

October 27, 2015

JETRO

Alberta Business Seminar

**Energy Development - Now is a great
time for Petrochemical Opportunities:
Six Keys to Successful Navigation of the
Regulatory Framework**





Six Keys to Successful Navigation of the Regulatory Framework

Objectives of Presentation:

1. To share what the various regulatory processes are
2. To highlight activities that are potential challenges and bottlenecks
3. To highlight opportunities for success



Six Keys to Successful Navigation of the Regulatory Framework

Energy Development – Now is a great time for Petrochemical Opportunities

- Plentiful supply of Natural Gas Liquids—great time for an olefin economy
- Record low prices on feed-stocks
- Designated Industrial Development Areas in Alberta: Alberta's Industrial Heartland including the City of Edmonton, Strathcona County, Sturgeon County, Lamont County
- Transportation network—pipelines, rail
- Alberta Government very supportive of value-add industry



Six Keys to Successful Navigation of the Regulatory Framework

Six Keys:

1. Start early!
2. Recognize three levels of government: Federal, Alberta, Municipal
3. Optimize siting
4. Public Consultation
5. Water and Power
6. Environmental Studies



Six Keys to Successful Navigation of the Regulatory Framework

1. Start early!

- A. Key to success is completing studies and application in a timely manner
- B. Work backwards from in-service date
- C. Acknowledge importance of completing environmental studies such as air modeling and noise impact assessments



Six Keys to Successful Navigation of the Regulatory Framework

1. Start early!

- A. Key to success is completing studies and application in a timely manner
- B. Work backwards from in-service date
- C. Acknowledge importance of completing environmental studies such as air modeling and noise impact assessments
- D. Answer all of the questions: traffic, neighbours, wastewater, wildlife, migratory birds, First Nations



Six Keys to Successful Navigation of the Regulatory Framework

2. Three levels of Government:

- A. Federal: *Canadian Environmental Assessment Act*
- B. Provincial: *Alberta Environmental Protection and Enhancement Act, Alberta Water Act, Alberta Utilities Commission*
- C. Municipal: local counties with development requirements including risk assessments, traffic studies, and building permits



Six Keys to Successful Navigation of the Regulatory Framework

2. Three levels of Government:

- Communicate with all three
- Ensure that all environmental studies are comprehensive and meet the needs of all three (a good consultant can be very helpful!)
- Answer questions of the community

3. Optimize Siting

- Locate a plant site that incorporates social, environmental and technical considerations
- Establish general area for site location
- Develop list of Technical, Environmental and Social indicators
- Develop suitability maps based on Technical, Environmental and Social scenarios
- Within the suitability map, select sites that show high suitability

