

**NexantThinking™**  
**PROSPECTUS**

*Next Generation  
Biofeedstocks:  
Resources for  
Renewables*



 **Nexant®**

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**PROSPECTUS**

December 2013

**Next Generation  
Biofeedstocks:  
Resources for Renewables**

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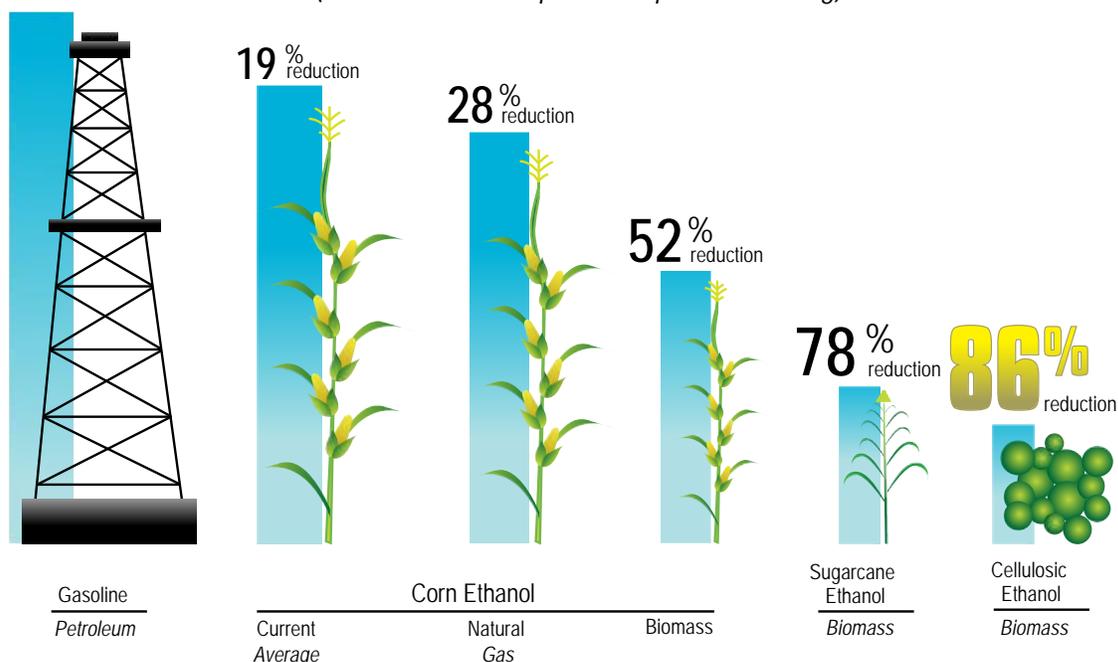
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## 1.1 OVERVIEW

Broad concerns about the future of the global economy and the environment have brought about a new goal for industries, consumers, and governments to strive towards in the twenty-first century: sustainability. Figure 1.1 shows GHG reductions possible through the use of biofeedstocks. First generation biofeedstocks for carbohydrates include corn, sugarcane, wheat, and sugar beets, while second generation feedstocks include all lignocellulosic biomass, such as on-purpose energy crops (e.g., biomass grasses and on-purpose wood), wood wastes, agricultural wastes, and refuse streams (e.g., MSW and food processing wastes). First generation oleaginous (oil containing) feedstocks include palm, soybean, and coconut, while next generation feedstocks include non-traditional oil crops, such as algae and jatropha.

