



Alaska LNG

Fueling Alaska's Future

APRIL 2015

Business Information Sessions

- **Safety Briefing**
- **Project Overview**
- **Contracting Overview**
- **Question and Answer**
- **Networking**

Safety Briefing



Project Overview

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An integrated liquefied natural gas export project that would provide access to gas for Alaskans

Gas Treatment Plant

- 3.3 BCFD peak winter rate
- Three trains with compression, dehydration and chilling for gas conditioning
- CO₂ removed, captured and compressed for reinjection at PBUs

LNG Storage & Marine Terminal

- LNG storage tanks
- Two jetties to accommodate 15-20 LNG carriers per month

Liquefaction Facility

- Natural gas is cooled to -260 degrees to condense the volume 600 times
- 3 trains dehydrate, chill and liquefy gas to produce up to 20 million tons of LNG each year



Point Thomson Gas Expansion*

- New wells
- New gas processing facilities

Prudhoe Bay Tie-In*

- Gas delivery to new gas treatment plant
- Integration with existing CGF
- Injection of CO₂ from GTP

Gas Pipeline

- 800+ mile 42" diameter gas pipeline from gas treatment plant to liquefaction facility
- 3.5 BCFD capacity
- 6-10 compressor stations
- ~5 off-take points

* Prudhoe Bay and Point Thomson Modifications/ New Facilities are managed by Prudhoe Bay Unit and Point Thomson Unit Operators, respectively, and are connected actions to the Alaska LNG Project.

Potential Benefits

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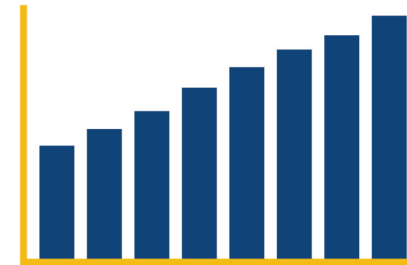
INCREASED REVENUE

- Would be the single largest investment in Alaska's history: \$45B - \$65B



15,000 ADDED JOBS

- Estimated that it could create 9,000-15,000 jobs for design and construction
- Could provide ~1,000 jobs for operations



**INVESTMENT IN
LOCAL ECONOMY**

- Could generate billions of dollars of new tax revenue for Alaska
- Would provide access to natural gas for Alaskans

Challenges

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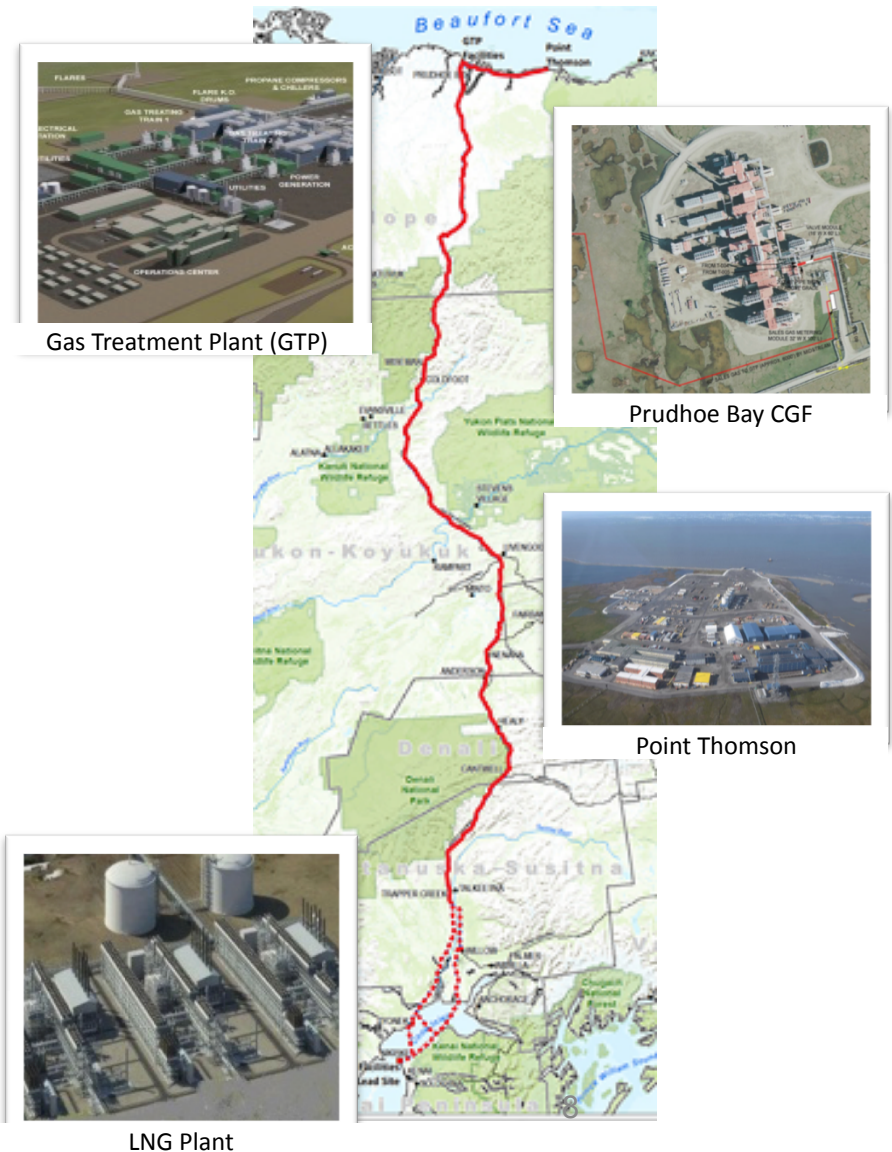
- Megaproject would require:
 - labor, resources and equipment that can handle Alaska's extreme, remote environment
- Complex commercial arrangements with foreign markets require long-term commitments
- Reducing environmental and socioeconomic impacts and risks
- Uncertainty related to permit timing/scope
- Working complex commercial and fiscal issues among Project participants, including the State of Alaska



Alaska LNG Project – 2014/2015 Highlights

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- Pre-FEED project spend - \$82M in 2014
- First draft Resource Reports to FERC
- Received DoE export authorization for Free Trade Agreement (FTA) nations
- Community open-house sessions
- Developing 2015 Summer Field Season plans



Gas Treatment Plant (GTP)

Prudhoe Bay CGF

Point Thomson

LNG Plant

LNG Plant Overview

- Preferred site near Nikiski, adjacent to Cook Inlet
- Plant would cool gas to -260°F to condense volume by 600 times
- Would require three modularized LNG trains to dehydrate & chill gas

Storage & Loading would require:

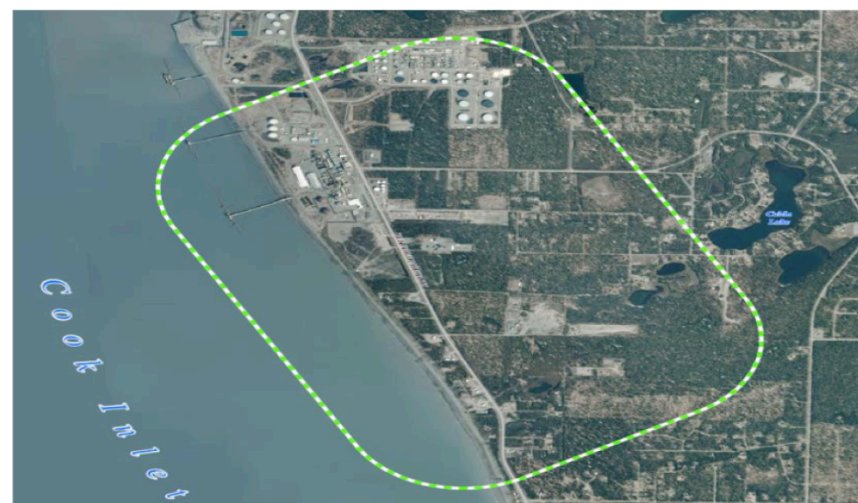
- Three 160,000 cubic meter LNG storage tanks
- Two jetties to accommodate 15-20 LNG carriers/month
- Specially designed LNG vessels transport chilled liquefied natural gas

Recent Progress / Focus

- Continuing land acquisition work
- Progressing geotechnical and geophysical site suitability analysis (onshore/offshore)



Initial LNG Plant Layout



Proposed LNG Plant Site

Alaska LNG Project - Pipeline Update

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Overview of project requirements

