



**ALASKA  
OIL AND GAS WORKFORCE  
DEVELOPMENT PLAN  
2014 - 2018**

## Industry Steering Committee

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**Mike Andrews**

Alaska Works Partnership

**Ben Glover**

Ilisagvik College

**Daniel Patrick O'Tierney**

Department of Commerce, Community, and Economic Development

## **Methodology**

### **Meeting One:**

Review industry occupational composition, statistical data, and approaches to establishing priority occupations

### **Meeting Two:**

Review of industry trends in exploration and production, near-term and long-term projects and possible impacts on workforce demand

### **Meeting Three:**

Review of labor supply, transitioning populations, and educational systems

### **Meeting Four:**

Review of the first draft of the report

### **Public Comment**

# Alaska's Oil and Gas Industry

## Oil and Gas Industry Defined

<b>NAICS Code</b>	<b>Category</b>	<b>Number of Firms</b>
21-1111	Crude petroleum and natural gas extraction	30
21-3111	Drilling oil and gas wells	11
21-3112	Support activities for oil and gas operations	77
22-1210	Natural gas distribution	5
23-7120	Oil and gas pipeline construction	38
33-6611	Ship building and repairing	10
48-6110	Pipeline transportation of crude oil	9
48-6210	Pipeline transportation of natural gas	1
48-6910	Refined petroleum product pipeline transportation	2

## Workforce Analysis

20,249 workers

270 occupations

Increasing employment

Shifting age profile

29 percent nonresident  
employment

Typical occupational churn rate  
of 20 to 30 percent

2,000 new workers due to  
growth

5,500 replacement workers

Limitations:

- Lag in occupational level data
- Changing regulatory requirements
- Changing business planning requirements
- Changing operational practices
- Shifting focus to natural gas, offshore, shale, and unconventional oil plays



**THE ALASKA  
OIL AND GAS  
INDUSTRY**

**IMPACTS MORE THAN**

**45,000**

**WORKERS**

**WITH EARNINGS OF**

**\$2.65 BILLION**

**THAT'S MEGA.**

## Priority Occupations

Top 25 occupations based on:

Worker count

Average earnings

Average age of incumbent  
workers

Residency

Industry guidance:

- Emphasize exploration and production jobs
- Long-term career positions versus short-term or seasonal
- Reflect recent changes in the industry

## Priority Occupations

### Engineering

is a discipline that drives project development, construction, and operations in the oil and gas industry and cuts across each of the other priority occupational groups.

New exploration incentives and business opportunities have increased the need for workers with education and experience in the **Geosciences**.

Increasing regulatory and business planning requirements have changed industry demand for **health, safety, security, and environmental** (HSSE) workers.

Development of offshore opportunities in the Cook Inlet and the Chukchi and Beaufort seas are increasing industry demand for **onshore and offshore maritime** workers.

New technologies, aging oil fields and infrastructure, and new modes of production and operation are increasing industry demand for skilled workers in **remote sensing and inspection** occupations.

## Career Clusters and Pathways for Priority Oil and Gas Occupations

Career Cluster	Career Pathway
Agriculture, Food, and Natural Resources	Environmental Service Systems
	Natural Resources
Architecture and Construction	Construction
	Design/Pre-construction
Manufacturing	Production
	Quality Assurance
STEM	Engineering and Technology
	Science and Math
Transportation, Distribution, and Logistics	Transportation Operations
	Warehousing and Distribution Center Operations