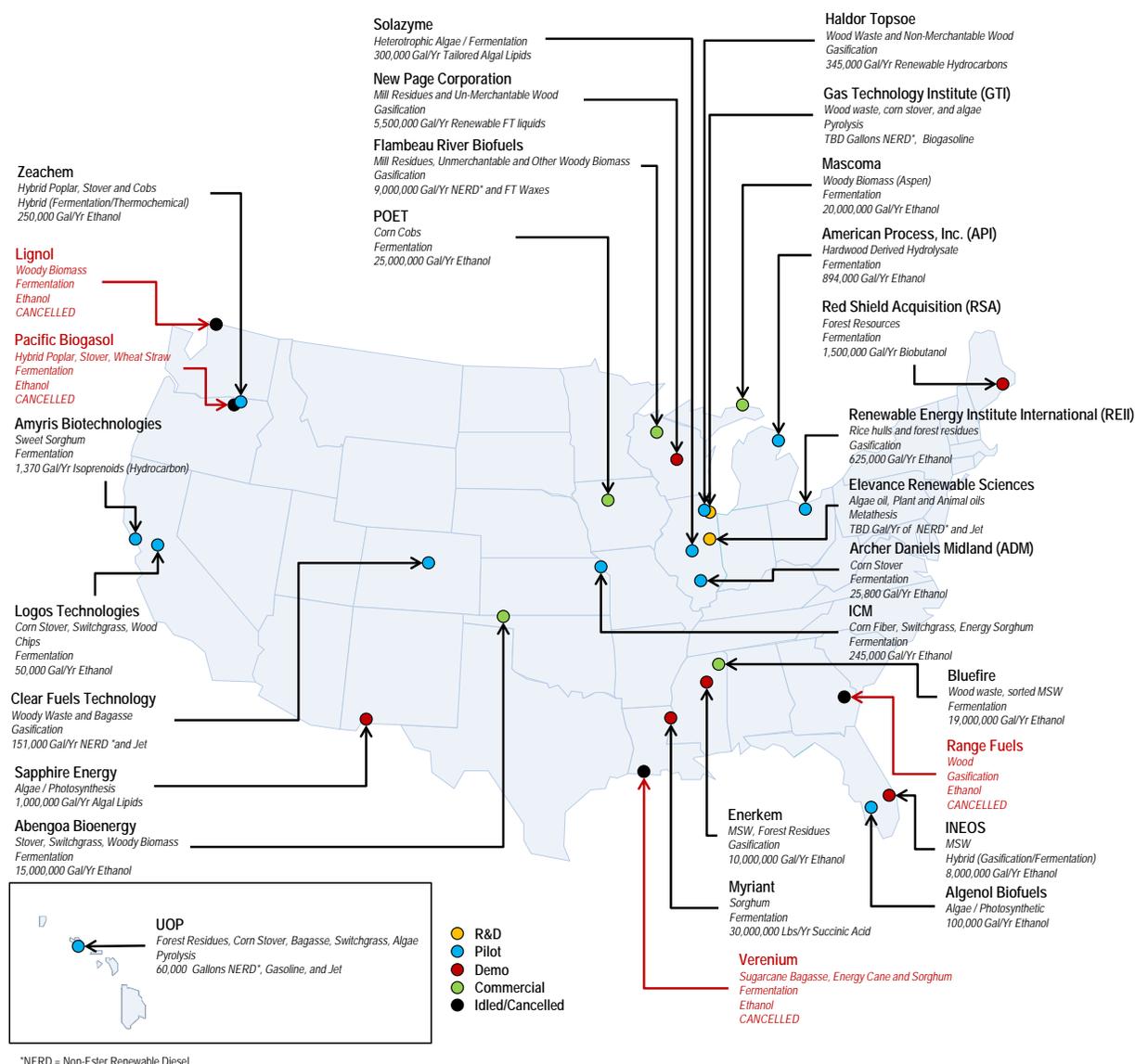
Figure 1.1 GHG Reductions Possible Through Feedstock Selection  
(Reductions are Dependent upon Processing)



Source: U.S. DOE EERE, [http://www1.eere.energy.gov/biomass/pdfs/biomass\\_basics.pdf](http://www1.eere.energy.gov/biomass/pdfs/biomass_basics.pdf)

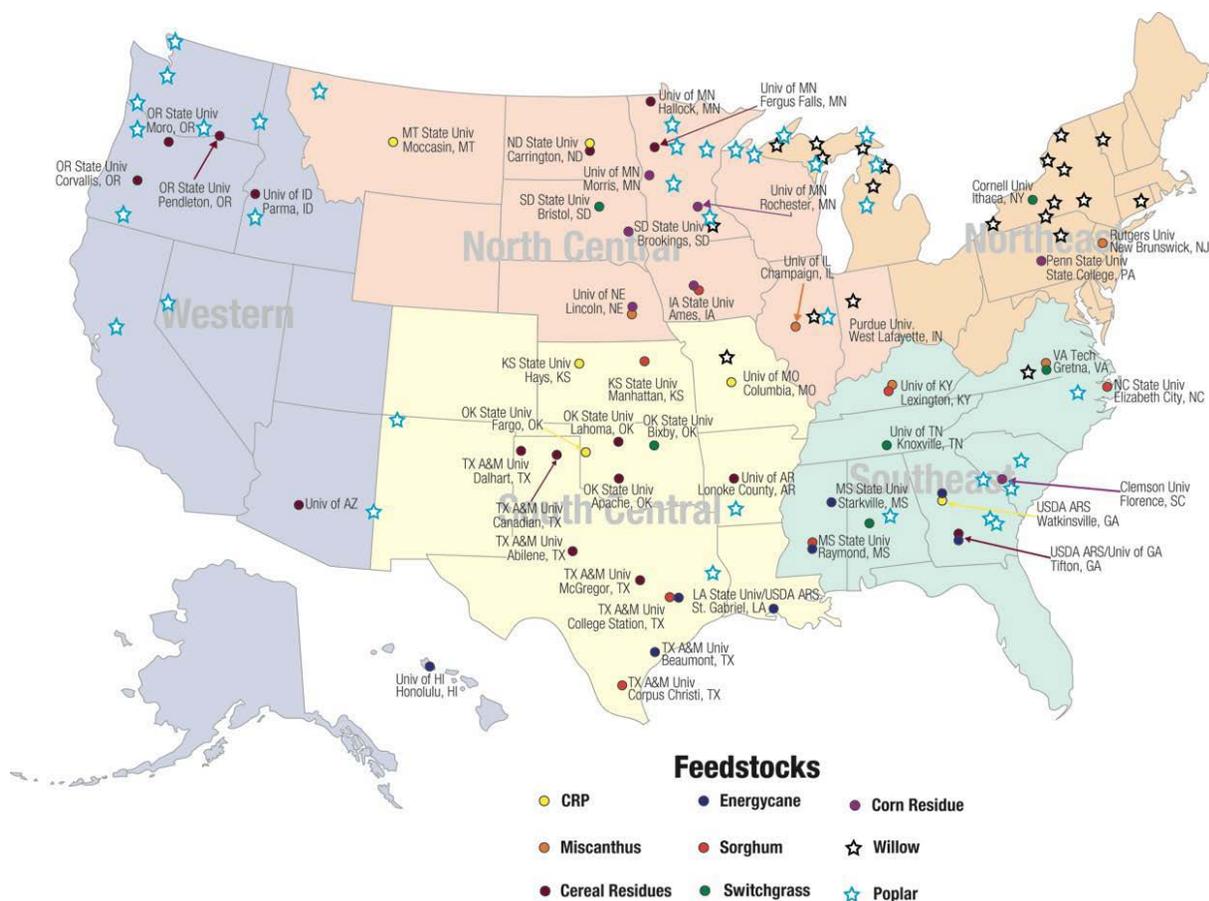
The energy and chemical industries are among those most heavily scrutinized for sustainability. As a result, biofeedstocks are expanding rapidly and their use is growing faster than conventional feedstocks. Figure 1.2 shows a map of next generation integrated biorefineries (IBRs) planned in the United States, with funding from the U.S. DOE including status, capacities, feedstocks, products, and technology types for the IBRs.