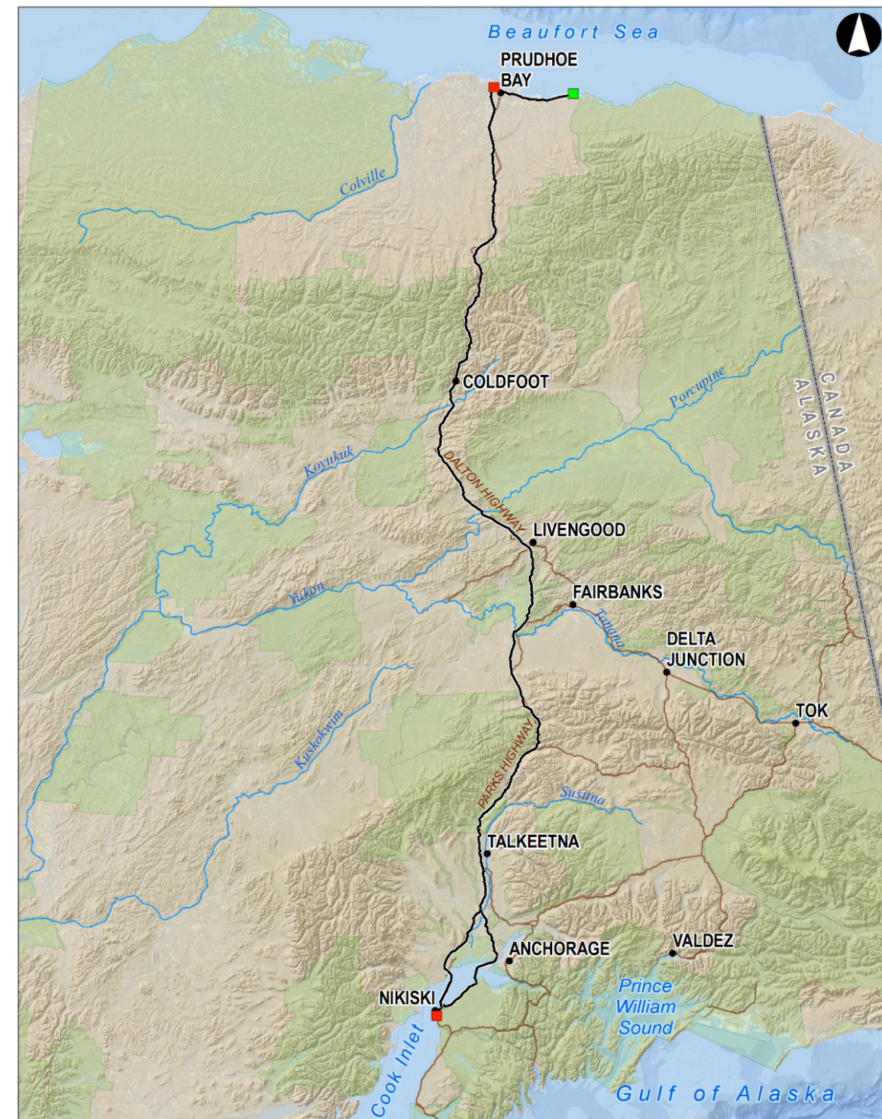
- 800-mile pipeline
- Will require ~1.2 million tons of steel
- Compressor stations will maintain pressure and temperature
- At least 5 off-take points to serve Alaska (determined by State)

Current status

- Continued collaboration with AGDC – aligned route
- Final Cook Inlet crossing under discussion with FERC
- Evaluate appropriate pipeline materials for each section
- Evaluating multiple mills' capacity/capability

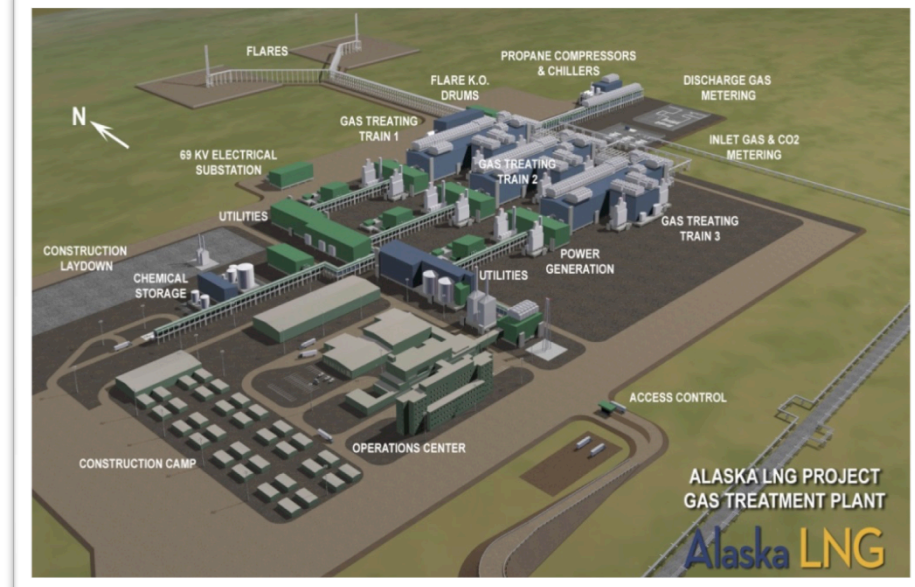
Forward plans

- Gathering/evaluating geotechnical and environmental baseline data
- Working with FERC and other agencies on permitting process
- Finalize design cost/schedule estimates



Overview of Plant Requirements

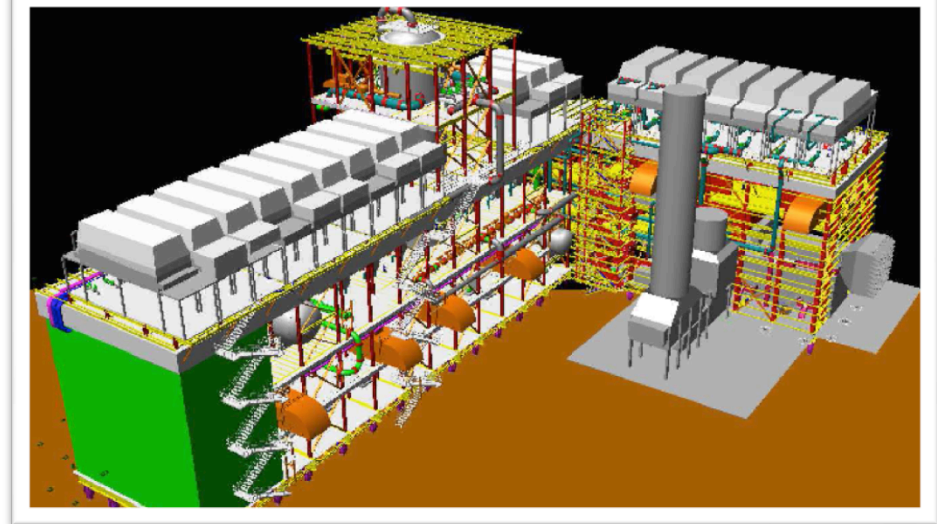
- 3.3 BCFD peak winter rate
- 3 process trains to remove impurities
- Modularized to reduce execution risk
- Facility will require ~250,000 tons of steel
- Facility will span ~200 acres
- CO₂ removed, captured and compressed for reinjection
- Located at Prudhoe Bay



Initial GTP Layout

Recent Progress / Focus

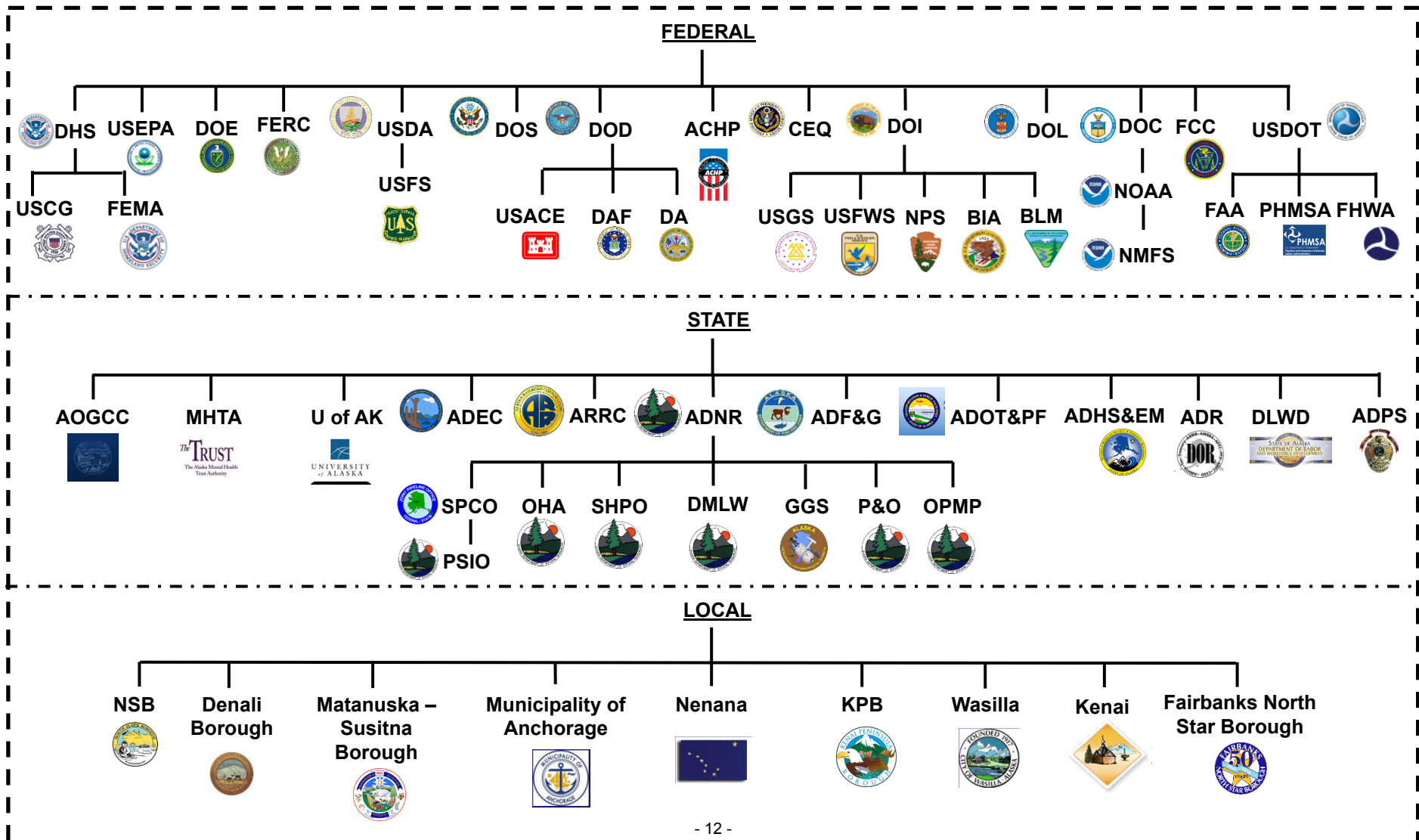
- Winter geotechnical assessment continues
- Confirming large pressure vessel fabrication and shipping capabilities
- Support regulatory process/submittals



