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PolyOlefins Planning Service

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PROSPECTUS July 2008

PolyOlefins Planning Service 2008 Program (March 2008 – February 2009)

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SECTION 1.



Introduction to the Program

The Program

The ChemSystems PolyOlefins Planning Service (POPS) has provided the most detailed, accurate and insightful analysis, of the global polyethylene and polypropylene business since its first publication in the 1990s.

The service is regarded by many in the industry as the definitive analysis and forecast program for polyolefins. By means of an annual Executive Report, Quarterly Business Update reports, three special topic reports per year plus a tri-annual Technology analysis, the program delivers a comprehensive commercial analysis of the industry.

The analysis in the program is developed by Nexant's polyolefins consultants based on detailed research and field work for all global regions. The forecasts are developed using Nexant's ChemSystems Simulator, the state-of-the-art simulation model of the global petrochemical industry, ensuring that the forecasts are compatible with and integrated to forecasts of olefins and of competing commodity plastics. Subscriptions to the ChemSystems Simulator are also available allowing subscribers to develop private scenarios and forecasts.

Key Industry Issues

The polyolefins industry is currently experiencing a period of immense challenge. The prices of feedstocks, namely ethylene and propylene, have been driven to hugely elevated levels as world crude oil prices have climbed dramatically. The industry has consequently been faced with the need to continually strive for price rises which has been successful to the extent that polyolefin prices are at record levels, yet margins for non-integrated producers have deteriorated significantly. This has been against a backdrop of great uncertainty in housing and financial markets in key polyolefin demand regions, namely the U.S. and Western Europe. The current 2009 outlook is one of declining operating rates with a high level of new capacity coming on stream, with most of it located in the Middle East and China. There is some upside potential should demand remain healthy and new projects be delayed.

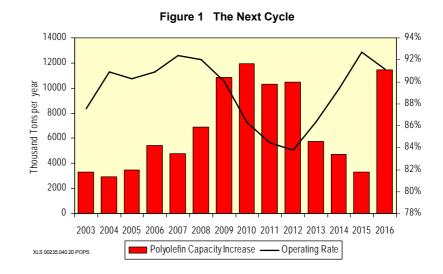
Thus in 2009 and beyond, the industry is anticipated to enter more difficult times (see Figure 1). While some delay to this capacity build may be anticipated in some countries, others have a very strong track record of timely delivery. Thus, the investment cycle, as often witnessed for the petrochemical industry, is likely to lead to very strong supply availability commencing in 2009. In the event of this supply increase occurring at the same time as a slowing in demand growth, industry margins could again decline to low levels.

However, better times will return as the industry comes out the other side of the next downturn. Throughout these periods, companies will be making important decisions on investments, marketing and product strategies. It is the purpose of the POPS program to serve as a valuable resource in these key decisions.



SECTION 1

Introduction of the Program



Below we outline several important issues for the polyolefins industry.

- Impact of high oil and gas prices on the olefins and polyolefins business: What will be the impact on demand growth and new capacity? For example, little to no new capacity in Japan, the U.S. and Western Europe.
- Middle East capacity build up: How much and how soon? The Middle East is currently the main investment focus for many companies. While some of these have been delayed for a variety of reasons, they are now coming to fruition and this will have a strong impact on world trade. Moreover, the number of countries building new plants is also increasing (Figure 2).

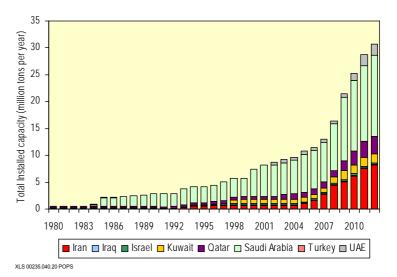


Figure 2 Steam Cracker Capacity Growth in the Middle East

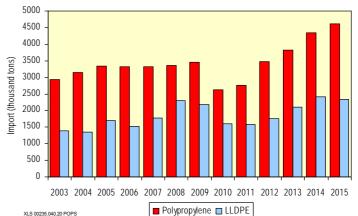
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Introduction of the Program

China: Demand growth for polyolefins has been very strong in recent years. The question remains as to what demand growth will look like in the coming years. There is also a strong indication for further significant increase in polyolefins capacity. While a significant proportion is likely to come from the two domestic producers, Sinopec and PetroChina, foreign joint ventures (existing and new) should also be prominent. A key issue is whether this additional capacity will lead to a declining import requirement or whether strong Chinese domestic demand growth will maintain imports at high levels. Our POPS reports will have the latest supply, demand and trade analysis.