Figure 1.2 Next Generation IBRs



Serious attention is being given to development of next generation biofeedstocks such as on-purpose energy crops and agricultural residues. Figure 1.2 shows research proceeding in the United States as part of the Sun Grant/DOE Regional Biomass Feedstock Partnership.

Figure 1.3 Sun Grant/DOE Regional Biomass Feedstock Partnership 2010 Field Trial Locations



Note: CRP = Conservation Research Program

Source: <http://www.sungrant.org/Feedstock+Partnerships/Research+Plots/>

This study will answer the following questions:

- What are the costs of producing biofeedstocks?
- What biofeedstocks are available regionally?
- What biofeedstocks are abundant regionally?
- How do first generation biofeedstocks economics compare to emerging next generation feedstocks?
- What are the potential opportunities for bio-developers?

The study will provide subscribers with a solid grasp of the existing markets for biofeedstocks, their production costs, as well as emerging feedstocks. This includes first and second generation carbohydrate feedstocks (e.g., corn and biomass) as well as first and second generation

feedstocks for the production of and crushing of oil feedstocks (e.g., production of soybeans and algae along with crushing to produce oils). The issue of food versus fuels (and chemicals) will be discussed. This prospectus describes Nexant's biofeedstocks multi-client study, the scope of the proposed report, the methodology to be used, and Nexant's qualifications to perform such a study.

The study was completed in October 2013. The cost of the study is US\$22,000.00 (twenty-two thousand U.S. dollars).

## 2.1 OBJECTIVE

The study objective is to assess the technical, commercial and economic status of producing biofeedstocks. This includes conventional carbohydrate feedstocks, such as corn and sugarcane, as well as conventional oleaginous and next generation feedstocks. The study will also consider critical elements of the biofeedstocks supply chain as well as the petrochemicals value chain in developing its conclusions.

## 2.2 SCOPE

The study will address the costs of production of various biofeedstocks both conventional and emerging. The report coverage as well as the broader value chain is shown in Figure 2.1. The left side of the figure shows the biofeedstocks “upstream” value chain that will be covered in the proposed report, while the downstream value chain on the right side is shown as a reference.

This report will assess:

- Economics and supply estimates of conventional carbohydrate biofeedstocks (e.g., corn)
- Economics and supply estimates of conventional oleaginous biofeedstocks and related crushing to produce oil (e.g., soybean production and subsequent crushing to soybean oil)
- Economic and supply estimates of next generation biomass feedstocks, as applicable
- Economic and supply estimates of next generation oleaginous feedstocks, as applicable
- Discuss the food versus fuel debate and its potential impact on biofeedstocks