Alaska LNG Project – Regulatory Overview (NEPA)

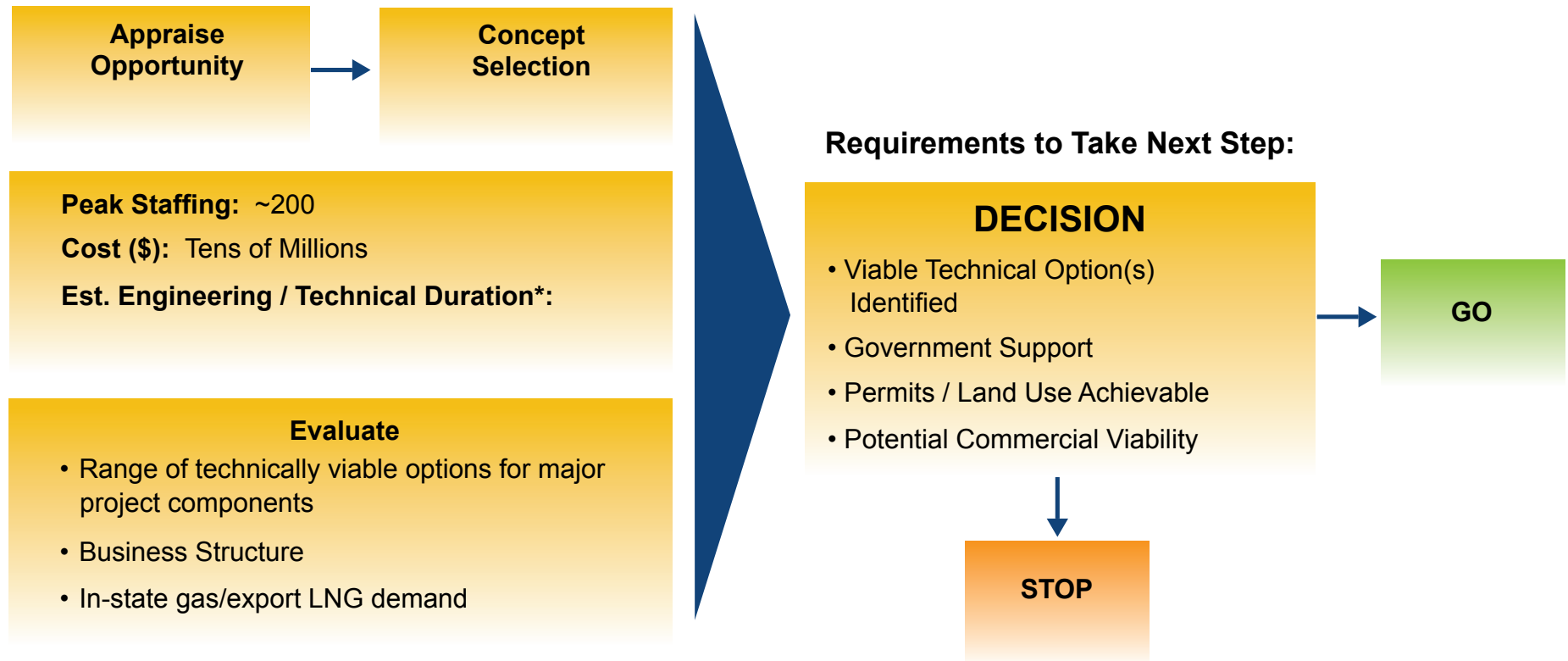
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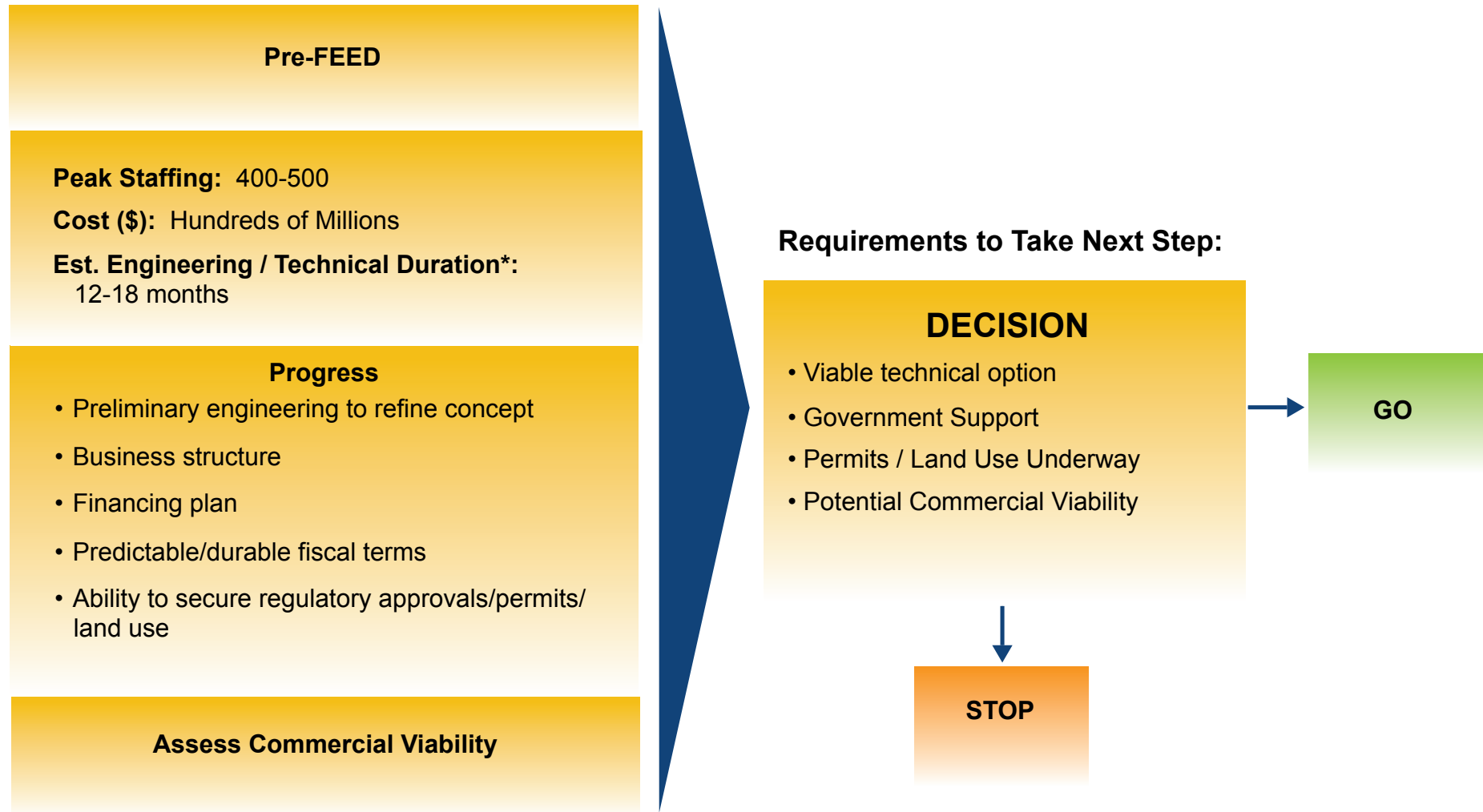
FERC leads NEPA process – umbrella for creation of all other permit applications; Requires collaboration with cooperating and reviewing federal, state, Alaska Native and local entities