- Other regional issues include:
 - Role and position of India: With its strong GDP growth, domestic demand has been increasing sharply. In response, domestic companies have announced the development of new capacity, both existing and new producers. With tariffs coming down, will India become a good export opportunity or will the new capacity be sufficient to meet domestic demand growth or even allow for some exports?
 - Future of Western Europe and the United States: With imports of finished goods and commodity polyolefin grades on the increase, the challenges facing United States and West European producers during the next downturn are anticipated to be very difficult ones. What is the outlook then for United States and West European producers during the next downturn and how will the combination of demand and supply issues impact on industry operating rates?
 - The outlook for Eastern Europe: This region has the benefit of extensive petrochemical feedstocks. With growing demand, the report will look at a view of capacity development in the region and the result on trade flows.
- Technology development: Most of the focus has been in the single site/metallocene area but there are other developments that will impact the business, including Basell's SPHERIZONE technology and Univation's gasphase single reactor bimodal HMW HDPE. The Executive report will provide a detailed outlook for single site/metallocene products, developed for all regions to determine the global demand outlook for these products.



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SECTION 2.



Value of the Program

The POPS program is used by, amongst others, Business Managers, Corporate and Business Planners, Industry Analysts, and Investors to understand the dynamics of this global business so that they may improve business performance and shareholder returns.

Our 2008 POPS Program:

We update our commercial database annually. This is based on fieldwork, published statistics and other publicly available information. The fieldwork is conducted in each region and consists of discussions with a variety of industry participants including polyolefin resin producers, fabricators, end users, trading companies, compounders, and trade associations. These contacts will be in commercial, technical, R&D and various other roles in order to get a detailed and concise set of data and understanding of the key issues.

Polyolefins Producers

Most of the global and regional polyolefins producers subscribe to the POPS program, relying on it to provide detailed market analysts and forecasting. In the complex world of polymer substitution, a reliable source of market forecasts is valuable and provides competitive advantage.

Polyolefin Consumers

Processors and component manufacturers need a sound understanding of their suppliers and the polyolefin industry. POPS provides the global benchmark for supply and market development.

Financial

The financial community has a need to understand polymer markets both through its role in project financing of polyolefin projects and in trading of polyolefin company bonds. The introduction of polymers futures on the London Metals Exchange has brought banks into the polymer business as traders of polyolefin paper.



SECTION 3.



Scope of the Program

The POPS program provides analysis of the technical and commercial polyethylene and polypropylene industries. The three polyethylenes: low density polyethylene (LDPE), linear low density polyethylene (LLDPE), and high density polyethylene (HDPE), and polypropylene (PP) are analysed with consumption for both conventional and metallocene grades. Production of LLDPE with co-monomers of butene, hexene and octene are presented. Consumption of polypropylene for homopolymer, random copolymer, impact copolymer and metallocene grades are presented.

Consumption of the four commodity polyolefins is analyzed by segmentation of the markets in each country into first level applications:

Film - food packaging, non-food packaging, retail bags, trash

to each polyolefin

- Fibre
 - Blow moulding liquid food bottles, non food bottles, industrial drums, gas tanks, and others as appropriate to each polyolefin

bags, shrink and film wrap, and others as appropriate

- Injection moulding lids, caps and closures, housewares, tubs & containers, crates/totes, pails, and others as appropriate to each polyolefin
- Extrusion coating flex packaging and laminates, paper board, and others as appropriate to each polyolefin
- Rotomoulding
- Other extrusion uses wire & cable, sheet, and others as appropriate to each polyolefin
- Other applications including adhesives, coatings, and others as appropriate to each polyolefin

Consumption drivers for each country and trading region are discussed. The industry is global and trade from low cost producing regions to regions of high consumption is highly influential on regional balances and prices. Consequently the program analyses the industry in:

- North America
- South America, Central America and the Caribbean
- Western Europe
- Central Europe
- Eastern Europe
- The Middle East
- Africa
- Asia

Developments in the industry are discussed quarterly including consumption, production, pricing and trade, new capacity developments and company news.