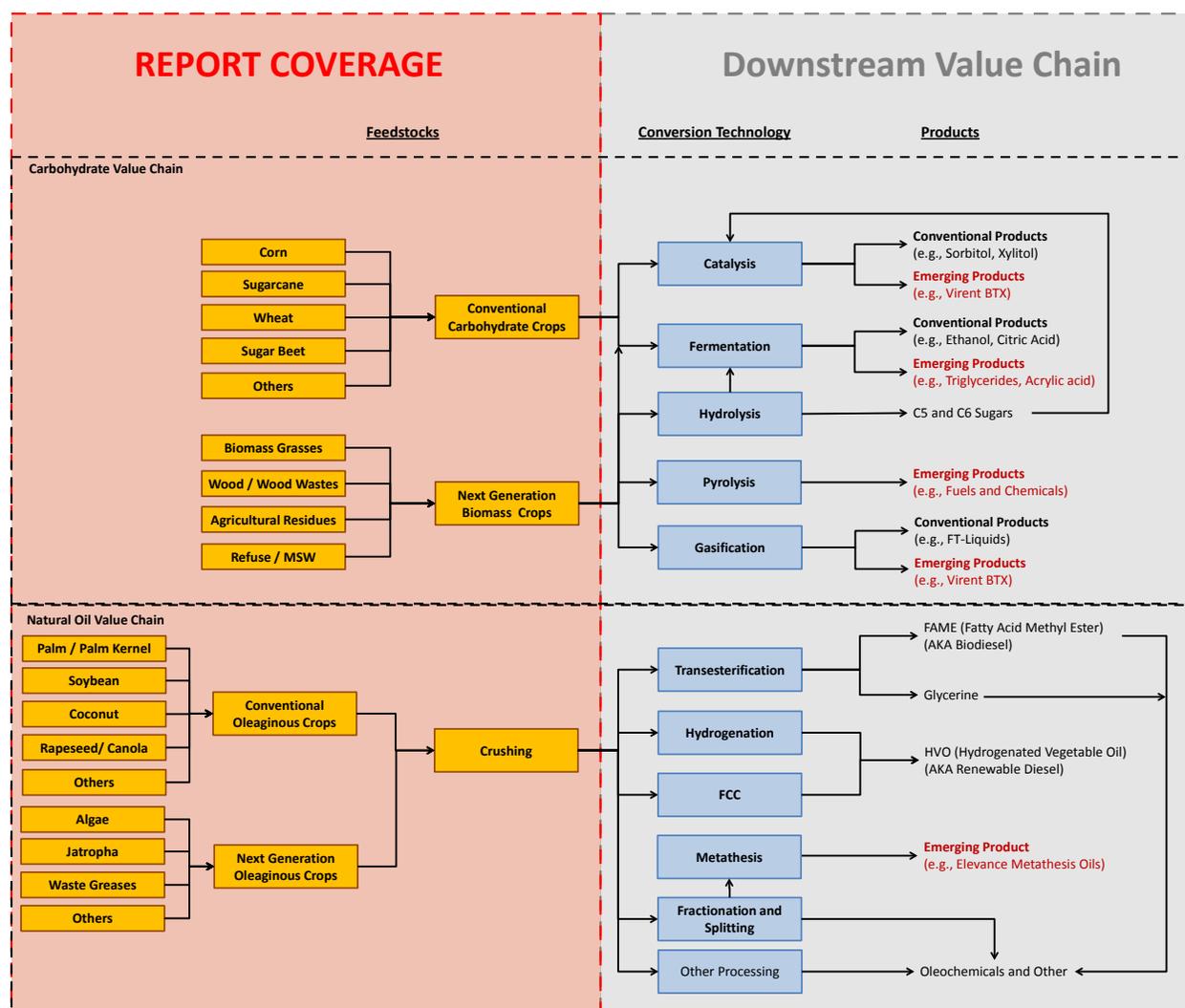
Within this overall scope, the following technical and market assessments will be made:

### 2.2.1 Technology Coverage

The report will analyze the following feedstock production technologies, as relevant:

- Production of conventional carbohydrate biofeedstocks
- Production of conventional oleaginous biofeedstocks
- Production of next generation biomass biofeedstocks
- Production of next generation oleaginous biofeedstocks
- Production of oils from oleaginous biofeedstocks (e.g., soybean oil from soybeans)

Figure 2.1 Report Coverage and Broader Value Chain



## 2.2.2 Supply Analysis

The study will provide high level multiregional coverage of the potential supply of each feedstock, for the purposes of identifying issues, emerging opportunities, and threats. Nexant will focus on the following producing regions, and will estimate supply for selected biofeedstocks, as regionally appropriate (i.e., sugarcane in Western Europe will not be profiled):

- North America
- South America
- Western Europe
- Asia

## 2.2.3 Economic Analysis

Economics for producing biofeedstocks will be developed for the fourth quarter of 2012, and will be presented using Nexant's Cost of Production (COP) modeling approach. In all cases, Nexant will profile costs associated with gathering feedstocks, processing them to a form/composition that is suitable to feed into the subsequent conversion technology, and costs associated with delivery to the plant gate. An example COP template (without values) for corn in the United States Midwest is presented in Table 2.1.

**Table 2.1 Illustrative Cost of Production**

COST OF PRODUCTION: CORN, 15% Moisture

Analysis Date 4Q 2012  
Location: US Midwest  
Land: 0 Acres  
Yield: 0 Bu/Acre  
Production: 0 Thousand Bushels  
Production: 0.00 Million Pounds  
Production: 0.00 Thousand Tons

Item	Units/Acre	Units	Price	\$/Acre	\$/Bushel	\$/Ton	\$Thousand/Year
<b>Operating costs:</b>							
Seed	25	1000 seeds	\$ -	\$ -	\$ -	\$ -	\$ -
Fertilizer N	179	lbs	\$ -	\$ -	\$ -	\$ -	\$ -
Fertilizer P	62	lbs	\$ -	\$ -	\$ -	\$ -	\$ -
Fertilizer K	50	lbs	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Seed and Fertilizer Total</b>			<b>\$ -</b>				
Ag-Chemicals - Lime	1	Cost per acre	\$ -	\$ -	\$ -	\$ -	\$ -
Ag-Chemicals - Herbicide	1	Cost per acre	\$ -	\$ -	\$ -	\$ -	\$ -
Ag-Chemicals - Insecticide	1	Cost per acre	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Ag-Chemicals Total</b>			<b>\$ -</b>				
<b>Total, Variable Costs</b>			<b>\$ -</b>				
Labor	3	Hours / Acre	\$ -	\$ -	\$ -	\$ -	\$ -
Preharvest Machinery*	1	Cost per acre	\$ -	\$ -	\$ -	\$ -	\$ -
Harvest Machinery -Combine	1	Cost per acre	\$ -	\$ -	\$ -	\$ -	\$ -
Harvest Machinery -Grain Cart	1	Cost per acre	\$ -	\$ -	\$ -	\$ -	\$ -
Harvest Machinery -Haul	1	Cost per acre	\$ -	\$ -	\$ -	\$ -	\$ -
Drying with LPG	1	Cost per acre	\$ -	\$ -	\$ -	\$ -	\$ -
Storage	1	Cost per acre	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Direct Fixed Costs</b>			<b>\$ -</b>				
<b>Allocated Fixed Costs:</b>							
Capital recovery	1	Cost per acre	\$ -	\$ -	\$ -	\$ -	\$ -
Land	1	Cost per acre	\$ -	\$ -	\$ -	\$ -	\$ -
Taxes and insurance	1	Cost per acre	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Allocated Fixed Costs</b>			<b>\$ -</b>				
<b>Cost of Production</b>			<b>\$ -</b>				
<b>Cost of Production--Bone Dry</b>			<b>\$ -</b>				