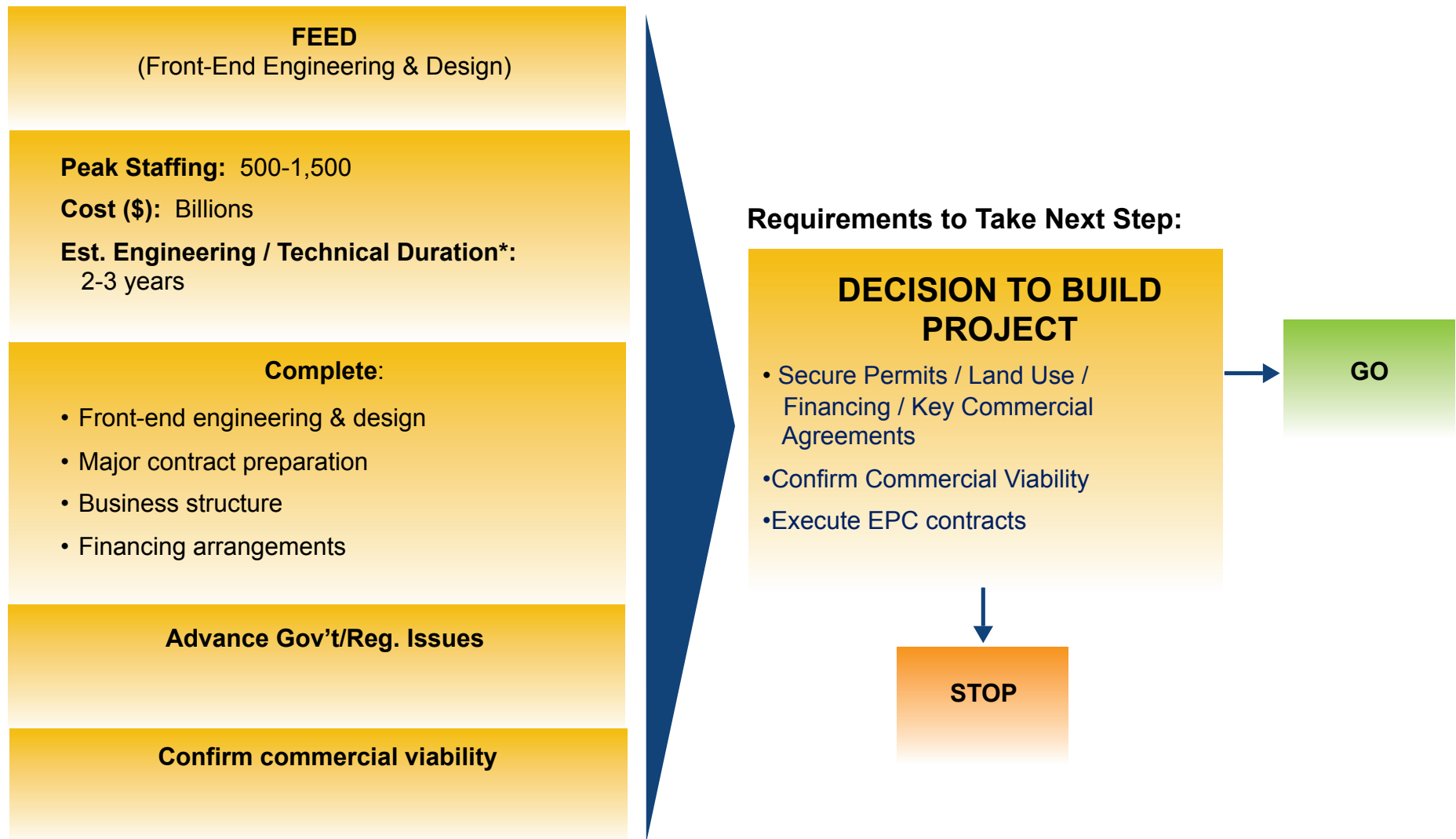


Anticipated Work Plans / Key Decision Points

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LNG Project Operations

Execution

(Engineering, Procurement & Construction)

Peak Staffing: 9,000-15,000

Cost (\$): Tens of Billions

Est. Engineering / Technical Duration*: 5-6 years

Execute

- Final engineering
- Financing
- Procurement
- Fabricate/Logistics/Construct
- Prepare for Operations

Complete Gov't/Reg. Issues

- Secure remaining construction/ operating permits
- Stakeholder engagement

Implement business structure & agreements

Commission/start-up

What's next for the Alaska LNG Project?

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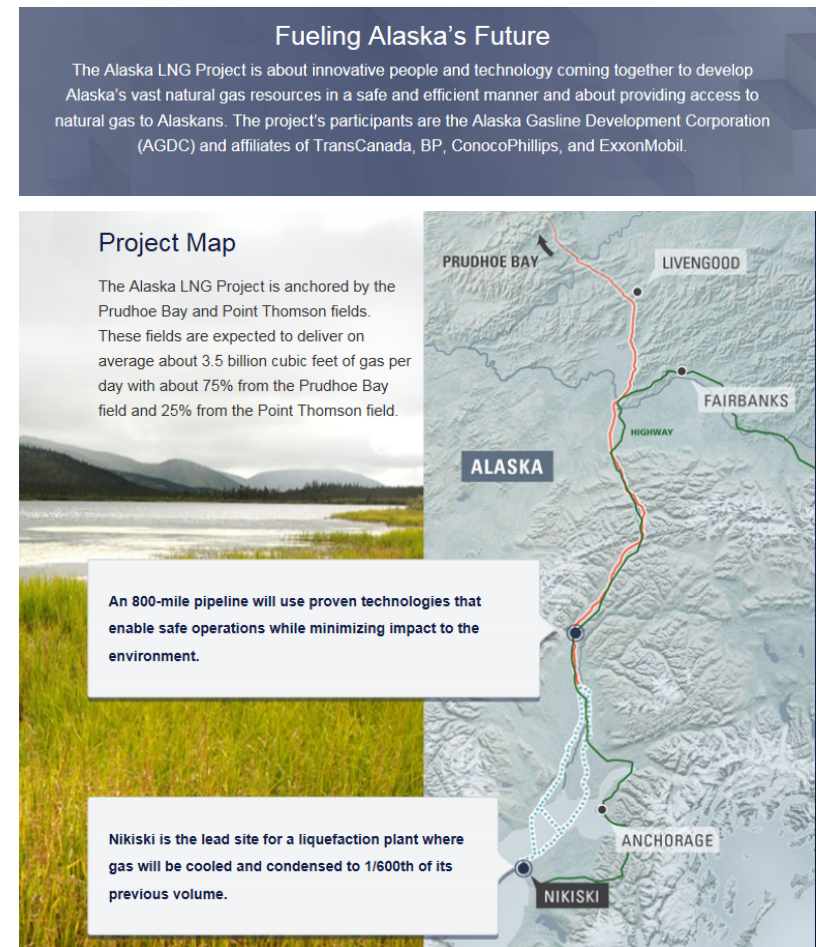
Alaska LNG Web Site
"ak-lng.com"

Opportunities to engage

- Logistics & labor studies underway
- Business information sessions
- Attend community meetings, talk with FERC

Target 2016 decision point

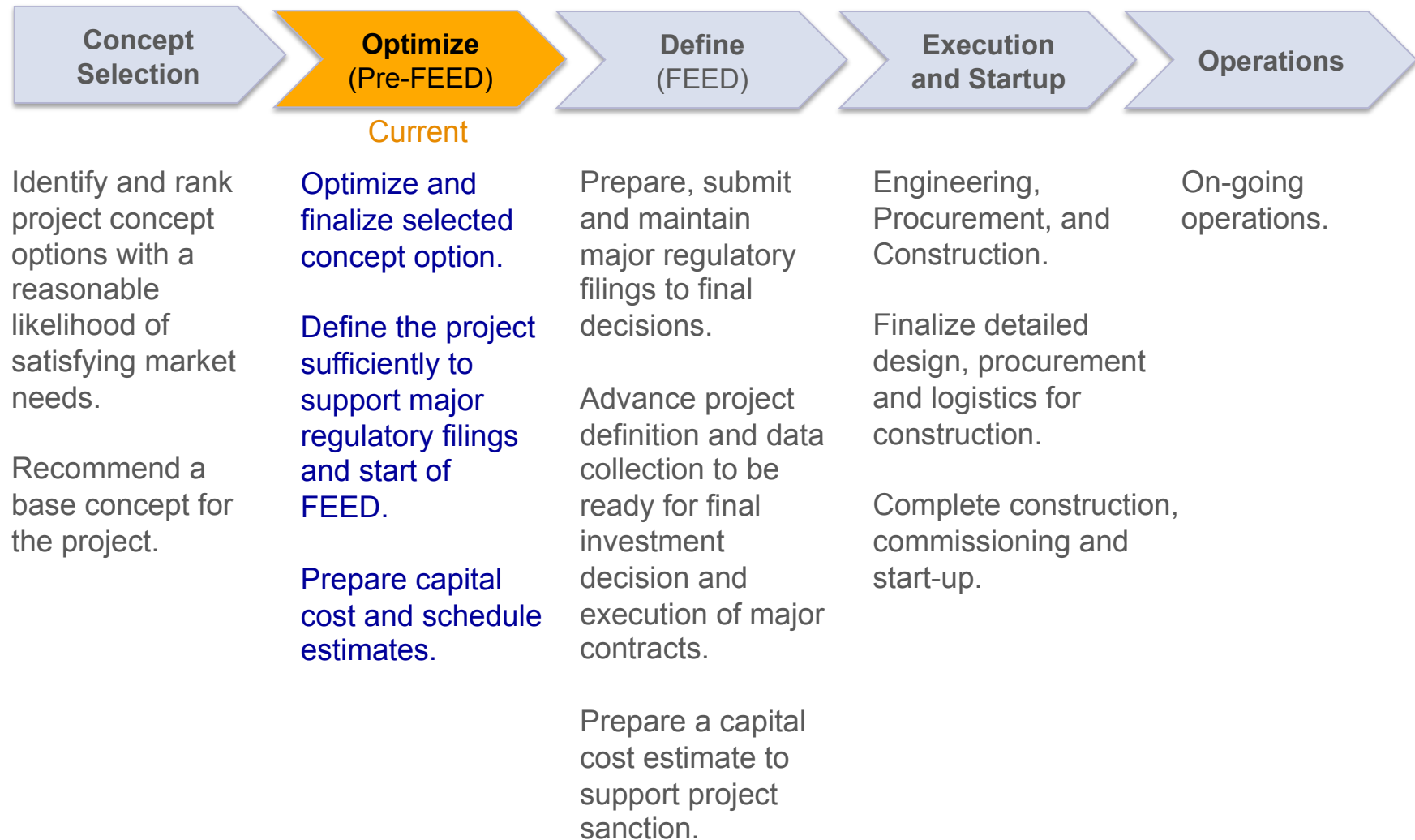
- Pre-FEED optimizes design, confirms site/route
- Confirm cost, schedule
- Work with State to identify offtakes
- Complete key commercial agreements
- Durable, predictable fiscal terms
- Continue building alignment between all parties



