapidly and both companies and employees must keep pace with new regulatory standards, methods of operation and equipment on an ongoing basis;
- There is a need for greater standardization of regulations and employment standards across provincial jurisdictions; and,
- The seasonal nature of oil and gas industry activity results in an annual attrition of skilled labour to other resource industries.

### **Desired Results**

The Consortium believes that in responding to these challenges, the Province, industry, educators and the Aboriginal community should work toward the following results:

- British Columbians, regardless of where they live or work in the Province, enjoy a superior quality of life; and,
- Oil and gas industry-related policies and programs are designed to maximize benefits for British Columbians

### **Recommendations**

11. *Develop new policies and programs to further encourage industry to reduce the seasonality of its activities and develop oil and gas resources in unexplored areas of the Province.*

#### *Strategies*

- a) MEMPR should develop new incentives that will promote summer seismic activity and the use of heli-portable technologies;  
*Priority: High, Short/medium-term*
- b) MEMPR should undertake a review of the OGDS to identify and quantify the benefits of the program and use this information to design new programs and strategies that will maximize benefits for British Columbians from their oil and gas resources; and,  
*Priority: High, Short-term*
- c) MEMPR should undertake a review of the present policies and procedures for administering oil and gas tenures to identify financial incentives that will encourage industry to conduct more of its operations in the summer.  
*Priority: High, Short-term*

12. *Harmonize, where possible, across jurisdictions and Ministries, oil and gas industry-related policies and programs.*

*Strategies*

- a) The ITA should work with its counterparts in other provinces to harmonize training standards across the Western Provinces allowing for more mobility of the workforce.  
*Priority: High, Short-term*
- b) The provincial and federal governments should institute a tax deduction to compensate employers who invest in training for their employees.  
*Priority: High, Medium-term*
- c) MEMPR should act as a catalyst to bring together other provincial Ministries and agencies and local government to address the shortage of lands available for housing in North East BC communities.  
*Priority High, Short-term*
- d) The provincial government should engage and encourage the federal government to adjust the employment insurance program funding ratio to allow for credits for training, re-certification or relocation costs.  
*Priority: High, Medium/long-term*

### **3. CONCLUDING OBSERVATIONS**

The Consortium's work has been a challenging and thought-provoking effort. It has brought together industry, educators, Aboriginal organizations and government in partnership to discuss the kinds of decisions that must be made if the human resource needs of the oil and gas industry in BC are to be met and ensure that the province remains the most competitive oil and gas jurisdiction in North America.

The responsible development and growth of the industry in BC will bring with it the creation of safe, well-paying jobs throughout the Province. Government must continue to encourage investment activity in the oil and gas industry, by supporting initiatives such as the Consortium, as these types of initiatives promote British Columbia's competitive edge over other jurisdictions -- resulting in more economic activity, more businesses and more jobs.

In conclusion, the Consortium makes the following observations:

***Investment in the education and training needs of British Columbia's upstream oil and gas industry is requisite to ensuring the Province continues to lead Canada in job creation and economic growth<sup>2</sup>.***

***Time is of the essence.***

The Province's oil and gas industry is in the midst of an unprecedented development boom in the wake of historically high oil and gas prices and most economists agree that the oil and gas sector will play an increasingly important role in future of the provincial economy.

Oil and gas industry investment dollars move readily around the globe to jurisdictions that provide the highest net returns for given levels of risk. Clearly, one risk facing the oil and gas industry in BC is an inadequate supply of trained and skilled workers to meet industry's needs.

There is an urgency to proceed with improvements to meet the education and training needs of the oil and gas industry in BC. Decisions made today in Cabinet rooms in Victoria, boardrooms in Calgary and classrooms throughout North East British Columbia and the rest of the province will influence oil and gas education and training in British Columbia and benefit the industry for years to come.

There are immediate and practical opportunities for action that if implemented now will help address the oil and gas industry's education and training requirements and ensure that British Columbians maximize the benefits from the development of BC's oil and gas resources that they own.

Some of the recommendations in this report go beyond education and training and focus on a better quality of life for those individuals living and working in oil and gas and related industries in northern and remote areas of the Province. All of the recommendations touch on more than one Consortium partner. As a result an inclusive, comprehensive process for successful implementation is required.

***The single most important challenge is leadership.***

The Consortium believes that leadership and partnerships are necessary to move forward on the recommendations of the Consortium. In this regard, the Consortium firmly believes that the Oil and Gas Centre of Excellence Board must become that leader and be the hub for oil and gas industry education and training, strategic planning, policy development and applied research in the Province. When this occurs the work of the Consortium will be complete.

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<sup>2</sup> According to Statistics Canada, BC's job growth in 2005 was the highest in Canada at 3.4 percent and BC's economic growth led the country in 2004 as measured by Gross Domestic Product which increased 3.9 percent with Alberta second rising 3.7 percent (2005 figures not yet available).

## Planning Today for Tomorrow's Prosperity

The Centre of Excellence Board must establish the vision for, and implement the Province's strategic direction for oil and gas education and training. For its part, the Province must build on its initial commitment when it partnered with industry to create the idea for the Centre of Excellence Board and provide adequate funding so that it can begin to implement these recommendations.

This ***Planning Today for Tomorrow's Prosperity*** report provides the start and guide for both the Centre of Excellence Board and the Province.