\* Chisel Plow, Tandem disk, apply N, field cultivate, plant, cultivate, and spray

### 2.2.3.1 *Regional Coverage*

Economics will be presented for the following regions where active development is occurring, and will include feedstocks which are regionally relevant (i.e., sugarcane in Western Europe economics will not be presented):

- North America
- South America
- Western Europe
- Asia

Economics may be presented for other regions if developments warrant coverage, at Nexant's discretion.

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The evaluations of conventional technology are based on Nexant's in-house information regarding process technology, augmented by contacts with licensors, engineering contractors and other experts in the industry. Analyses of emerging technologies are built up from reviews of patents, public domain information, and discussions with technology development companies and engineering contractors.

Nexant utilizes proprietary and commercial state-of-the-art software tools to develop the technology and economic estimates. These are well established engineering tools in the process chemical industry and are employed by major engineering contractors.

Commercial information and forecasts are developed from Nexant's extensive in-house databases, augmented with selected regional fieldwork. Market projections are developed based on Nexant's in-house modeling systems and experience.

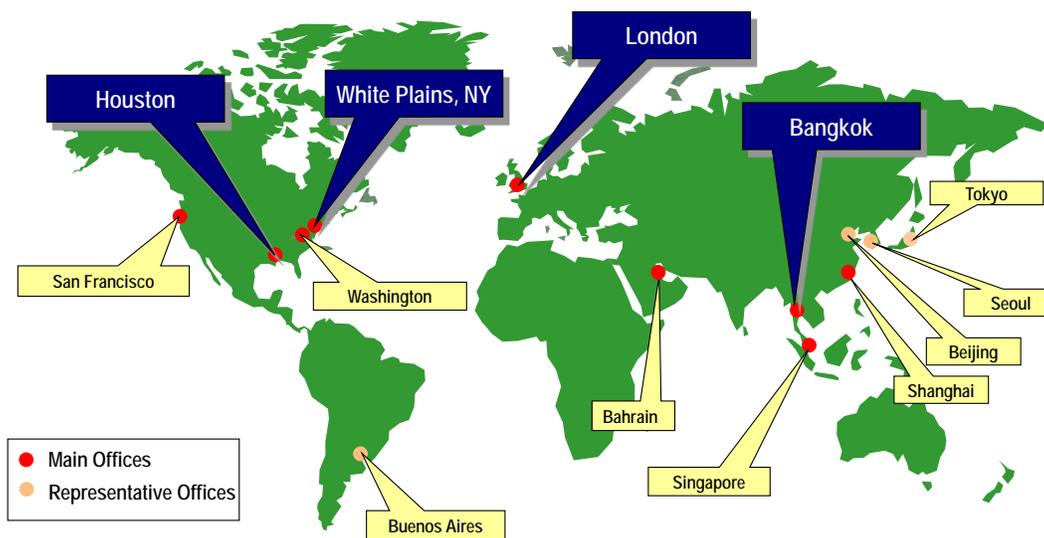
## 5.1 GENERAL

Nexant uses multidisciplinary project teams drawn from the ranks of our international staff of engineers, chemists, economists and financial professionals, and from other Nexant groups to respond to the requirements of each assignment. Most of the consulting staff possesses credentials in both scientific and commercial disciplines plus substantial industrial experience. The collective talents of our staff are strategically located and closely linked throughout the world, resulting in valuable insights gained through a variety of perspectives.

Nexant is an international consultancy and is dedicated to assisting businesses within the global energy, chemical, plastics, and process industries by providing incisive, objective, results-oriented management consulting. Over four decades of significant activity translates into an effective base of knowledge and resources for addressing the complex dynamics of specialized marketplaces. By assisting companies in developing and reviewing their business strategies, in planning and implementing new projects and products, diversification and divestiture endeavors and other management initiatives, Nexant helps clients increase the value of their businesses. Additionally, we advise financial firms, vendors, utilities, government agencies and others interested in issues and trends affecting industry segments and individual companies.

The Nexant Group was formed as an independent global consulting company in 2000, combining a number of companies that had a long history of providing consultancy services to the chemical and refining-related industries. Nexant's experience covers all aspects of project development relating to major refinery, petrochemical, and polymer investments, ranging from grassroots plants to revamps of existing process units. Nexant's key offices serving the petrochemical and downstream oil sectors are located in New York, Houston, London, Bangkok and Bahrain, and locations for other offices are shown in Figure 5.1.

Figure 5.1 Nexant Office Locations



From major multinationals to locally based firms and governmental entities, our clients look to us for expert judgment in solving compelling business and technical problems and in making critical decisions.