Contracting Overview

Typical Major Project Development Phases

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Project Procurement Overview

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- Would provide significant opportunity for Alaska businesses
- Multi-faceted, complex contracting requirements over 10-year period
- Currently in preliminary engineering phase to establish strategic procurement approach
- Committed to providing fair opportunities for local contracting and employment
- Alaska LNG Project encourages ongoing communication and information exchange.
 - Alaska LNG Project: communicate available opportunities, provide guidance regarding expectations and standards
 - Business community: communicate interests, capabilities, availability



Why use Alaska businesses?

- Alaska LNG Project participants are committed to supporting the communities where we do business
- Alaska expertise and experience working in remote environments and harsh weather conditions
- Many have proven to be technically capable and competitive
- Equipment and personnel already located in Alaska can provide cost benefits
- Familiarity with State regulations, requirements and processes
- Familiarity with Alaska socio-economic landscape



Use of Alaska Businesses

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Prime Contractors will be required to develop a plan to provide opportunities to qualified Alaska businesses and to monitor and report its implementation.

- Many of the Project opportunities for Alaska businesses will be through subcontracts with the Prime Contractors
- Prime Contractors' use of Alaska expertise will be commensurate with scope of work and the project stage
- The Prime Contractors will be required to address workforce and supplier development as well as subcontracting requirements for use of Alaska Businesses
- The Prime Contractors are provided with regular updates of all businesses registered on the Alaska LNG Project through www.ak-lng.com



What is a Prime Contractor?

Key contractors will be responsible for developing large, complex pieces of the Alaska LNG Project. These “prime” contractors will subcontract work to other businesses which will involve qualifying bidders, requesting and evaluating bids and awarding contracts.

Basic Subcontracting Guidelines

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Safety First

- Safety is more than just another element of our business – it is a **base requirement**.
- Safety is a **core value** and should be considered in every decision that we make.
- We are committed in our Safety belief that **every accident is preventable**.
- We will adhere to **high standards for safe operations** and the protection of employees, contractors, customers and the people in the communities in which we do business.
- Anything less than **flawless Safety performance** by our Project Team, service providers, contractors and subcontractors is not acceptable.



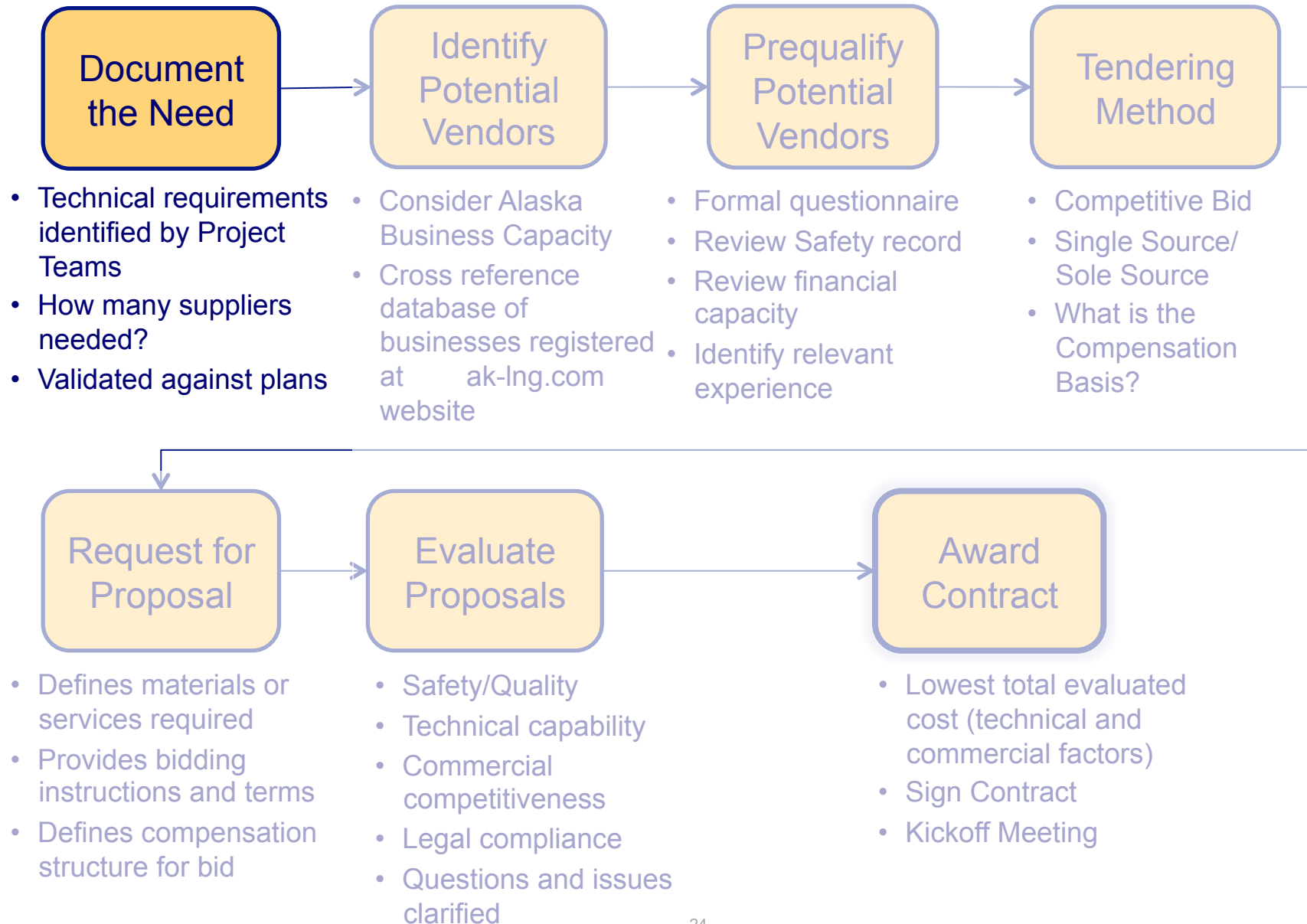
Additional Project eligibility criteria

- **Quality management / quality performance** – Businesses bidding for Alaska LNG work should have a stringent quality assurance program in place.
- Proposals that are **commercially competitive**
- **Schedule** – demonstrated history of completing work on-time.

Alaska LNG Project Prime Contractors may have additional prequalification requirements, depending on scope of work.