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*October 2003*

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Petroleum Human Resources Council of Canada

*May 2005*

## **British Columbia Oil and Gas Education and Training Consortium**

### **Terms of Reference**

#### **Mandate**

The British Columbia Oil and Gas Education and Training Consortium is established to provide advice and recommendations to the Ministry of Advanced Education (AVED) (lead Ministry) and the Ministry of Energy, Mines and Petroleum Resources\* (MEMPR) regarding:

- An overall strategic direction for oil and gas education and training in British Columbia;
- Research into workforce training for the oil and gas industry and related issues; and,
- Broad stakeholder involvement to meet community, learner and industry needs.

#### ***Principles:***

- Consortium sets strategic direction and makes strategic recommendations;
- Consortium directs the activities of working groups undertaking investigation and analysis;
- Broad stakeholder involvement in the process;
- Flexibility, creativity and innovation; and,
- Provincial and interprovincial coordination to avoid duplication, where appropriate.

#### ***Focus:***

The Consortium focuses on identifying short and long-term potential skills shortages and developing recruitment, retention and training initiatives that support the oil and gas industry to invest for the long-term in British Columbia.

The Consortium will address the skills training and labour needs for the exploration and development of conventional oil and gas reserves in the Northeast region of British Columbia over the next three to five years. The Consortium will also serve as a forum for ensuring a strategic approach to the emerging human resource needs associated with conventional, unconventional and off shore reserves. General activities of the Consortium will include:

- Identify industry labour requirements;
- Identify training models required for each skill group and current training available;
- Advise on strategies to ensure a better linkage between the full range of educational programming and the needs of learners, communities and industry;
- Develop implementation strategy; and,
- Establish an overall strategic framework to assist the further implementation of MEMPR's Education and Training Initiative and provide input and advice as required. Specifically, MEMPR and CAPP officials will develop a model that identifies the strategic linkages between the Consortium and MEMPR's \$500,000 education and training initiative.

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\* Formerly Ministry of Energy and Mines

## **British Columbia Oil and Gas Education and Training Consortium**

### **Terms of Reference**

#### **Consortium Membership**

1. Membership in the BC Oil and Gas Education and Training Consortium comprises senior-level decision makers capable of providing strategic advice related to oil and gas industry education and training.

#### **Industry Associations/Organizations**

Canadian Association of Petroleum Producers (CAPP) and/or  
CAPP member companies (2 – 4 representatives to be determined)  
Canadian Association of Oilwell Drilling Contractors  
Petroleum Services Association of Canada  
Northern Society of Oilfield Contractors & Service Firms  
Small Explorers and Producers Association of Canada  
Canadian Energy Pipeline Association  
Canadian Association of Geophysical Contractors  
Petroleum Human Resource Council of Canada  
Fort Nelson Chamber of Commerce (representing the service sector industry  
for the Fort Nelson region)

#### **Post-secondary Educational Institutions/Organization**

British Columbia Institute of Technology  
Northern Lights College  
University of Northern British Columbia  
North East Native Advancing Society  
Regional School Districts (one representative)

#### **Provincial Government**

Ministry of Advanced Education – lead government Ministry  
Industry Training Authority  
Ministry of Energy, Mines and Petroleum Resources

2. Each member organization may send an alternate to attend a meeting if its representative is not available. However, the intention of the Consortium is to maintain, as much as possible, continuity and the ability to provide high-level strategic advice to the provincial government.

## **British Columbia Oil and Gas Education and Training Consortium**

### **Terms of Reference**

#### **Terms**

1. The Ministers of Advanced Education (lead Ministry) and Energy, Mines and Petroleum Resources determine the membership structure of the Consortium in consultation with industry and post-secondary education institutions who will provide specific nominees.
2. AVED will appoint an interim Chair to facilitate establishment of the Consortium and a permanent Chair will be selected by the membership at the first meeting.
3. At the request of the Chair, the BC Oil and Gas Education and Training Consortium may serve as a steering committee to working groups established on an ad hoc basis and tasked with addressing priority and emergent issues related to industry education and training needs.
4. Meetings will typically be limited to members of the Consortium or their designates with the following exceptions:
  - The Chair may permit the attendance of guests; and,
  - Staff of the provincial government may attend for the purpose of providing resources and other services to the Consortium.
5. The members of the Consortium will be responsible for consulting with their organizations or constituencies that they represent and bringing their respective views to the Consortium as well as keeping their constituencies apprised of consortium decisions and initiatives. In addition, AVED and MEMPR will ensure that the Ministry of Education, and the Ministry of Economic Development, are kept informed and invited to participate in Oil and Gas Consortium initiatives as appropriate.
6. The Consortium will develop a communication strategy to ensure that the decisions and initiatives of the Consortium are communicated in a timely manner to all appropriate external audiences.
7. Each member of the Consortium will be responsible for the expenses of its representatives to the Consortium with any further financial contributions for Consortium projects etc. provided strictly at the discretion of individual member organizations. AVED will pay the costs of meeting space/hosting the meetings if required.
8. AVED as lead Ministry and with the assistance of MEMPR, will provide overall coordination and secretariat support to the consortium to the extent resources permit.



**Terms of Reference - continued**

9. Funding for research and analysis projects, new or expanded training etc. and project management will be sought from a range of possible sources including institutional core budgets, special government/industry funding initiatives, the federal government etc.
10. The BC Oil and Gas Education and Training Consortium will meet at least twice a year and as required at the call of the Chair.
11. The BC Oil and Gas Education and Training Consortium will report its advice and recommendations to the Ministers of AVED and MEMPR.