Nexant's clients include most of the world's leading oil and chemical companies, financial institutions, and many national and regional governments. Nexant, Inc. is active in most of the industrialized countries of the world, as well as in most of the developing areas including the Middle East, Africa, and East and Southeast Asia.

Major annual subscription programs are:

- Process Evaluation/Research Planning (PERP)
- Petroleum & Petrochemical Economics (PPE) – United States, Western Europe, and Asia
- Polyolefin Planning Service (POPS)

The PERP program covers technology, commercial trends, and economics applicable to the chemical industry. The program has more than 40 subscribers, including most of the major international chemical companies. Many of the processes to be analyzed in this multi-client study have been assessed in the PERP program.

The PPE program provides historic and forecast analysis of the profitability, competitive position and supply/demand trends of the global petroleum and petrochemical industry. The program includes capacity listings and analysis, global supply, demand and trade balances, profitability, competitiveness, and price analysis and projections for all the major petrochemical value chains. The PPE program is supported by an internet-based planning and forecasting tool that provides online access to the database behind the reports of the PPE program.

The POPS program provides reports on the global polyethylene and polypropylene industry. It is recognized globally as the benchmark source for detailed information and analysis on current commercial, technical and economic developments in the polyolefins industry. Coverage includes: capacity listing and analysis, detailed consumption, supply/demand, trade, operating rates, price forecasts, technological developments, new products, inter-material substitution and regional competitiveness.

## 5.2 ASSIGNMENTS UNDERTAKEN WHICH COVER BIO-FEEDSTOCKS, BIOCHEMICALS, AND/OR BIOFUELS

### 5.2.1 Multiclient Work

During the past ten years, Nexant has completed a number of major multi-subscriber studies. Selected multi-subscriber studies which included coverage of biochemicals and biofeedstocks include:

- **PERP Report 09/10S4 Biobased Commodity Feedstocks** – A study of the technology, and economics of producing commodity biofeedstocks; work from this report will be updated and greatly expanded upon in the current report
- **PERP Report 06/07S11 “Green” Polyethylene** – A study of the emerging biotechnology, processing technologies and economics of producing and recovering polyethylene, and a comparison to conventional routes
- **PERP Report 07/08S11 “Green” Polypropylene** – A study of the emerging biotechnology, processing technologies and economics of producing and recovering polypropylene, and a comparison to conventional routes
- **PERP Report 06/07S4 Glycerin Conversion to Propylene Glycol** – A study of the emerging biotechnology, processing technologies and economics of producing and recovering propylene glycol from glycerine, and a comparison to conventional routes
- **PERP Report 08/09S11 Plants as Plants (PHAs)** – A study of the emerging biotechnology, processing technologies and economics of producing and recovering polyhydroxyalkanoates (PHAs), as an alternative to conventional polyesters
- **PERP Report 00/01S3 Biotech Route to Lactic Acid/Polylactic Acid** – A study of emerging biotech routes to lactic acid and polylactic acid. Processing technologies, and economics of producing and recovering lactic acid and polylactic acid are investigated
- **PERP Report 08/09S7 “Green” Acetyls** – A study of emerging biotech routes to acetic chemistry. Processing technologies, and economics of producing and recovering acetates are investigated
- **PERP Report 09/10S8 “Green” Glycols and Polyols** – A study of emerging biotech routes to glycols and polyols (e.g., propylene glycol and sorbitol). Processing technologies, and economics of producing and recovering glycols and polyols are investigated
- **Cellulosic Sugars: Unlocking Biomass’ Potential** – A study of the emerging biotechnology, processing technologies and economics of producing and recovering commodity sugars and/or direct products (e.g., ethanol) from cellulosic biomass as well as a comparison to conventional routes
- **Bio-Based Chemicals: Going Commercial** – A survey of the emerging biotechnology, processing technologies, announced project capacities, and a risk adjustment of these announced capacities. This included coverage of commodity monomers and polymers, as

well as emerging polymers (e.g., succinic acid and/or 1,4-butanediol for polybutylene succinate)

- **Plants to Plastics** – A study of the emerging biotechnology, processing technologies and economics of producing and recovering commodity polymers such as polyethylene, polypropylene, polyethylene terephthalate, and others as well as a comparison to conventional routes
- **Bio-Acrylic Acid and Derivatives** – A study of the emerging biotechnology, processing technologies and economics of producing and recovering bio-acrylic acid as well as a comparison to conventional routes
- **Biotransformation Routes to Specialty Chemicals** – Includes consideration of conversions of natural oils, fatty acids, fatty acid esters, fatty alcohols and fatty amines, and fermentation technologies and commercial overviews of many bio-based product markets

Nexant's E&CC division has also completed a number of definitive studies on specific regions. These studies have analyzed the business structure and opportunities for many of the chemicals covered in this proposed study within the context of a changing economic environment. In addition to these studies, Nexant's E&CC division maintains a global commercial and technoeconomic database covering the principal petrochemicals, intermediates and polymers.