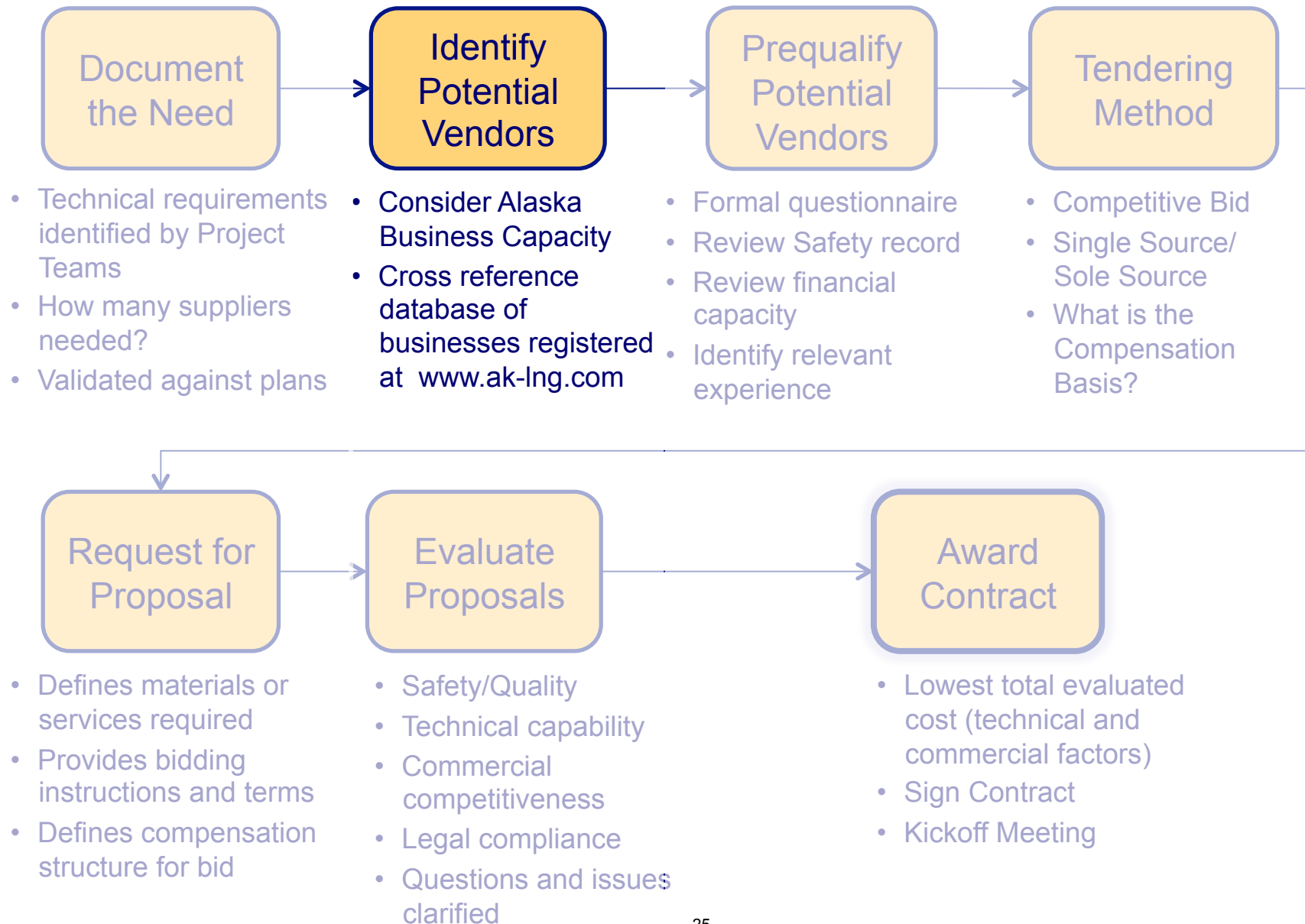
General Project Acquisition Process

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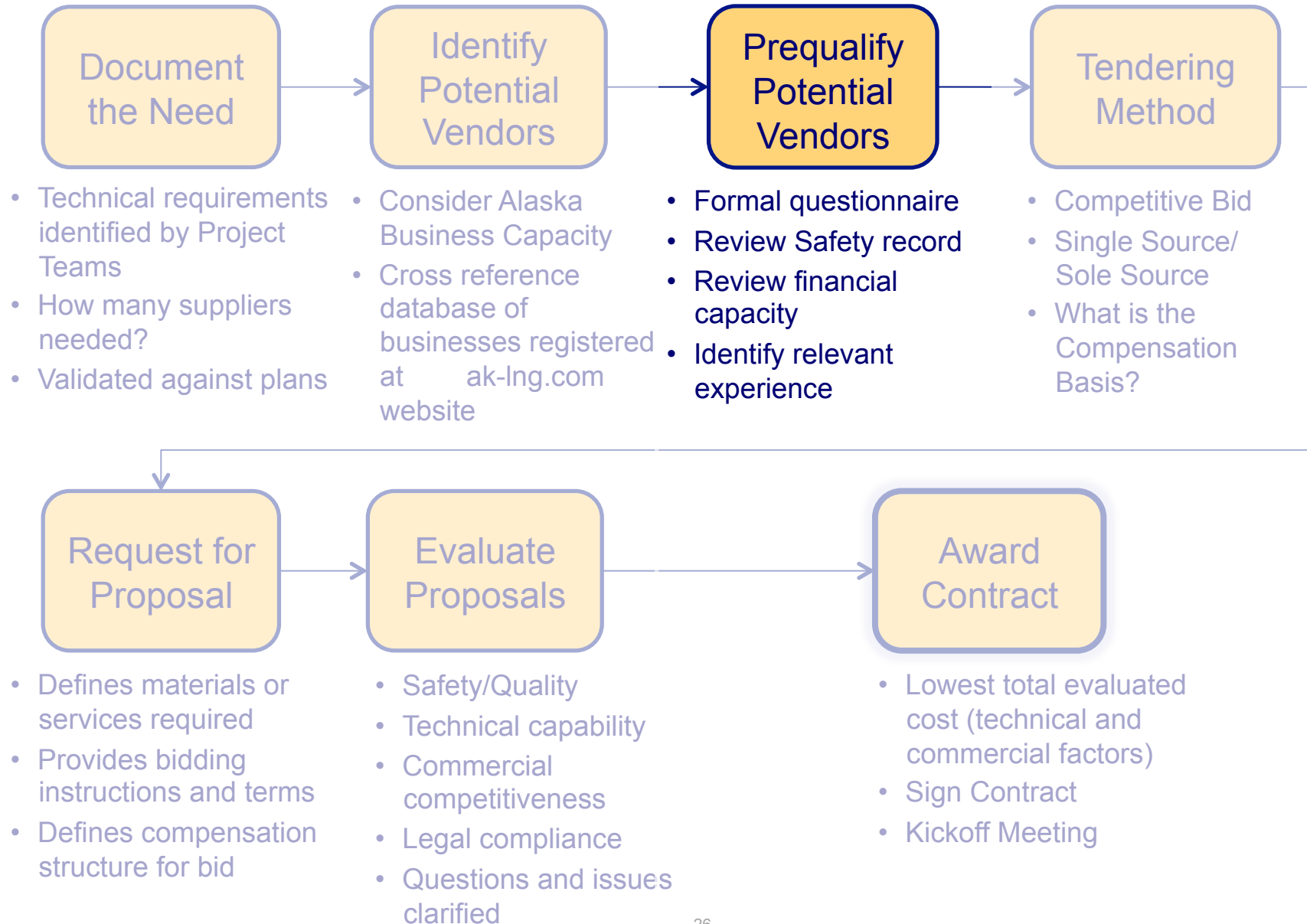
General Project Acquisition Process

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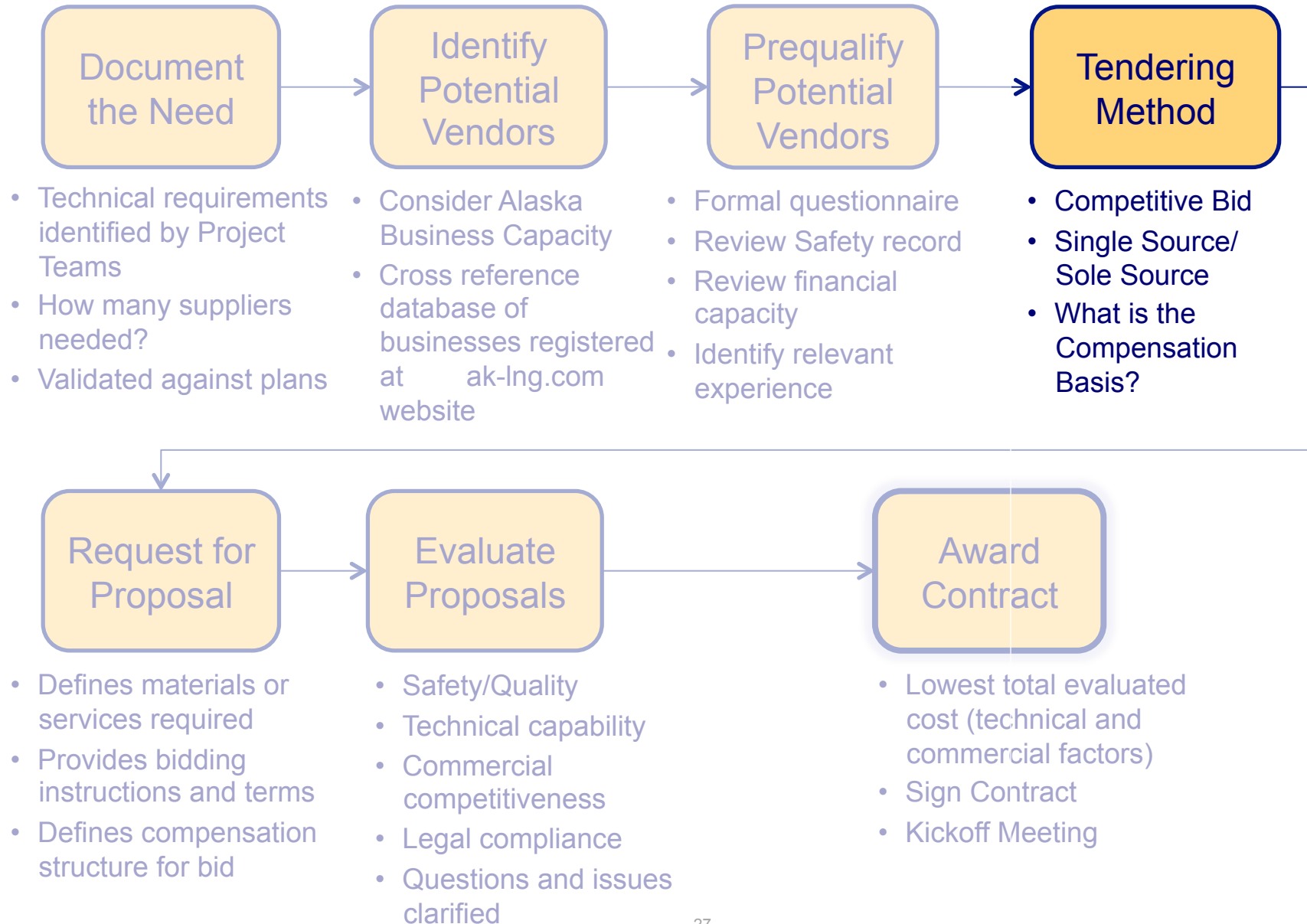
General Project Acquisition Process