*Revised and Approved: Consortium meeting January 14, 2005*

*Updated: January 18, 2005*

*Updated: December 7, 2005 (Ministry titles)*

*Updated: January 9, 2006 (Footnote -Ministry former titles)*

**B.C. Oil & Gas Consortium on Education & Training  
Working Groups - Membership**

Updated: September 16, 2005

Note: underline denotes Consortium Member

**Drilling Working Group**

**Chair: Don Herring**, President, Canadian Association of Oilwell Drilling (CAODC)

**Pat Deis**, Senior Driller, EnCana

**Joe Laminski**, Director, Program Implementation, Industry Training Authority (ITA)

**Brad Caldwell**, Action Services Group

**Cindy Hames**, Director, Field Personnel Resources, Ensign Resource Service Group Inc.

**Cindy Soderstrom/Nancy Malone**, Canadian Association of Oilwell Drilling (CAODC)

**Rita Novak**, Human Resources Manager, Lakota Drilling

**Shauna Simpson**, Training Program Coordinator, Western Lakota Energy Services Inc.

**Education Working Group**

**Chair: D. Jean Valgardson**, President, Northern Lights College (NLC)

**Dr. Ron Thring**, P.Eng., Professor & Chair, Chemistry, Environmental Science & Environmental Engineering Programs, University of Northern British Columbia (UNBC)

**Dan Pope**, Director Region Seven, NE BC: Metis Provincial Council of BC  
Assistant: Catherine Sprigg

**Graham Prouse**, 1<sup>st</sup> Vice President, Fort Nelson Chamber of Commerce

**Liz Logan**, Deputy Chief, Treaty 8 Tribal Association

**Diane Bigfoot**, Education Coordinator

**Audrey Sam**, Executive Director, Northeast Native Advancing Society (NENAS)

**Ron Samborski**, Superintendent of School District 60

**Brian Vermuelen**, Chairman of the Small Explorers and Producers' Association of Canada (SEPAC)

**Exploration Working Group**

**Chair: Mike Doyle**, President, Canadian Association of Geophysical Contractors (CAGC)

**Bob Fedderly**, Manager, Fedderly Transportation Ltd.

**Allan MacQueen**, Canadian Association of Geophysical Contractors (CAGC)

**Herb Nodes/Joe Nodes**, H.F. Nodes Construction

**Michelle Gardner**, Regional Director, On-Site Camp Services

**Rob Lee**, Eh-Cho Dene Enterprises

**Bill Streeper**, Streeper Contracting Ltd.

**Doug Iverson**, Geophysical Coordinator, Field Acquisition Upstream, EnCana Corporation

**Dave Donovan**, Contract Field Operations Coordinator, Cdn Upstream Business Services Upstream, OSNA Div. of EnCana Corporation

**Carolyn Golightly**, Petroleum Industry Training Service (PITS)

**Production Working Group**

**Chair: Norm MacNeil**, Superintendent of Operations for the Cutbank Ridge/Hythe area, EnCana

**David de Medeiros**, Employee/Labour Relations Representative, Duke Energy Gas Transmission (CEPA)

**David Urquhart**, HR Leader, Canadian Foothills and Frontier Region, EnCana (CAPP)

**Gerry van't Riet**, Human Resources Department, Devon Energy Corp.

**Doug Roemer**, DESA Transport

**Clint Letendre**, EnCana

**Ruth Christensen**, Canadian Natural Resources Ltd.,

**BC OIL AND GAS EDUCATION AND TRAINING CONSORTIUM  
WORKING GROUP RECOMMENDATIONS**

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## OIL AND GAS EDUCATION AND TRAINING CONSORTIUM

### CHALLENGES AND OPPORTUNITIES

The Oil and Gas Education and Training Consortium mandate is to:

1. Consult and share information related to the coordinated delivery of training and education that reflects the current and projected needs of the industry;
2. Provide recommendations to Ministers of Advanced Education (AVED) and Energy, Mines and Petroleum Resources (EMPR) on the strategic direction for oil and gas education and training in BC; and,
3. Provide recommendations on how future stakeholders including industry, educational institutions and communities should be involved in fulfilling oil and gas education and training needs.

To assist with meeting these objectives, the Consortium established four working groups comprised of representatives from different industry sectors. The Exploration, Drilling, Production, and Education Working Groups were formed in order to:

1. Consider a standard set of issues and themes;
2. Identify short, medium and long term priorities for Consortium consideration;
3. Identify models required for training and education of each skill group;
4. Focus on industry labour requirements/challenges of sector;
5. Use background information/inventories provided; and,
6. Solicit input from Aboriginal communities.

The Education Working Group had a further mandate to review Interim Reports from the other three Working Groups.

The Working Groups collectively provide this report to Consortium members for their consideration. The following recommendations have been grouped into six overlapping theme areas: recruitment, education, retention (the Challenges), and promotion, partnership and policy (the Opportunities).

This report provides the Consortium and government with recommendations for addressing BC industries' need for skilled and educated labour, as well as some specific and detailed suggestions for changes and initiatives that will positively impact the oil and gas industry labour force development.

Note 1: Suggestions for how a recommendation may be implemented are in *italics*.

Note 2: Recommendations are not listed in order of importance. The Working Groups have indicated importance and possible timelines under the heading of Priority.

**PART I****CHALLENGE: RECRUITMENT**

- The majority of BC residents have little awareness of the booming oil and gas industry in the Northeast part of the province.
- People considering career opportunities lack knowledge of the oil and gas industry's many career paths and opportunities.
- There are too few people in the Northeast region to meet the current and projected needs of industry for skilled and educated labour.
- The cyclical and seasonal nature of the industry is lessening, improving stability and year-round employment prospects albeit increasing employee burn-out.
- There is limited understanding of how much the industry has improved methods and equipment over time, and lowered risks to workers and impacts on the environment.

