

# Modeling of Short- and Long-Term Employment Generated by Construction and Operation of an Alaska Natural Gas Pipeline Project



# Employment projections generated for ...

- **Construction Phase** of the pipeline and installation of compressor stations, Gas Treatment Plant and LNG facility
- **Operation Phase** of the pipeline and related facilities (compressor stations, GTP and LNG plants)
- **Exploration and Development** work on the North Slope spurred by operation of natural gas pipeline





# Sources of Data/Model Used

- Sources of Data
  - Cost data from TC Alaska AGIA Application and other information provided to the State
  - Data generated by State's consultants
  - Information from Division of Oil and Gas
- Model Used
  - IMPLAN
  - Cost-driven
  - Uses Alaska-specific labor factors



# Construction Phase Assumptions

- Gas Treatment Plant and LNG facility will be built Outside
- Major equipment and materials purchased Outside
- Labor force in Valdez constrained by size of camp



# Construction Phase Employment Results

- Any natural gas pipeline project will create thousands of short-term construction jobs
- Largest number of construction jobs will be available during a brief peak period
- LNG option
  - 16,000 jobs in peak year
  - Longer 'peak' period due to LNG installation
- TC Alaska/Producer Pipeline
  - 15,000 jobs in peak year



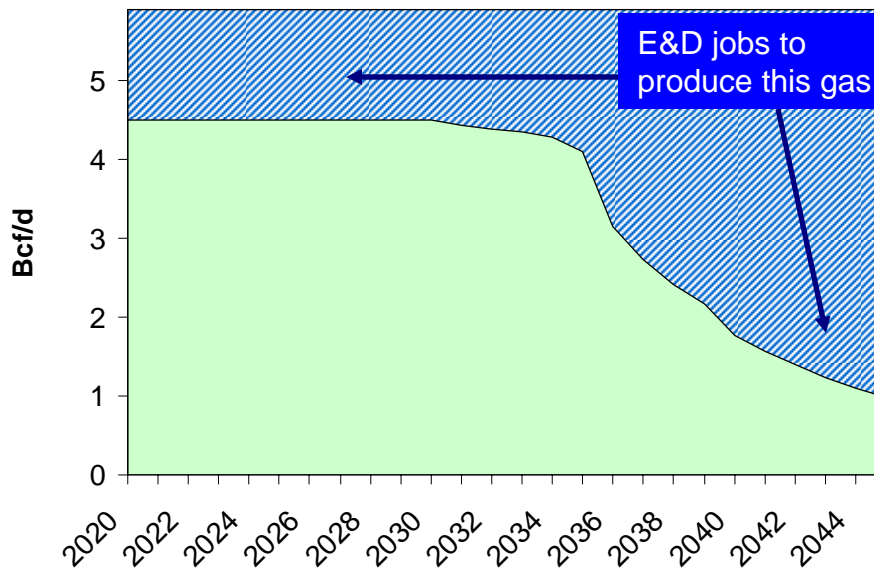
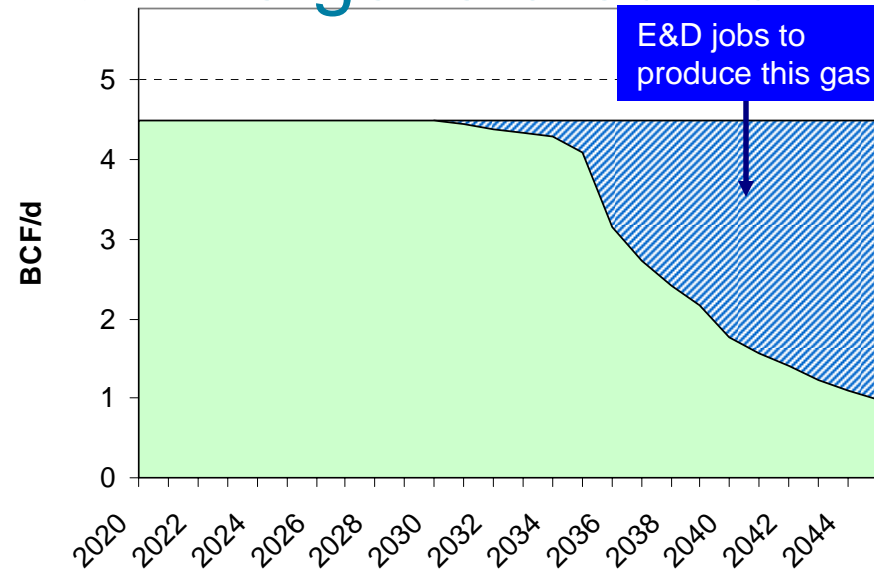
# Operations Phase Employment Results

- TC Alaska or Producer Pipeline: ~200 operations jobs in Alaska
- LNG option: ~600 operations jobs in Alaska
  - ~400 jobs at LNG plant in Prince William Sound



# E&D Employment:

## How we generated our results—Scenarios



- Non-Open Access Pipeline
  - No capacity expansion
  - No new natural gas production (or E&D work) until current fields fall off plateau
- TC Alaska Scenario
  - Capacity expansions as demanded + Reasonable tariffs = Favorable explorer economics = E&D rush

# E&D Employment:

## How we generated our results—Assumptions

- New production facilities will be constructed in Alaska
- Fields will be brought on-line to keep the pipeline full at a given assumed capacity
  - 5.9 bcf/d for TC Alaska Scenario
  - 4.5 bcf/d for Non-Open Access Pipeline Scenario





# Results: E&D Employment

- TC Alaska
  - Approximately 72,000 E&D jobs in the 2015 to 2045 timeframe
  - Jobs may be created as early as 2015
- Non-Open Access Project
  - Approximately 47,000 E&D jobs in the 2015 to 2045 timeframe
  - Job creation may be delayed as late as 2026



# Results: E&D Employment

- Timing of E&D job creation is a function of a pipeline's characteristics
  - Open Access = Jobs Sooner
  - Non-Open Access = Job Creation Delay
- Creating new natural gas basin-related jobs sooner is important ...
  - Offset job losses likely to occur as existing oil fields decline
  - Maintain existing skill sets and talent pool in Alaska