Alaska LNG



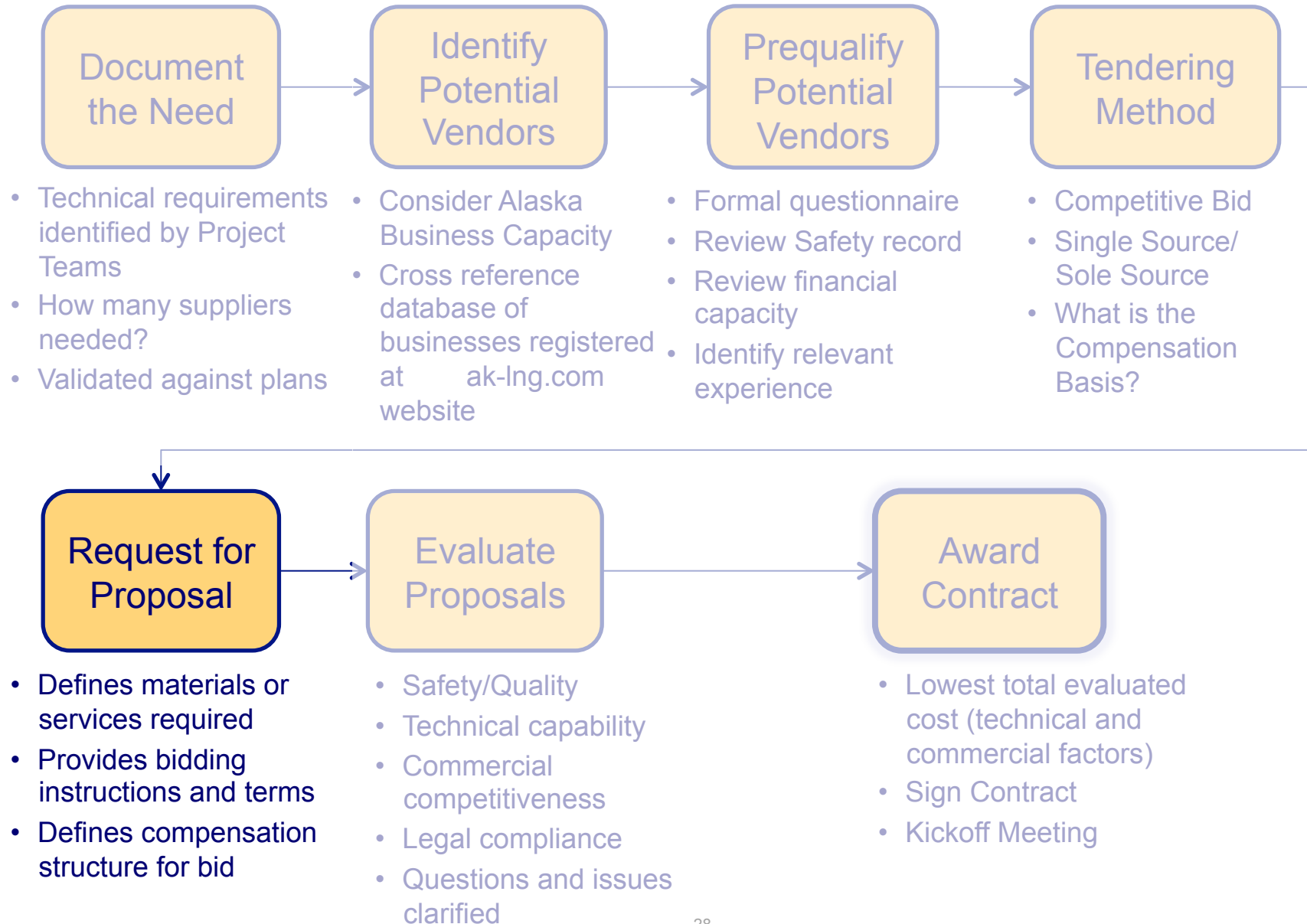
General Project Acquisition Process

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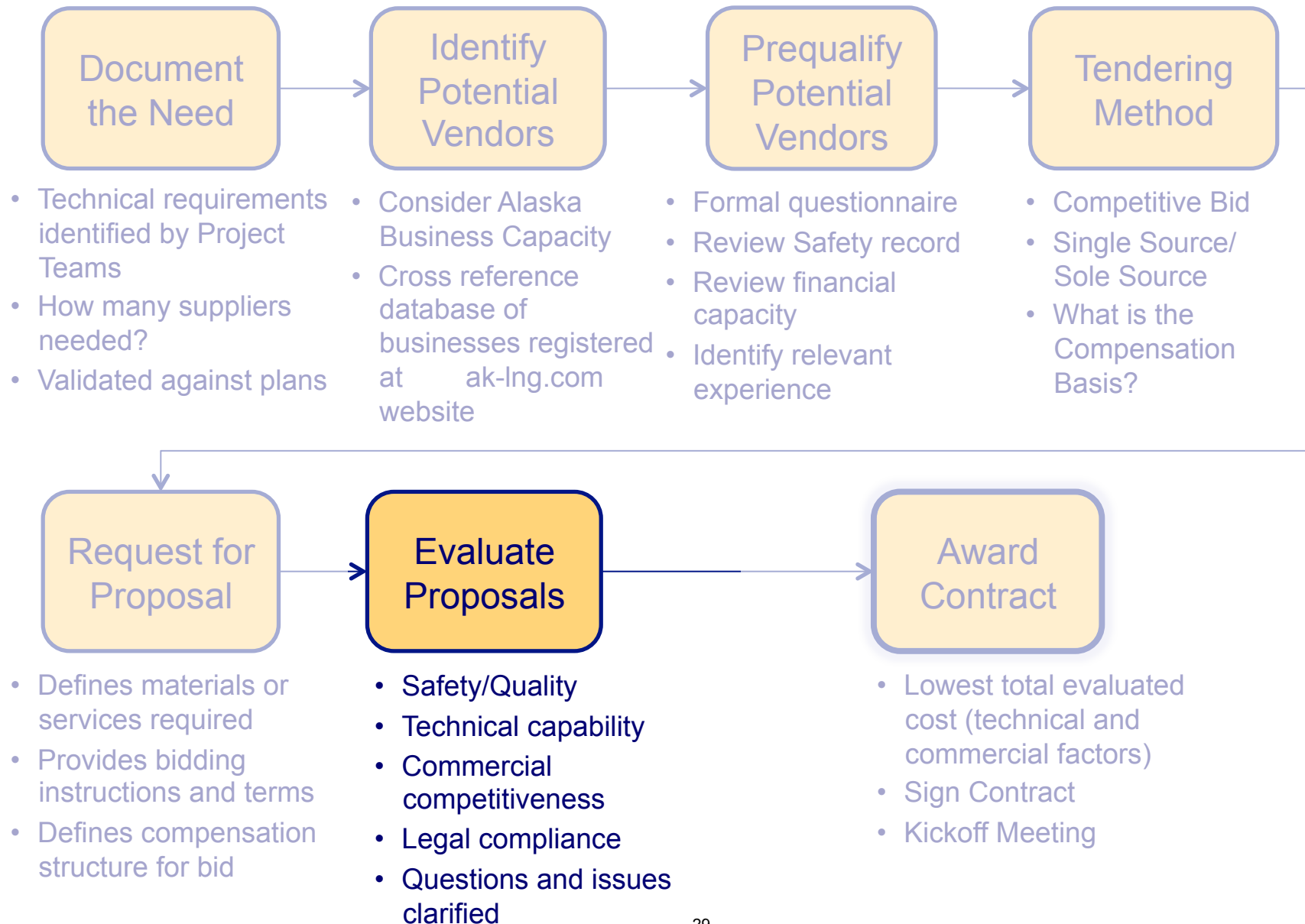
General Project Acquisition Process