SECTION 4.



Detailed Description of the Program

Our 2008 POPS program has been structured to meet the information and analysis needs of our subscribers and to reflect the changing nature of the industry. All of our reports and databases will be available electronically and in printed form. Subscription to the program is corporate, allowing as many employees access to the data and reports as required. POPS 2008 will provide timely topical data and valuable insights with commercial and technical information to support your company's competitive positioning in the industry. This will consist of the following:

- An Annual Executive Report covering commercial aspects of the global polyolefins business (LLDPE, LDPE, HDPE, polypropylene and second generation technology products (metallocene, bimodal, etc.). This will include global, regional and country-by-country supply, demand, net trade, production, and operating rates.
- Quarterly Business Updates (QBUs) provide an executive level analysis of key developments in the polyolefins industry. The reports include data reflecting quarterly demand, trade and pricing for selected regions, an updated table of new capacity additions, and a listing and assessment of important industry events (mergers, acquisitions, outages, etc.). Special topics of interest and strategic importance to the polyolefins industry will also be analysed in each QBU (consolidation, restructuring, technology shifts, feedstock issues, etc.). These will be published in the month following the close of each quarter.

Our POPS 2008 program is aimed at providing in-depth coverage plus topical analysis and commentary information. Three **supplements** will be provided covering in-depth analysis of key issues and developments that will likely impact the polyolefins businesses. The three supplements included in our POPS 2008 program are:

- Bimodal HDPE: Commencing with a global overview of biomodal HDPE technology and applications, this supplement will primarily focus on the market positioning of these products in a Global Bimodal HDPE review. The report will look at key application areas, discuss the reasons for market uptake and provide insights into potential market developments for Bimodal HDPE products.
- Global LLDPE Comonomer Review: Butene, Hexene and Octene are key comonomers in the production of LLDPE. In our Global LLDPE Comonomer Study, we will study the growth of LLDPE butene, hexene, and octene grades on a global and regional basis and investigate the impact on comonomer supply and demand.
- Central and Eastern Europe Update: Continuing the theme of providing one supplement each year on an insightful look into one significant polyolefin producing and consuming region, this year we will look at Central and Eastern Europe. Feedstock availability, growing domestic markets as well as ready access to Western Europe, make these regions of growing significance. The report will analyse the key players in the regions, provide detailed supply demand and trade data and report on the major application developments in the region.



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SECTION 4.

Detailed Description of the Program

In addition to the print reports subscribers are provided with a CD containing the **Global Database**. Our database will include demand, supply (capacity by location and technology), production, net trade, and operating rate for each major country, while regional and global summaries will also be prepared. More specifically, our database will have a detailed demand analysis by processing category (film, injection molding, blow molding, pipe, fiber, etc.). It will also include estimates for both new (speculative) capacity additions by country/region that will be needed and the demand for second generation technology (single site/metallocene and non metallocene) for all of the polyolefins.

Support for the program is provided through our **Presentation/Consulting** service: Companies will be entitled to a half-day presentation of the program results along with a half day of discussion in smaller groups or workshops. Each presentation will be tailored to the individual company. Travel expenses are not included and will be invoiced at cost.



SECTION 5.



Costs and Subscription

The cost of the 2008 POPS Program is US\$29,000. All amounts are net of all local taxes, duties, and other applicable charges. Companies will be invoiced upon authorization payable within 30 days of receipt of the invoice. POPS 2008 can be ordered using the form provided with this prospectus or online at our web site: <u>www.chemsystems.com</u>.

Technology Report:

Our latest POPS Technology Report is being published in the summer of 2008. This report consists of an in-depth analysis of all key polyolefins technologies employed in the industry. The cost of the POPS Technology Review report is US\$15,000 and is priced separately from the main POPS 2008 program.



