

# Downstream Industrial Cluster Opportunities for the Northeast Quadrant

## Update

### Recommendation:

That the September 1, 2009, Planning and Development Department report 2009PGM002 be received for information.

### Report Summary

**This report provides a summary of the findings of the Demand Analysis, based on the conclusions of the Kline Report. The action plan is provided to move forward in a strategic direction to advance the development of the petrochemical cluster and a Research and Technology Science Park/Centre of Excellence in NE Edmonton.**

### Report

- In October of 2008, FdP Associates were retained by the City of Edmonton, Edmonton Economic Development Corporation, Alberta Finance and Enterprise, and Alberta Energy, to prepare a demand analysis on the feasibility of developing a world class downstream industrial development within the proposed Northeast industrial area.
- In the preparation of the demand analysis the following objectives and attributes were considered:
  - The City of Edmonton is proposing to develop a multi-discipline industrial area in the Northeast quadrant incorporating research and technology, a value-added petrochemical cluster, business/commercial activities, mainstream industrial uses and logistics.
- With a concentration on petrochemical opportunities, the intended cluster will focus on maximizing value-added integration along the petrochemical value chain. This will be achieved through the production of downstream chemicals and materials from feedstocks from oil sand upgrading and refining.
- The incorporation of a downstream chemical cluster producing value-added chemical products based on the envisaged cluster has the following objectives:
  - To create a multi-dimensional eco-sensitive science park for innovative eco-industrial activities.
  - To attract major providers of equipment and services to the energy, petrochemical and chemical activities in the Capital Region.
  - To incorporate research and technology facilities and Centres of Excellence in the City.
  - To attract emerging industries that further diversify the value-add sector opportunity within the City.
- The demand analysis confirmed the objectives of the City of Edmonton (CoE) and reinforced a number of conclusions:
  - The City should pursue the placement of a research and technology component as a first step to fostering innovation.

Establishing a Research and Advanced Technology Science Park/Centre of Excellence would require no prior upstream or midstream development and could be developed independent of petrochemical economics. While continuing the NE initiatives identified herein, the potential exists to establish on immediate basis, a research and technology/incubation centre in the Edmonton Research Park or existing SE Industrial area.

- In addition, a world class chemical and manufacturing cluster could be commenced within the NE lands, utilizing existing feedstock availability in Alberta.
- In the medium to longer term, bitumen upgrading complexes are anticipated in the Heartland Region to further support the growth of midstream and downstream value-added operations.
- There is sufficient global market demand in petrochemical sectors to support long-term development of chemical and manufacturing activities.
- A global Logistics Service Provider should be pursued as a partner in developing and managing the logistics infrastructure.
- The potential for an eco-industrial development (EID) exists but will be limited to industrial and local community participation; however it will require the development of a clear concept EID plan together with government facilitation.
- In order to fully realize the EID opportunity, the CoE cluster component will need to link into the developments in the AIHA Midstream Cluster. The conclusions of the Kline Study and the Demand Analysis support and confirm the viability of developing downstream industry and manufacturing in NE Edmonton. Utilizing existing feedstocks, there is the potential for initial production to commence in 2015. On-going City and Provincial socio-economic analyses (employment projections, skill levels and projected taxation revenues) indicate that the annual revenues for each level of government will justify participation in the development objectives.
- A CoE Cluster specific investment attraction strategy study should form part of the future cluster implementation work.
- Alberta Finance & Enterprise and Alberta Energy invited the Planning and Development Department, the Edmonton Economic Development Corporation and Alberta Industrial Heartland Association to participate in developing a communications strategy plan to assist in the promotion of the chemical cluster initiative. The intent of this plan is to have preliminary marketing, branding and communications tools by the end of September 2009 for use by the participants as common regional messaging and branding.
- Changing the traditional regional mindset will be fundamental to developing a value-added industry.
- In addition to these conclusions, the demand analysis also suggests:
  - Creation of a Cluster Implementation Team.
  - Creation of an EID concept master-plan.