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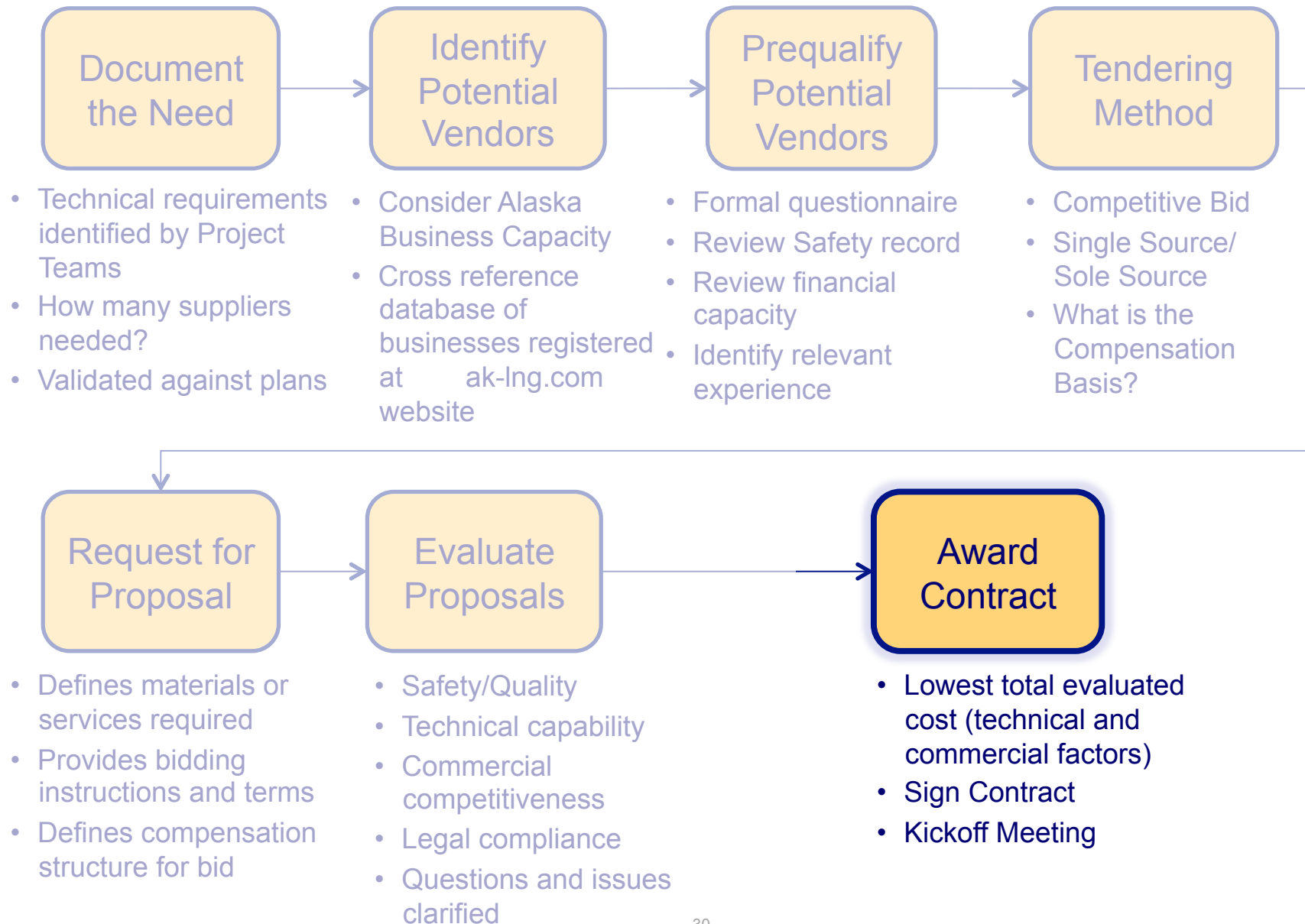
General Project Acquisition Process

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General Project Acquisition Process

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Potential Opportunities for Local Businesses

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- **Bulk Materials**
 - Gravel
 - Sand
 - Concrete
- **Camp Operation Support Services**
 - Catering
 - Water supply
 - Cleaning Services
 - Maintenance
 - Sewage/Garbage Disposal
 - Misc. Equipment
- **Earthwork**
- **Pre-engineered and Modular Buildings**
- **Building Assembly and Fit-out**
- **Construction Equipment**
- **Temporary Construction Facilities and Services**
- **Environmental Consultation**
- **Craft Labor**
- **Access Road Building/Maintenance**
- **Emergency Vehicles**
- **Fuels and Lubes**
- **Marine Vessel Charters**
- **Aviation Charter**
- **Bus Charter**
- **Hot Shot Delivery**
- **Freight inland**
- **Freight Marshalling**
- **Right of Way Clearing**
- **Snow and Ice Roads/bridges**
- **Medical, Safety and Security Services**
- **Snow Removal**
- **Office/Administrative/Clerical Services**
- **Right of Way Maintenance**
- **Weed, Rodent and Pest Control**
- **Engineering Services**
- **Communications & Public Relations**
- **Hotels/Restaurants**
- **Travel Services**

Better understand labor capacity within Alaska:

- Combination of desktop research & interface with key stakeholders:
 - Labor unions, state government officials, several Alaska Native regional & village corporations, and others
- Initial focus on construction-related craft labor:
 - pipefitters, welders, ironworkers, carpenters, scaffolders, sheet metal workers, boilermakers, equipment operators, truck drivers, instrument technicians, insulators, electricians, laborers and more
- In the field over coming months
- Study results will help assess gaps between supply and demand

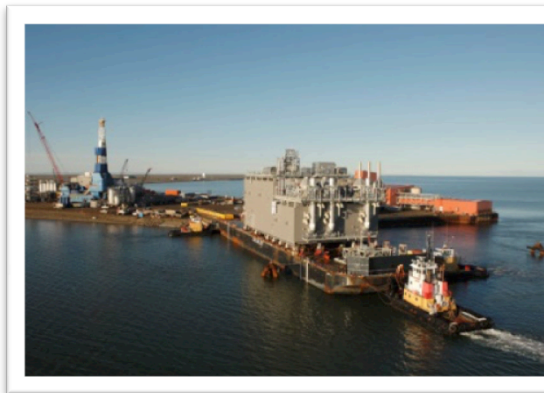


Logistics Studies 2015

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Project infrastructure logistics studies underway:

- Materials logistics capabilities study (table top & inquiry)
- Aviation operators & support
- Logistics infrastructure & routes
- Key supply ports
- People logistics management
- Work to obtain a better understand of:
 - Trucking, barging, rail, air, etc.
 - Storage areas, laydown yards
 - Camp management, personnel travel, catering, housekeeping, etc.
 - Ice road construction, maintenance & support
 - Fuel support



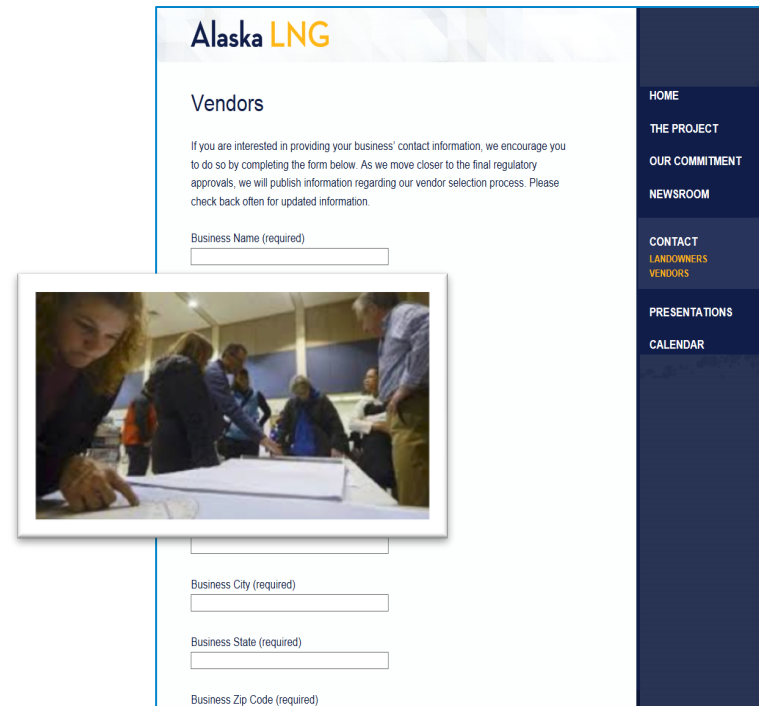
Alaska LNG Project Contracting Planning

- Complete Pre-FEED studies and other information gathering
- Finalize Contracting Strategy and Plans for FEED and Execution phases of the Project
- Develop and conduct Bids for FEED prime contracts
- Award FEED prime contracts
- Complete identification of subcontracting needs and of opportunities for Alaska businesses
- Prime contractors bid/negotiate and award subcontracts



Continuing the Dialogue

- Pre-Screening Form
 - Safety record/statistics
 - Company profile
 - Primary offices/locations
 - Relevant experience
- Regular Project updates via electronic Alaska LNG Project newsletter
- Additional business information sessions and contracting workshops
 - Proposal development tips & expectations
 - Networking opportunities & engagement with Prime Contractors
- Continue to provide Alaska business contact information to Alaska LNG Prime Contractors
- Direct company communication



The screenshot displays the 'Alaska LNG Vendors' pre-screening form. The header includes the 'Alaska LNG' logo and the title 'Vendors'. A paragraph explains the purpose of the form: 'If you are interested in providing your business' contact information, we encourage you to do so by completing the form below. As we move closer to the final regulatory approvals, we will publish information regarding our vendor selection process. Please check back often for updated information.' Below this text are four required input fields: 'Business Name (required)', 'Business City (required)', 'Business State (required)', and 'Business Zip Code (required)'. A small inset image shows a group of people in a meeting, looking at documents. On the right side of the form, there is a vertical navigation menu with links: HOME, THE PROJECT, OUR COMMITMENT, NEWSROOM, CONTACT, LANDOWNERS, VENDORS (highlighted in orange), PRESENTATIONS, and CALENDAR.

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Questions