**OPPORTUNITY: PROMOTION & INFORMATION**

These recommendations may assist in:

- Promoting the benefits of the oil and gas industry across BC;
- Informing the general public about industry and improvements to safety and environmental responsibility; and,
- Educating potential recruits and those that influence their choices (parents, teachers, counsellors) about oil and gas career paths and opportunities.

**INDUSTRY PROMOTION**

<p><b>Recommendation #1 - General Public Awareness</b></p> <p>Develop a multi-media advertising/marketing campaign throughout the province to improve awareness of the oil and gas industry and promote opportunities.</p>	<p><u>Lead:</u> EMPR with Industry partners</p> <p><u>Priority:</u> High; Short-term</p> <p><u>+Themes:</u> Recruitment</p>
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<p><b>Recommendation #2 – Community &amp; Company Relations</b></p> <p>Develop better corporate and public relations campaigns to further engage industry in BC communities where there is oil and gas industry-related activity.</p>	<p><u>Lead:</u> Industry, Northeast BC Companies, with Communities</p> <p><u>Priority:</u> Medium; Medium-term</p> <p><u>+Themes:</u> Retention Partnership</p>
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*Recommendation #2 may:*

- *Encourage more ways for industry to engage with communities;*
- *Identify community projects that provide a range of alternatives for companies to become involved in a community; and,*
- *Encourage the locating of satellite offices in Northeast BC region.*

<p><b>Recommendation #3 – Northeast BC Focus</b></p> <p>Continue to promote the Northeast region to industry, and raise the profile of BC companies so that industry identifies this region as the BC centre for oil and gas activity.</p>	<p><u>Lead:</u> EMPR, Northeast BC Companies, with Communities</p> <p><u>Priority:</u> Medium; Medium-term</p> <p><u>+Themes:</u> Partnership</p>
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*Recommendation #3 may:*

- *Build on best practices of current initiatives (trade shows, job fairs);*
- *Ensure industry has easy access to information about BC companies;*
- *Ensure industry considers BC suppliers and contractors when doing work in BC; and,*
- *Reduce the high mobility cost to industry of crews based in other jurisdictions that are transported into the region for oil and gas-related work.*



**TRADES CAREER INFORMATION**

<p><b>Recommendation #4 – Oil &amp; Gas Industry Trades</b></p> <p>Create more awareness of careers in the oil and gas industry and encourage more people to select the oil and gas industry for practicing their trade.</p>	<p><u>Lead:</u> AVED, ITA, EMPR, with Industry</p> <p><u>Priority:</u> High; Short-term</p> <p><u>+Themes:</u> Recruitment Education Partnership</p>
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*Recommendation # 4 may:*

- *Clearly show an entry-level recruit where they could be in 5-10 years and increase awareness of industry career paths through Apprenticeship programs 'career' focus.*
- *Create a web-based curriculum map that shows skills needed for each job, how to acquire occupational skills, and what resources are available;*
- *Ensure full distribution of the DVD promotional product "3<sup>rd</sup> Option Rocks: Oil and Gas";*
- *Identify cross-over skills from other industries and how they link to industry occupations and develop bridging options;*
- *Specify the courses, credentials and /or certifications that are required; and,*
- *Differentiate between occupations requiring mobility and those that are more stationary and/or operate on a set schedule.*

<p><b>Recommendation #5 – Non-traditional Workers</b></p> <p>Develop a campaign to:</p> <ul style="list-style-type: none"> <li>Effectively target women and Aboriginal people to improve awareness of oil and gas industry careers and opportunities.</li> <li>Promote industry careers to non-students, including unemployed and under-employed.</li> </ul>	<p><u>Lead:</u> EIA, MEd &amp; School Districts, Industry, EMPR, First Nations</p> <p><u>Priority:</u> High; Short-term</p> <p><u>+Themes:</u> Recruitment Education Partnership</p>
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<p><i>Recommendation #5 may:</i></p> <ul style="list-style-type: none"> <li><i>Continue supporting changes to workplace culture to attract more diverse employees;</i></li> <li><i>Provide a support network to minimize barriers experienced by new recruits;</i></li> <li><i>Clearly identify highly mobile careers that require travel; and,</i></li> <li><i>Promote the advantage of a more set schedule in the area of operations.</i></li> </ul>
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<p><b>Recommendation #6 – K-12 Focus</b></p> <p>Work with K-12 school system partners to promote:</p> <ul style="list-style-type: none"> <li>The trades and technology option as a valued career choice;</li> <li>The oil and gas industry and career opportunities generally; and,</li> <li>Opportunities for industry and company representatives to interact with students.</li> </ul>	<p><u>Lead:</u> MOE &amp; School Districts, with AVED, ITA, PSEd Institutions, Industry</p> <p><u>Priority:</u> High; Short-term</p> <p><u>+Themes:</u> Recruitment Education Partnership</p>
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*Recommendation # 6 may:*