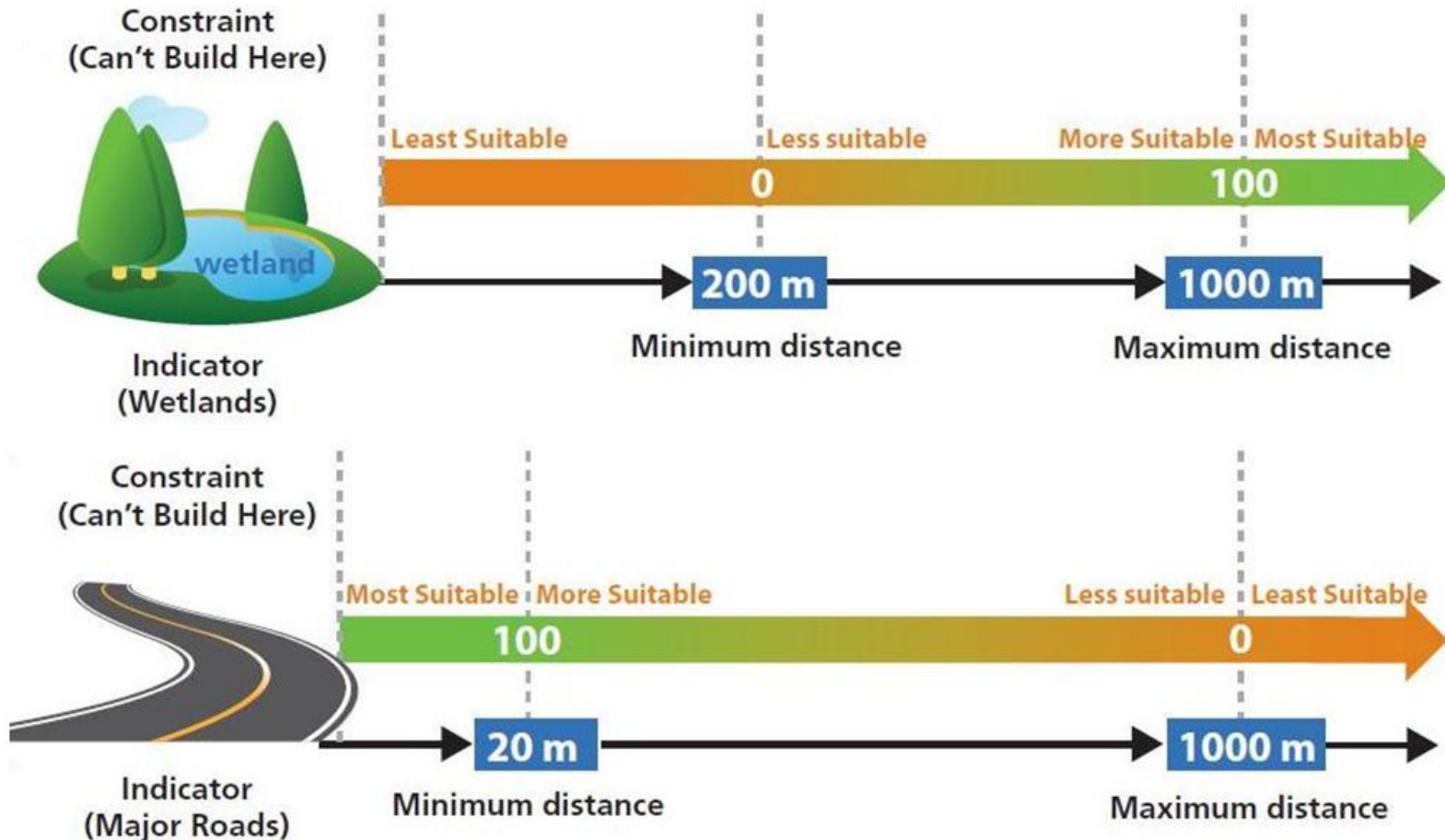
3. Optimize Siting

- Approach balances and evaluates:
 - Environmental priorities
 - Social needs
 - Technical plant-related demands



Six Keys to Successful Navigation of the Regulatory Framework

3. Optimize Siting



3. Optimize Siting

Environmental Indicators consider factors such as:

- Sensitivity of regional air sheds
- Proximity to environmentally sensitive areas such as trumpeter swan habitat and key biodiversity areas
- Location of wetlands and watercourses

3. Optimize Siting

Social Indicators consider factors such as:

- Proximity to residences, private lands, agricultural activity
- Possible visual effects
- Proximity to known archaeological or historical features
- Location of existing recreational areas, protected areas and parks

3. Optimize Siting

Technical Indicators were consider factors such as:

- Distance to labour source
- Proximity to existing infrastructure such as roads, bridges, transmission lines, rail and pipelines
- Presence of existing logged areas (cut blocks)
- Location of existing active and abandoned gas wells



Six Keys to Successful Navigation of the Regulatory Framework

4. Public Consultation

Critical to the success of any project

- Regulators
- Members of the general public
- First Nations
- Other industrial players
- Neighbours



Six Keys to Successful Navigation of the Regulatory Framework

4. Public Consultation

- A. Essentially tell the community what you are going to build
- B. Explain who you are and why you want to develop the project
- C. Explain safety
- D. Be prepared to discuss opportunities for jobs and contractors
- E. Website, open house, brochures (a good consultant can provide significant help!)



Six Keys to Successful Navigation of the Regulatory Framework

5. Water and Power

Critical infrastructure to any petrochemical development

A. Water can be a challenge or an opportunity

- purchase in a utility arrangement
- own and operate an intake
- share infrastructure—defray costs

B. Alberta's electricity sector is deregulated

- creates opportunities for cogeneration and selling to the grid
- power companies willing to contract power supply



Six Keys to Successful Navigation of the Regulatory Framework

6. Environmental Studies

A. Environmental Impact Assessment

--may or may not be necessary—depending on technology and location

B. Alberta Industrial Approval Application

--must be prepared for each development



Six Keys to Successful Navigation of the Regulatory Framework

6. Environmental Studies

Alberta--Project is subject to the *Alberta Environmental Protection and Enhancement Act (AEPEA)*:

- Environmental Impact Assessment (EIA)
 1. Mandatory EIA: an ethylene or ethylene derivative manufacturing plant
 2. Must submit a project summary (1-4) pages briefly describing the project
 3. Alberta Environment & Parks will decide whether to proceed with EIA or just Industrial Approval Application



Six Keys to Successful Navigation of the Regulatory Framework

6. Environmental Studies

Alberta: Industrial Approval Application

1. Applicant Identification
2. Plant or Facility Information
3. Project Background
4. Current State of the Environment
5. Design including impact on the Environment
6. Construction
7. Operation
8. Reclamation



Six Keys to Successful Navigation of the Regulatory Framework

6. Environmental Studies

Alberta: Industrial Approvals Application

- Critical Path is Air Modeling—requires client design input and computerized prediction modeling
- Air studies are a key input into an Environmental Impact Assessment
- Other Studies are seasonally-dependent



Six Keys to Successful Navigation of the Regulatory Framework

6. Environmental Studies

Alberta: *Water Act* Application

- License to withdraw water, e.g., from North Saskatchewan River, Red Deer River, or groundwater wells
- License to use water
- Approval to remove wetlands



Six Keys to Successful Navigation of the Regulatory Framework

6. Environmental Studies

Alberta: *Electricity--Cogeneration*

1. Industrial Systems Designation—application to the Alberta Utilities Commission

2. Cogeneration unit—application to the Alberta Utilities Commission

- Describe generation unit
- Demonstrate noise compliance
- Mandatory public consultation



Six Keys to Successful Navigation of the Regulatory Framework

6. Environmental Studies

Municipal:

- Zoning
- Development Permit
- Building Permit



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Questions