This Subscription Agreement (this "Agreement") is by and between the undersigned (the "Subscriber") and Nexant, Inc. ("Nexant"). Pursuant to this Agreement, Subscriber will purchase the ChemSystems PolyOlefins Planning Program (POPS) (the "Subscribed Report") for the 2008 subscription year (the "Subscription Year"), produced by Nexant in accordance with the following terms and conditions.

- 1. Subscribers to the Subscribed Report will receive three (3) copies in published form and access to the Subscribed Report via a password-protected area from www.chemsystems.com. All rights and limitations described above apply equally to hard copy and electronic versions of the reports. Nexant will provide up to eight hours in a single day of consulting services, at cost to be invoiced separately, provided by a senior study manager consisting of a half-day summary presentation of the Subscribed Report and a half-day of individual/small-group focused meetings organized by the Subscriber. Travel expenses are not included and will be invoiced at cost. All amounts invoiced are net of all local taxes, duties, and other applicable charges. Additional published copies of the Subscribed Report are available at US\$1,000 (one thousand U.S. dollars) each.
- 2. While the information supplied by Nexant to Subscriber in connection with the Subscribed Report will represent an original effort by Nexant, based on its own research, it is understood that portions of the reports will involve the collection of information available from third parties, both published and unpublished. Nexant does not believe that such information will contain any confidential technical information of third parties but cannot provide any assurance that any third party may, from time to time, claim a confidential obligation to such information.
- 3. The information disclosed in the Subscribed Report is for the sole and confidential use of Subscriber and any 51 percent or greater owned affiliates and subsidiaries of the Subscriber ("Affiliates") except those Affiliates which are engaged in the business of marketing research, management consulting, or publishing or are subsidiaries of such firms ("Permitted Users"). However, the Permitted Users may use such information in their own research and commercial activities, including loaning the data on a confidential basis to third parties for temporary and specific use for the sole benefit of the Subscriber. Breach of this covenant of use shall entitle Nexant to terminate this Agreement immediately with no obligation

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- 4. Subscriber further agrees that it will use reasonable efforts to keep the Subscribed Report for its sole use; however, this restriction shall not apply to information which is or becomes generally available to the public in a printed publication, which is already in the possession of subscriber, or which is received by Subscriber in good faith from a third party without an obligation of confidentiality.
- 5. Subscriber shall not republish any portion of the Subscribed Report except within its own organization or that of its 51 percent or greater owned affiliates. Subscriber further agrees to refrain from any general publication of the Subscribed Report, either directly or through its affiliates, so as to constitute passage of title into the public domain or otherwise jeopardize common law or statutory copyright in the Subscribed Report.
- 6. In consideration of the Subscribed Report, Client will be billed by and shall pay to Nexant a total subscription fee of US\$29,000.00 (twenty-nine thousand U.S. dollars), the Base Subscription Fee. If Client selects to also purchase the POPS Technology Report (2008), Client will be billed by and shall pay to Nexant an additional subscription fee of US\$15,000.00 (fifteen thousand U.S. dollars). Client shall be invoiced upon signature of this Agreement. Amounts are due upon receipt of invoice and payable within thirty (30) days. Late payments shall accrue interest at the rate of 1.5% per month. Fees quoted do not include any applicable sales tax, or use or value added tax, all of which are for the account of Client.
- 7. The obligations of paragraphs 3 and 4 shall terminate five (5) years from receipt of reports.
- 8. Unless specified otherwise, there are no warranties of any kind for reports and consulting services provided under this Agreement. Nexant's total liability under this Agreement is limited to the total amount paid to Nexant for the reports.
- 9. A person who is not a party to this Agreement shall have no right under this Agreement.
- 10. This Agreement will be governed by the laws of the State of New York, United States of America.
- 11. By signing below, Nexant and Subscriber agree that this is the complete agreement between them regarding the Subscribed Report. No change, modification, extension, termination or waiver of this Agreement, or any of the provision herein, shall be valid unless made in writing and signed by duly authorized representatives of the parties.



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| | | | |
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