- *Target secondary students; parents of secondary students; School Districts and schools (especially teachers and career counsellors); and, unemployed and under-employed people;*
- *Ensure Continuing Education coordinators and school administrators have the knowledge to speak about the industry and skill requirements when discussing industry opportunities in their communities;*
- *Encourage a partnership with CAPP and CERI to build a curriculum piece, and promote it; and,*
- *Develop an oil and gas orientation program for educators across BC (for example, the “Oil and Gas 101” course in Nova Scotia that was created specifically for secondary teachers);*
- *Develop partnerships that increase interaction between industry and high schools, for instance, team-teaching, industry mentorship program, guest speakers, and guided field trips such as Seismic In Motion and Project Heavy Duty;*
- *Provide learning materials that increase the emphasis on science subjects across the school curriculum (including Grades K-5, 6-9 and 10-12);*
- *Develop new materials and create links into standard curriculum for sciences and trades showing how various aspects of industry lead to a career;*
- *Offer a ‘summer school’ option whereby School Districts and industry partner to enable secondary students to train on rigs and therefore gain some firsthand experience of the industry’s work environment;*
- *Encourage secondary and post-secondary schools to adopt year-round programming that complements summer intake and industry seasonality, so that students can shift full course loads to the summer and take advantage of employment opportunities in the industry over the busy winter season (activity slows between March and November);*
- *Focus on pre-entry rig technician recruiting during last semester of grade 12;*
- *In the final semester of Grade 12, offering drill rig technician pre-training for 2 days/week, for 2-4 months (for example); and,*
- *Research the maritime experience and their best practices in the area of oil and gas education.*

**INDUSTRY ORIENTATION**

<p><b>Recommendation #7 – New Workforce Recruits</b></p> <p>Deliver industry orientation program through collaboration between public and private post-secondary educational institutions to meet the basic skills and certification requirements for unskilled workers entering industry.</p>	<p><u>Lead:</u>  AVED, PSEd  Institutions, Industry</p> <p><u>Priority:</u>  High; Short-term</p> <p><u>+Themes:</u>  Recruitment  Retention  Education  Partnership</p>
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*Recommendation #7 may:*

- *Clarify and/or refine programs currently offered by NLC and others;*
- *Provide 5 courses\* in first 5 days, followed by 5 days of industry orientation through job shadowing;*
- *Make introductory program available province-wide, to students outside of Northeast BC; and,*
- *Explore opportunities for collaborating with other resource industries to meet basic safety and skills standards (forestry, mining).*

*\*Five courses should include:*

- 1) *H2S Alive*
- 2) *WHMIS (or Petroleum Safety Training)*
- 3) *First Aid (with Transportation Endorsement)*
- 4) *GODI*
- 5) *TDG*

## **PART II**

### **CHALLENGE: EDUCATION AND TRAINING**

- Students and other potential recruits to industry have difficulty accessing oil and gas related training in or near their home communities.
- Employed and under-employed workers have difficulty accessing education and training on evenings, weekends and between shift rotations.
- Equipment used by industry is often more technologically advanced than equipment used for training.
- Some industry occupational standards and requirements are not well aligned with the actual competency and certification needs for that occupation.
- A lack of workplace and life skills causes problems for new recruits and experienced employees, and these training opportunities are difficult to access.
- The graduation rate is lower than the provincial average in communities with high levels of industry activity, as secondary students choose high wages over high school completion.
- Increasing numbers of experienced workers are retiring from industry and their skills and knowledge are not being effectively transferred to new employees and students.

### **OPPORTUNITY: PARTNERSHIPS**

Group members recognize that the success of many of these recommendations will depend on developing inter-dependencies between industry, companies, governments, institutions and educators: There is a need to:

- Have regular and formal collaboration and communication between industry, institutions, educators, and communities to smooth transitions between one education or training program and another.
- Harmonize and level the articulation of training programs within BC and Western Canada enhancing seamlessness and transparency of the educational and training needs for industry occupations.
- Develop and expand innovative and flexible delivery methods through partnerships between industry, educators and institutions that increase opportunities for students, for example, secondary dual credit programs, benefits from co-operative work experiences, and access to industry-related training across the province.
- Create tax incentives that compensate employers for part of the ongoing cost of training, upgrading and maintaining employee certifications will enhance BC-based businesses' competitive edge.
- Offer more industry education and training programs in more regions of BC, directed toward unemployed, under-employed, students and parents, and teachers and counsellors to increase the size of the labour pool, supplying the increasing needs of industry.

**TARGET STUDENTS**

<p><b>Recommendation #8 – Student &amp; Company Relations</b></p> <p>Identify and develop opportunities for individual companies to connect with students in training.</p>	<p><u>Lead:</u> AVED, PSEd Institutions, Industry, Northeast BC Companies</p> <p><u>Priority:</u> High; Medium-term</p> <p><u>+Themes:</u> Recruitment Retention Education</p>
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*Recommendation #8 may:*

- *Provide more opportunity for industry to have input into screening student candidates;*
- *Provide qualified instructors with oil and gas industry experience (e.g. through company secondments, train the trainer and team-teaching programs);*
- *Develop agreements with students entering training so that if they meet criteria throughout course, they are assured an offer of work;*
- *Enrol students in an industry- sponsored scholarship program where they are expected to maintain grades;*
- *Provide mentorship support for students while training is underway; and,*
- *Commit students to working for industry for a period of time, in exchange for support during education and training.*

*Proposal is similar to scholarships developed for nurses in Fort McMurray and teachers in the Northwest Territories.*

<p><b>Recommendation #9 – K-12 Completion</b></p> <p>Develop and expand initiatives that target the graduation gap to increase graduation rates and meet the need for more people with grade 12 diplomas.</p>	<p><u>Lead:</u> MEd, Industry</p> <p><u>Priority:</u> Medium; Medium-term</p> <p><u>+Themes:</u> Recruitment Education</p>
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*Recommendation #9 may:*

- *Link employment of secondary students to completion of Grade 12, ensuring students see the benefit of high wages for unskilled labour is outweighed by the benefit of career opportunities for more educated workers;*
- *Build on best practices, for example, Project Heavy Duty where participation is based on maintaining grades and completing Grade 12;*
- *Encourage industry to examine entry requirements to determine whether they are realistic for unskilled occupations; and,*
- *Develop bridging programs enabling unskilled adult workers without grade 12 to succeed in training and reach a higher level of education.*

**Recommendation #10 – Safety Training**

Review and improve training for heavy equipment operators and truck drivers to ensure graduates have the right skill level to meet oil and gas industry needs.