## 5.2.2 Single Client Studies

Selected single client studies which included coverage of biofeedstocks:

- **Multiple Technoeconomic Due Diligences** – In advance of IPOs, Nexant performed comprehensive technoeconomic analysis, including technology and markets. In such capacities, Nexant has investigated and evaluated multiple conversion technologies, including cellulose hydrolysis as well as thermochemical platforms for products from biomass
- **Multiple Technoeconomic Due Diligences** – In advance of IPOs, Nexant performed comprehensive technoeconomic analysis, including technology and markets. In such capacities, Nexant has investigated and evaluated multiple product platforms, including algae based, isoprenoid based product platforms
- **“Forest Refinery” Industry Evaluation** - A U.S. national laboratory retained Nexant to assess the technical and economic feasibility of a forest refinery designed to manufacture chemical products from trees. The analysis screened a variety of biomass conversion technologies and compared the production costs and energy consumption levels of each route to conventional routes. Processes evaluated included fermentation, lignocellulose separation, lignin conversion and gasification
- **Hunest Biorefinery Market Study** - A project to revitalize a former Nitrokemia site in Hungary to convert circa 200,000 tons per year of biomass into biopolymers, green solvents and intermediates. Nexant was engaged to undertake a market study of the

- commercial opportunities for the project covering mainly pricing and the European market in order to guide the company in developing its marketing strategy for the project
- **Biochemical Opportunities in the United Kingdom** - The National Non Foods Crops Centre (NNFCC) has engaged Nexant to provide a focused analysis of renewable chemical opportunities in the United Kingdom. The project was in part undertaken to gain a better understanding of the opportunities for the United Kingdom to integrate renewable feedstocks into its chemical manufacturing base. Nexant's analysis was used to support the development of research and development programs in both academia and industry organizations
  - **Fermentation Routes to Adipic Acid: Petrochemical Competitive Benchmarking** - For a developer of fermentation routes to Adipic Acid (nylon intermediate), this study was to provide analyses of conventional petrochemical routes, issues over nitric oxide emissions, and other critical factors
  - **Financial Due Diligence** - Analysis of Myriant Technologies' renewable route to succinic acid and potentially to adipic acid and other valuable green chemical intermediates. Examines technology, intellectual property position, market potential, and competitor positioning
  - **Sustainability and Plastics** - Client was interested in understanding how increased awareness of environmental issues and of the related initiatives might impact the polyolefins business in the future and asked Nexant to provide a high level review of the following conventional polymer displacement threats to conventional polymers: biodegradable polymers, bio-based polymers, and recycling. The main focus was on polypropylene in North America, but wider issues were also considered
  - **Fermentation Routes to Bio-Succinic Acid/BDO** – In a series of studies for a number of different stakeholders, Nexant evaluated technologies, markets, and competition for fermentation routes being developed for this potential raw material for polybutylsuccinate, 1,4-butanediol, and other chemicals derivatives, and compared to petrochemical routes
  - **PLA** – For this key renewable, biodegradable commodity polymer, polylactic acid, or polylactide (PLA) made from corn or sugar substrates, Nexant evaluated production technologies and markets for a number of different stakeholders
  - **Chemicals by Depolymerization of PHAs: Petrochemical Competitive Benchmarking** – For a developer of fermentation and crop-based PHA (polyhydroxyalkanoates) production that exploring the feasibility of depolymerizing these natural polyesters to make commercial chemicals (monomers, intermediates, solvents, etc.), Nexant provided analysis of the same C<sub>3</sub> and C<sub>4</sub> chemicals production via petrochemical routes, and assisted in developing process and cost models of the speculative depolymerization routes
  - **Hydrocarbon Fuels and Chemicals via Sugar Fermentation: Process Development Assistance** – For a biotech developer of sugar fermentation routes to C<sub>5</sub> hydrocarbon-based (isoprene homologues) for vehicle fuels, chemical intermediates and specialty

chemicals, this was a series of three projects to provide assistance, including process flowsheet and capex review, troubleshooting, and cost reduction strategies, product recovery studies, and process safety analyses

- **Advanced Biobutanol Process Technology, Economic, and Market Due Diligence** - For a prospective investor in this technology development, Nexant performed a broad-based feasibility study/due diligence with the full cooperation of the developer providing R&D data and existing business models for critique. Butanol was examined for its proposed fuel potential as well as for its large existing market as a solvent and chemical feedstock. The economics of the incumbent petrochemical route was compared
- **Biopolymers for Beverage and Food Packaging** – For a U.S.-based, leading, multinational beverage and food company, Nexant performed a study of the technical and economic feasibility of using, and issues around, selected bio-based polymers for packaging in the future, including PLAs, PHAs, green polyethylene, and others. For this, evaluated and compared three radically different emerging routes to green p-xylene production for feeding production of green PTA to react with green MEG to make 100 percent green PET bottle (and fiber) resin
- **Bio-ethylene for Beverage and Food Packaging** – For another U.S.-based, leading, multinational beverage and food company, Nexant performed a study of the technical and economic feasibility of using, and issues around, green polyethylene. For this, Nexant evaluated and compared green MEG production for PET bottle (and fiber) resin
- **Biopolymer Value Chain** – Investigate renewable feedstocks for biopolymers, biopolymer compounding and polylactide
- **Fermentation Propanol to Green Propylene – Confidential** - This report identifies discusses four routes to producing propylene from renewable feedstock (corn, sugarcane and glycerine). Bio-propylene, bio-based chemicals, biological route, biotechnology, genetically modified organism (GMO), bacteria are included in the study
- **Chemicals from Corn** - This was a broad-based study for the National Corn Growers Association (NCGA), funded by the U.S. DOE, to identify and screen chemicals that could be feasibly produced from corn. The study considered a wide range of potential sugars, and fermentation-derived acids, alcohols, and other building blocks, but emphasized fuel ethanol derivatives, including basic petrochemicals, solvents, intermediates and specialties, and application of the Reactive Distillation technology sponsored by the NCGA. The basic economics of ethanol production and potential improvements, economies of scale, logistics, and other production and value chain issues, are addressed in the study