# Alaska's Talent Pipeline

## Alignment with Secondary and Postsecondary Education and Training

**Postsecondary Education, by 2012**  
**Alaska High School Graduates and GED Recipients, 2005-2011**

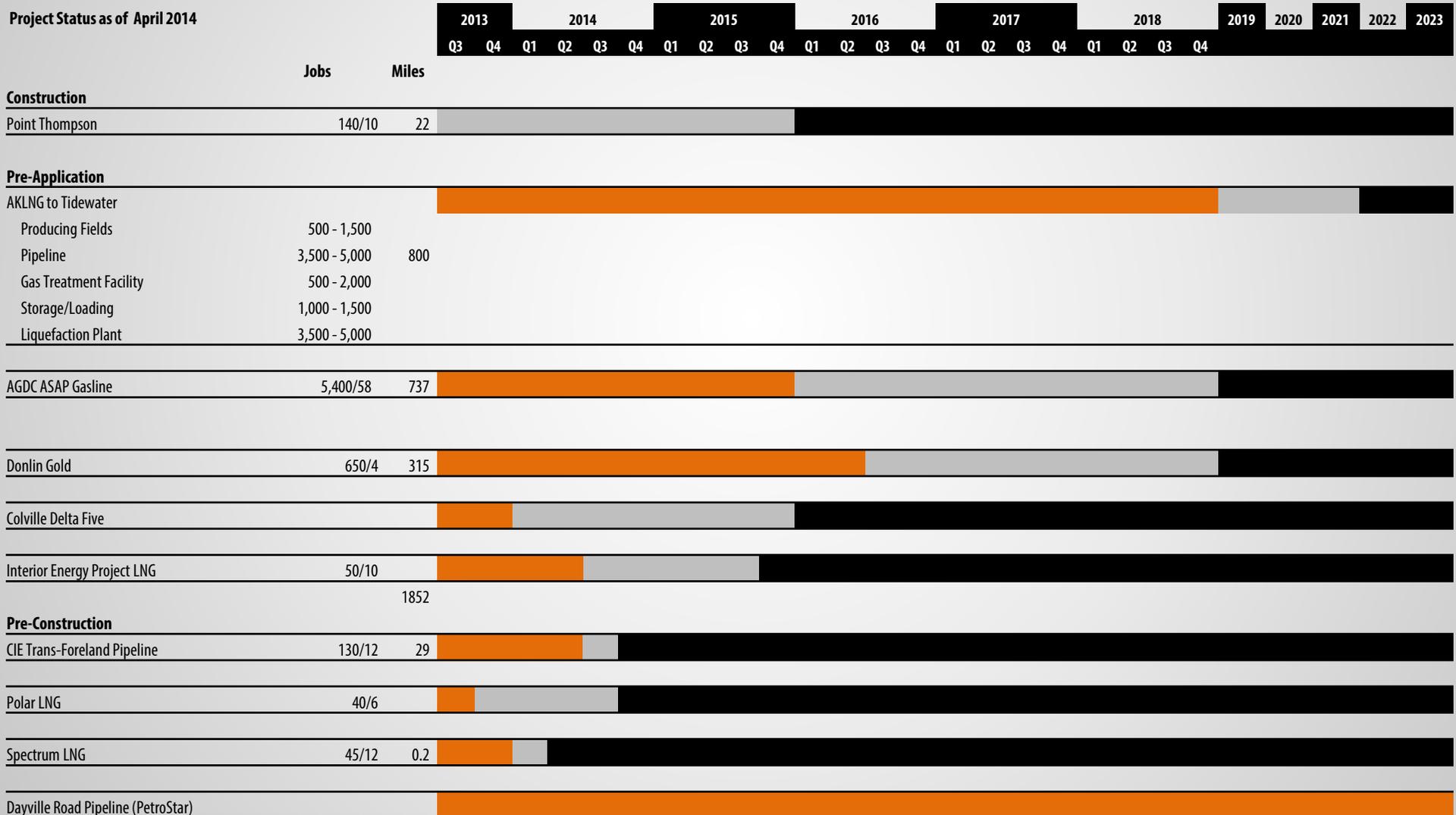
Academic Year	High School Outcome	Students	College Graduate	Some College or still Enrolled	Job Training Only	No Postsecondary
2004-2005	GED	784	12	230	191	351
2004-2005	Graduate	6,233	1,685	2,755	591	1,202
2005-2006	GED	814	14	256	198	346
2005-2006	Graduate	6,745	1,508	3,244	633	1,360
2006-2007	GED	640	6	183	194	257
2006-2007	Graduate	7,058	1,080	3,632	1,317	1,029
2007-2008	GED	528	4	134	131	259
2007-2008	Graduate	7,182	258	4,448	609	1,867
2008-2009	GED	456	0	104	130	222
2008-2009	Graduate	7,250	113	4,464	650	2,023
2009-2010	GED	399	0	75	101	223
2009-2010	Graduate	7,529	23	4,317	657	2,532
2010-2011	GED	277	1	34	50	192
2010-2011	Graduate	7,322	1	3,529	282	3,510

\*Postsecondary outcomes were derived from the National Student Clearinghouse and Alaska's job training providers.

# Trends in the Alaska Oil and Gas Industry

## Portfolio of Pipeline Projects

Project Status as of April 2014



# Action Agenda

## Action Agenda

### **Goal 1. Engage Alaskans in oil and gas workforce development**

Strategy 1.1 - Maintain ongoing industry participation and guidance to oversee the implementation of the Alaska oil and gas workforce development plan.

Strategy 1.2 - Increase awareness of and access to career opportunities in the oil and gas industry

Strategy 1.3 - [Develop a comprehensive, one-stop information system on oil and gas industry job openings and training opportunities in Alaska](#)

## Action Agenda

### **Goal 2. Train Alaskans for oil and gas industry employment**

Strategy 2.1 - Increase utilization of the Alaska Oil and Gas Occupations Training Fund for priority occupation training

Strategy 2.2 - Convene subject matter experts to develop KSAs/STTs/POSs for the four priority occupational groups

Strategy 2.3 - Target and optimize the use of incentives to increase qualified Alaskans for oil and gas employment

Strategy 2.4 - Strengthen CTE offerings in secondary schools

Strategy 2.5 - Strengthen degree and credential programs aligned with priority occupations

## Action Agenda

### **Goal 3. Recruit qualified candidates for oil and gas career pathways**

Strategy 3.1 - Develop outreach efforts to recruit targeted and underrepresented populations into oil and gas career pathways

- 3.1.1 Rural and Alaska Native Outreach
- 3.1.2 Women
- 3.1.3 Transitioning Military
- 3.1.4 Former industry workers

Strategy 3.2 - Promote oil and gas careers in conjunction with other efforts to promote the Alaska oil and gas industry

## Action Agenda

### **Goal 4. Retain a skilled oil and gas workforce**

Strategy 4.1 Develop best practices to retain oil and gas workers

### **Goal 5. Prepare the Alaska Workforce Development System for future oil and gas workforce demand**

Strategy 5.1 - Monitor proposed oil and gas projects

5.1.1 Maintain an inventory of the workforce needs for each project

5.1.2 Assess training capacity to meet future demand

5.1.3 Develop long-term strategy to fund training needs

## **Next Steps**

**Establish a collaborative charter amongst the plan stakeholders**

**Establish lead partners on specific goals/strategies**

**Establish work groups on priority occupational groups**

- HSSE Occupations
- Petroleum and Engineering Technicians

**Coordinate with other planning processes to ensure representation of industry priorities**

**Set first plan review/progress update – Nov/Dec 2014**



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