Lead: ITA, PSEd  
Institutions, Industry

Priority:  
Medium; Medium-term

+Themes:  
Education

*Recommendation #10 may:*

- *Provide training equipment beyond what is currently available for heavy equipment operator students;*
- *Provide truck driving students with more opportunities for students to practice moving heavy equipment typically used by the oil and gas industry;*
- *Use methods of assessing and testing skills that incorporate actual tasks related to field work;*
- *Reduce down time caused by learning on-the-job; and,*
- *Reduce costs to industry by ensuring that crews are fully effective.*

**TARGET EMPLOYEES**

<p><b>Recommendation #11 – Employee Soft Skills</b></p> <p>Develop and deliver a program to provide employees with additional (non-technical) training in workplace and life skills.</p>	<p><u>Lead:</u> PSEd Institutions with Industry</p> <p><u>Priority:</u> High; Short-term</p> <p><u>+Themes:</u> Recruitment Retention Education</p>
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<p><i>Recommendation #11 may include:</i></p> <ul style="list-style-type: none"> <li>• <i>Financial management training;</i></li> <li>• <i>Business management training;</i></li> <li>• <i>Leadership training;</i></li> <li>• <i>Mentorship training;</i></li> <li>• <i>Diversity training (including long-time employees in senior positions);</i></li> <li>• <i>Drug awareness training (should be mandatory for new workers and first offenders);</i></li> <li>• <i>“English as a Second Language” (ESL) training to immigrant workers to teach industry vocabulary and jargon;</i></li> <li>• <i>Programs packaged in short bursts to suit industry cycles and schedules; and,</i></li> <li>• <i>Choices between training at work (such as provided by contractors) and on a campus (such as provided by PSEd Institutions).</i></li> </ul>
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<p><b>Recommendation #12 – Employee Technical Skills</b></p> <p>Support development of more flexible and innovative ways to deliver upgrading and re-training programs to adults, and increasing opportunities for continuous learning by existing employees and those transferring to oil and gas from another resource sector.</p>	<p><u>Lead:</u> AVED, PSEd Institutions</p> <p><u>Priority:</u> High; Short-Medium Term</p> <p><u>+Themes:</u> Retention Education</p>
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*Recommendation #12 may include:*

- *Offering more courses on evenings and weekends and during industry off-season;*
- *Offering more industry-related courses and programs outside Northeast BC;*
- *Re-structuring programs to suit part-time learners (e.g. programs requiring one weekend per month);*
- *Credits for non-conventional learning;*
- *Contract training accessed through qualified providers;*
- *Identifying and creating links to a network of qualified instructors and experienced workers (similar to a brain trust);*
- *Pairing teachers and experienced workers and industry consultants for team-teaching;*
- *Development of instructional skills in experienced employees;*
- *Expansion of on-line training programs; and,*
- *Continuous improvement of curriculum through feedback.*

## TARGET OTHERS

### **Recommendation #13 – Aboriginal Partnerships**

Identify and develop opportunities for companies and educational institutions to partner with Aboriginal communities by building on best practices and lessons learned in recruiting and retaining Aboriginal people.

Lead: AVED, with providers, e.g. NENAS, AHRDA, NEABC

Priority:  
High; Short-Term

+Themes:  
Recruitment  
Retention  
Education

*Recommendation #13 may:*

- *Provide culturally-sensitive pre-employment training in the life skills necessary to obtain and maintain employment;*
- *Provide more technical training opportunities in Aboriginal communities (e.g. mobile training program);*
- *Pair aboriginal recruits with mentors, such as elders with industry experience;*
- *Accommodate cultural differences such as family roles and responsibilities;*
- *Support integration of new workers into the industry; and*
- *Apply lessons learned from the best practices of transitional models to increase employment and retention of other under-represented groups such as women, immigrants and adults with special needs.*

**Recommendation #14 – Industry-Institutional Connection**

Strengthen and add structure to existing relationships to ensure a positive flow of ideas and information between industry and the Centre of Excellence.

Lead: AVED, NLC, COE

Priority:  
High; Short-Medium Term

+Themes:  
Recruitment  
Retention  
Education

*Recommendation #14 may:*

- *Follow through on the Centre of Excellence mandate to regularly meet with industry partners and collaborate on program development;*
- *Identify and further develop links between education and training programs and oil and gas industry career paths;*
- *Engage industry in developing programs and establishing standards;*
- *Use partnerships to support introduction of the Skills Canada program in the Northeast;*
- *Increase industry understanding of the education and training mechanisms available;*
- *Continue and strengthen ongoing initiatives that bring all providers of education and employment services together with the service sector and small employers;*
- *Consider the need for association representatives to be there on behalf of their part of industry (rather than as individuals representing a company);*

- *Explore an option such as Regional Community Learning Councils, led by a Provincial Learning Council, and including representatives from K-12, post-secondary institutions, small business, industry sectors, Aboriginal and local government(s); and,*
- *Identify the lessons learned through Northern Opportunities and consider the potential for developing a new model for use by other communities, including:*
  - *Involving local community;*
  - *Increasing educators' understanding of the potential in the industry; and,*
  - *Providing funding support for the people attending.*

### **Recommendation #15 – Training Equipment**

Develop partnerships between educational institutions and equipment providers to make up-to-date equipment available for training.