### 6.1 CONTACT DETAILS

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e-mail: [hcoleman@nexant.com](mailto:hcoleman@nexant.com)

## 6.2 AUTHORIZATION FORM, TERMS AND CONDITIONS

### Subscription Terms and Conditions

1. The undersigned (hereafter "Client") hereby subscribes to purchase from Nexant, Inc. ("Nexant"), Nexant's study, *Next Generation Biofeedstocks: Resources for Renewables* (The "Subscribed Report"), in accordance with the following terms and conditions.

Nexant will provide to Client the following information and services:

- (a) Access to electronic downloads of the report via a password-protected area from the web site, [www.chemsystems.com](http://www.chemsystems.com). Nexant will provide users of the service with a user name and password. Subscriber will inform Nexant if any of its employees who are registered users leave Subscriber's employment.
2. The information disclosed in the Subscribed Report and the terms of this Agreement will be retained by Client for the sole and confidential use of Client and its 51 percent or greater owned affiliates except those parents or affiliates which are engaged in the business of marketing research, management consulting, or publishing or are subsidiaries of such firms (Permitted Subscribers). However, the Permitted Subscribers may use said 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 Subscriber. It is the responsibility of Client to notify Nexant of 51 percent or greater owned affiliates requiring access to the Subscribed Report. Breach of this covenant of use shall entitle Nexant to terminate this Agreement immediately with no obligation to return any portion of the Subscription Fee.
  3. Client 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 Client, or which is received by Client in good faith from a third party without an obligation of confidentiality.
  4. Client shall not republish all or any portion of the Subscribed Report. Client further agrees to refrain from any dissemination of the Subscribed Report, either directly or through its subsidiaries and affiliates, so as to constitute passage of title into the public domain or otherwise jeopardize common law or statutory copyright in said Subscribed Report.
  5. The Subscribed Report is delivered, inter alia, via the Internet. The Agreement does not include provision of hardware or software to allow Client employees to view the Internet sites, download data, etc. The software requirements include an Internet browser (Netscape 4.7 or higher or Microsoft Internet Explorer IE version 5.0 or higher). Some changes to the configuration of the user's browser, and windows control panel, may be required for optimal use of the products. The web site that houses the products uses software including Flash Plug-in version 4.0 or higher and may pass applets to the user. Client firewall restrictions may inhibit access to Subscribed Report or the performance of the products. Nexant is not responsible for restrictions to use of the Subscribed Report imposed by Client firewall(s).
  6. There are no warranties of any kind for the Subscribed Report provided under this Agreement and there shall be no liability for consequential or indirect damages. Nexant's entire liability under this Agreement is limited to the total amount paid to Nexant for the services.
  7. Nexant does not accept responsibility for the accuracy of the information in the Subscribed Report. Client is responsible for use of the information contained in the Subscribed Report and Nexant will not be responsible for any reliance Client places on the contents thereof.
  8. A person who is not a party to this Agreement shall have no right to enforce any of its terms.
  9. By signing the Authorization, Nexant and Client agree that the Proposed Table of Contents, Authorization and Terms and Conditions represent 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.
  10. This Agreement and the relationship between the parties shall be governed by and interpreted in accordance with the laws of the state of New York, United States of America.
  11. Upon authorization, Client will be billed by and shall pay to Nexant a total of US\$22,000.00 (twenty-two thousand U.S. dollars). Client shall be invoiced the full Subscription Fee upon signature of this Agreement. Amounts are due upon receipt of invoice and payable within thirty (30) days. If payment is not made within 30 days from the date of invoice, Client will be subject to late payment charges. Such charges will be calculated at a monthly rate of 1.5 percent of the invoice amount, compounded for each period or part period of 30 days that the invoice remains unpaid. Fees quoted do not include any applicable sales tax, or use or value added tax, all of which are for the account of Client.

### Authorization Form

If the foregoing terms are acceptable, please sign below to confirm subscriber's agreement and return to Nexant.

#### AUTHORIZATION

**AGREED TO AND ACCEPTED:**

**AGREED TO AND ACCEPTED:**

**SUBSCRIBER:**.....

**NEXANT, INC.**

Name: .....

Name: .....

Title: .....

Title: .....

Address: .....

Address: .....

Phone: .....

Phone: .....

Fax: .....

Fax: .....

Email: .....

Email: .....

Date: .....

Date: .....

Signature: .....

Signature: .....

**Next Generation Biofeedstocks: Resources for Renewables**

US\$22,000

Hard copies of the report are available at US\$500.00 each

US\$ 500 \_\_\_\_ number of copies

Total amount

US\$ \_\_\_\_\_

We shall pay Nexant, Inc. the applicable fee stated above plus applicable taxes (including but not limited to VAT, withholding tax and any other applicable deductions).

If your company requires a purchase order number, please provide the number below:

Purchase Order Number: \_\_\_\_\_

NEXANT, INC.  
44 SOUTH BROADWAY, 4th Floor  
WHITE PLAINS, NY 10601-4425, U.S.A.  
FAX: 1-914-609-0399

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