- Securing and zoning the land for the cluster.
- Provision of basic public infrastructure (roadways, energy connections – electricity and gas).
- Development of an EID focused business model.
- Development of detailed land-use and infrastructure planning based on development phasing. Working cooperatively, a Regional Master Site Plan can integrate upstream, mid-stream, and downstream industries. This would include pipeline corridor requirements, logistics infrastructure requirements, phased servicing requirements, eco-industrial guidelines, land use and zoning.
- Identification of key anchor investors/players and pursuing participation commitments.
- Establishing a governance framework (led by the Provincial Government) to implement the chemical cluster and to coordinate funding of infrastructure and phased infrastructure development. Significant progress has been achieved in unifying regional cooperation within the Greater Edmonton Area. The creation of a Cluster Development Agency will help to focus efforts in attracting industries to Edmonton and the region and encourage speaking with one voice. In addition, the Cluster Development Agency will coordinate investment strategies, planning, marketing, communications and infrastructure investment.
- Coordination with a strategic partner having global experience in design development and logistics management of EID's. These discussions will ensure that the Northeast Eco-Industrial Development will be successful and competitive with other world class eco-industrial developments.
- The Action Plan Proposal (Attachment 1) details the actions which Administration is pursuing to achieving City Council's objectives to diversify Edmonton's economy, ensure financial stability and contribute to the growth of the regional economy.

### **Focus Area**

The conclusions contained in the report provide the next steps in achieving City Council's Strategic Plan for 2009 – 2011, and are consistent with the 10 year strategic goal to "Diversify Edmonton's Economy".

### **Attachments**

1. Action Plan Proposal

### **Background Information Available on Request**

1. The City of Edmonton World Class Downstream Industrial Development -Downstream Industrial Cluster Opportunities for the Northeast Quadrant Phase 1: Demand Analysis

### **Others Reviewing this Report**

J. Tustian, Deputy City Manager

## Action Plan Proposal

1. Administration will continue participation with the Province and AIHA in phased land use planning and infrastructure requirements to support the proposed eco-industrial petrochemical cluster development.
2. Administration will commence the creation of a master plan concept for the petrochemical component following approval of the Area Structure Plan.
3. Administration will continue to pursue approval of the NE Edmonton Area Structure Plan, prepare specialized zoning requirements applicable to broad industrial-related uses within the ASP, complete a risk management assessment for the petrochemical cluster, and prepare eco-industrial development (EID) guideline principles for implementation with development approvals.
4. Administration will work with EEDC and AIHA in the preparation of a draft Memorandum of Agreement to formalize the common mandate for the chemical cluster initiative. After circulation and internal reviews, approval of the document by the regional stakeholders involved will be sought.
5. One significant element will be to draft a Governance Framework for the creation of a Cluster Development Agency to coordinate staged implementation of the eco-industrial petrochemical cluster. This could be facilitated through the creation of a cluster implementation team and the appointment of a cluster management organization.
6. Administration will continue participation in the mid-stream site requirements study with the Province and AIHA, and provide input to the mid-stream/down-stream utility corridor requirements, infrastructure staging (public infrastructure and logistics), and funding options.
7. Administration will participate with the Province, EEDC and AIHA in the creation of an aggressive marketing and communications strategy to provide a coordinated approach to investors and industries, including Business Model format for use by prospective participants. This will include:
  - a. identification of key anchor investors and participants;
  - b. creation of a united investor strategy with AIHA;
  - c. closely working with AIHA for placement of key investors;
8. Administration and EEDC, together with AIHA, will pursue the early placement of a general research and advanced technology (R&T) component and incubation centre. This will include a feasibility assessment of R&T, marketing requirements, attraction strategy and financial modelling.
9. Administration will continue discussions with International logistics and energy park operators to determine the optimum infrastructure design and management model for Eco-Industrial development in NE Edmonton.