Lead: PSEd Institutions, Industry, SBR

Priority:  
Medium; Medium-Term

+Themes:  
Education  
Policy

*Recommendation #15 may:*

- *Provide industry with tax breaks to provide equipment;*
- *Provide a mechanism for manufacturers to donate equipment to a training facility and structure it as a lease return as with rental fleets (using subsidy from government to buy equipment down or put it into a rental fleet to recover losses); and,*
- *Administer the training through educational institutions.*

### **Recommendation #16 – Land Use & Planning**

Develop a regulatory training program to increase the number of people knowledgeable about land use legislation, regulations and processes.

Lead: PSEd Institutions

Priority:  
Medium; Medium-Term

+Themes:  
Education

*Recommendation #16 may:*

- *Be accessible to local government(s), Aboriginals, and other community organization employees engaged in land use planning;*
- *Be offered as a sub-set of a public administration, business management or law degree program; and,*
- *Increase the availability of well-trained staff needed by industry, companies, aboriginals, local government, and the Oil and Gas Commission.*

### **PART III**

#### **CHALLENGE: EDUCATION AND RETENTION**

- The oil and gas industry is changing rapidly and both companies and employees must keep pace with new standards, methods and equipment on an ongoing basis.
- The seasonal nature of oil and gas industry activity results in an annual attrition of skilled labour to other resource industries and occupations.
- With unemployment at record low levels, the Employment Insurance program surplus is not being utilized effectively to further develop the labour force.
- Apprenticeship and occupational training programs lack structure and for many occupations, methods of tracking competency standards are unclear and inconsistent.
- Local infrastructure, including investments in land, fibre optics, community services and amenities have not kept pace with an expanding population and record growth of Northeast BC industry and business activity.

#### **OPPORTUNITY: POLICY & PROGRAMS**

These recommendations relate to some aspect of existing policy or programs, or propose new ones. In addition, some recommendations go beyond the mandate of education and training; industry seasonality and limited availability of land, for example, are more related to employee retention.

Some recommendations are specific to the mandate of the Ministry of Energy, Mines and Petroleum Resources, others have implications for other levels of government, including other provincial ministries, aboriginal and local governments, and the federal government.

**OIL AND GAS DEVELOPMENT POLICY**

<p><b>Recommendation #17 – Reducing Seasonality</b></p> <p>Develop new incentives to increase summer oil and gas activity across sectors, and further encourage industry to reduce seasonality.</p>	<p><u>Lead:</u> EMPR, with Industry</p> <p><u>Priority:</u> High; Short-Medium Term</p> <p><u>+Themes:</u> Recruitment Retention</p>
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*Recommendation #17 may:*

- *Encourage those companies who don't operate in BC in summer to review the business case for increasing load level activity;*
- *Increase promotion of load levelling and summer incentives;*
- *Develop more partnerships between companies for sharing information;*
- *Ensure Government undertakes a process of review to determine the impact of the oil and gas development strategy;*
- *Structure incentives for increasing marketability of products from heli-portable seismic activity, to be realized later when seismic information is used by a company to drill wells (through extra royalty credits for the company to use against their production);*
- *Use heli-portable seismic activity as a showcase for government to promote work that produces very little environmental impact;*
- *Consider potential for combining environmental credits with federal Kyoto incentives;*
- *Provide a year extension on tenures when efforts are made to load level work for summer drilling;*
- *Consider basing part of granting tenure on completing a portion of the work in summer season (for some tenures this may be unworkable); and,*
- *Offer incentives if work other than drilling is initiated between April and November to further encourage local industries to go to a 12-month working season.*

**OTHER POLICY**

<p><b>Recommendation #18 – Harmonization</b></p> <p>BC government should bring together representatives of regulatory agencies to seek harmonization of competency standards across industry occupations and jurisdictions.</p>	<p><u>Lead:</u> Government, with Industry, ITA, PSEd Institutions</p> <p><u>Priority:</u> High; Short-Term</p> <p><u>+Themes:</u> Recruitment Education Partnership</p>
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*Recommendation #18 may:*

- *Enhance initiatives that harmonize and standardize industry training programs among the Western provinces;*
- *Continue and strengthen the development of partnerships that build on those established between Northern Lights College, Northern Alberta Institute of Technology and the Southern Alberta Institute of Technology;*
- *Establish cross-industry equivalencies;*
- *Develop more structured apprenticeship programs for more industry occupations, for example, introducing apprenticeship programs for Trucking and Heavy Equipment Operator;*
- *For non-apprenticeship occupations, level competency standards and mandating use of experience log books by employees and employers;*
- *Consider new technology ( e.g. cards with magnetic strips) to track competencies;*
- *Recognize other resource industry training programs;*
- *Review driver licensing and regulations to ensure they are appropriate to the industry and Northeast region, for example:*
  - *Use of personal transportation to travel to and from work;*
  - *Use of personal transportation to attend occupational training; and,*
  - *Performing work as a truck driver.*
- *Harmonize standards with Alberta and Saskatchewan to ensure certification recognition and training standards are mirrored across the Western provinces, allowing for more mobility of the workforce. Two examples are:*
  - *Reviewing boiler certification standards across the Western provinces for appropriateness and relevancy to oil and gas industry requirements; and,*
  - *Improving transportation safety by introducing a driver license endorsement to allow 18 year old employees to begin work as swampers (this will enable them to become more familiar with equipment and gain practical experience*

*before turning 19 years old, when they can qualify as a driver.  
The risk that the oil and gas industry may lose workers to other industries is balanced with the benefit of standards being established and safety records improved.*

<p><b>Recommendation #19 – Federal Financial Policy</b></p> <p>Engage and encourage the federal government to provide employers with incentives that provides some compensation for lower productivity of trainees.</p>	<p><u>Lead:</u> Industry, PHRCC, BC and federal governments</p> <p><u>Priority:</u> High; Medium-Long Term</p> <p><u>+Themes:</u> Recruitment Education Partnership</p>
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*Recommendation #19 may:*

- *Provide employers with a tax break (for example) to bring new employees into workforce;*
- *Consider relocation incentives to reduce the cost of recruiting labour from other regions;*
- *Adjust the Employment Insurance (EI) program funding ratio for employee/employer deductions to allow for other, creative financial incentives (eg. credits for training, re-certifying, relocation costs etcetera);*
- *Remodel the self-employment program that allows some people to receive benefits while starting a business to support transition from EI to full employment along a graduated continuum; and,*
- *Involve employers, companies, federal and provincial governments in program review, development and implementation.*

<p><b>Recommendation #20 – Housing Shortages</b></p> <p>Provincial and local governments, BC Lands, and Agricultural Land Reserve interests should work together to make more land available for residential development.</p>	<p><u>Lead:</u> BC Government with Communities</p> <p><u>Priority:</u> High; Short-Medium Term</p> <p><u>+Themes:</u> Recruitment Retention Partnership</p>
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<p><i>Recommendation #20 may:</i></p> <ul style="list-style-type: none"> <li>• <i>Provide transitional housing for people to live in when they are recruited to work in the region; and,</i></li> <li>• <i>Provide permanent housing to retain workers and their families to live in the area.</i></li> </ul>
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<p><b>Recommendation #21 – Region &amp; Community Appeal</b></p> <p>Develop new initiatives to make Northeast BC a more attractive place to live and work.</p> <p>Develop an initiative that provides additional government support to local governments, enabling Northeast BC to grow their local workforce.</p>	<p><u>Lead:</u> Government, with Communities</p> <p><u>Priority:</u> High; Short-Medium Term</p> <p><u>+Themes:</u> Recruitment Retention Education Partnership</p>
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*Recommendation #21 may:*

- *Increase access to health care;*
- *Improve transportation links (e.g. frequent flight delays inhibit mobility);*
- *Improve education services, for example developing strategies to deliver a broader range of courses, to address the challenges of a smaller population;*
- *Engage federal government to explore opportunities for financial incentives, for example tax breaks to recognize these areas have fewer amenities and higher costs;*
- *Enhance the northern living allowance;*
- *Provide tax breaks (e.g. sales tax);*
- *Lower interest rates for mortgages;*
- *Improve local infrastructure;*
- *Invest in fibre optics to improve electronic communication;*
- *Emphasize the regional attributes; and,*
- *Promote Northeast BC as a good place to live and work.*

**Recommendation #22 – University Graduates**

Provide support to universities to develop professional programs related to resource development.

Lead:

AVED, PSEd  
Institutions

Priority:

High; Medium-Long  
Term

+Themes:

Recruitment  
Retention  
Education  
Partnership

*Recommendation #22 may:*

- *Address the shortage in BC of surveyors and geologists (for example);*
- *Encourage innovation in the development and delivery of professional programs;*
- *Increase communities' access to professional programs related to the oil and gas industry; and,*
- *Increase the number of skilled professionals in BC.*

<p><b>Recommendation #23 – Financial Policy</b></p> <p>Develop new financial incentives to increase the number of people pursuing oil and gas careers.</p>	<p><u>Lead:</u> BC Government, with Communities</p> <p><u>Priority:</u> High; Medium-Long Term</p> <p><u>+Themes:</u> Recruitment Retention Education Partnership</p>
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<p><i>Recommendation #23 may:</i></p> <ul style="list-style-type: none"> <li>• <i>Institute a tax deduction for corporate investments that develop skilled trade workers, to compensate employers for time and money needed to train skilled employees and maintain trade certifications to industry standards;</i></li> <li>• <i>Provide 50% reimbursement of student loans for students who achieve journeyman status; and,</i></li> <li>• <i>Provide bursaries to students for training in specific occupations, linked to their maintaining employment in regions where there is high demand and a shortage of skilled labour.</i></li> </ul>
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<p><b>Recommendation #24 – Supporting the Work</b></p> <p>Provide \$20 million in seed funding for the development and implementation of these recommendations.</p>	<p><u>Lead:</u> BC Government</p> <p><u>Priority:</u> High; Medium-Long Term</p> <p><u>+Themes:</u> Partnership</p>
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## Acronyms

H <sub>2</sub> S	Hydrogen Sulphide
WHMIS	Workplace Hazardous Materials Inventory System
OFA	Occupational First Aid
GODI	General Oilfield Driver Improvement
TDG	Transportation of Dangerous Goods
AVED	Ministry of Advanced Education
MEMPR	Ministry of Energy, Mines and Petroleum Resources
MEd	Ministry of Education
MED	Ministry of Economic Development
WCSB	Western Canada Sedimentary Basin
NLC	Northern Lights College
OGDS	Oil and Gas Development Strategy
ITA	Industry Training Authority
AHRDA	Aboriginal Human Resource Development Agreement
MHRDA	Métis Human Resource Development Agreement
MNBC	Métis Nation British Columbia
ACEit,	Accelerated Credit Enrolment in Industry Training
YES2it	Youth Exploring Skills to Industry Training