

## Methes Energies Product Offering Canada

600 Liters per Hour  
Continuous Biodiesel Modular Process System / Facility

This Proposal is for One Denami 600 Biodiesel Processor



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Prepared by:

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Typical 5 M Liter per year plant layout.

## Overview

Methes Energies Inc. was created in 2004 to respond to the growing demand for renewable energy. In this endeavor, it is marketing a unique biodiesel processor (the Denami 600), which provides a reliable source of biodiesel in an efficient and versatile manner.

This presents a unique opportunity to entrepreneurs/corporations for the production of biodiesel fuel at a local self-contained plant for either their own use, or for resale. With one of the smallest footprints in the industry, the Denami 600 can quickly and easily be set up anywhere to produce over 5 million liters of ASTM quality biodiesel per year. The Denami 600 is modular and scalable (5 million liters per year increments); designed to fit your needs. Whether you are looking to be a large or small producer Methes energies Inc. has the equipment, the feedstock sources and the testing facilities to meet your needs.

## Product Offering

Methes Energies Inc. offers 3 distinct methods to become involved in the ASTM quality biodiesel production business.

1. **“Pipe-to-Pipe” solution** – Ideal for individuals/corporations/municipalities with experience in the biodiesel/oil and gas industry, some of which may already be heavy diesel users. This solution provides for one Denami 600 unit, as well as an environmental checklist, lab equipment, in addition to an overseeing of the installation, commissioning, training, ongoing support and maintenance via an annual service agreement.
2. **Turn-key “Production Line” solution** – Once your site has been selected and approved for the production and storage of biodiesel, Methes will work with you to set up your location including: the environmental checklist, lab equipment, overseeing of the installation of storage tanks, pipes, truck-loading facility and one Denami 600 unit. This solution is ideal for individuals/corporations with limited experience in the biodiesel production business, looking to jump start production of 5 M liters per year of biodiesel.
3. **Turn-key “Facility” solution** - This option is a true turn-key solution. You tell us where you want your plant to be located and our team will go to work to deliver an operating biodiesel production facility. Starting with an existing building or selecting to build a new one, our team of experts will turn-over the key to the front door of your completed project, once it is running and producing ASTM quality biodiesel. This is a great option for individuals/corporations looking for a “no hassle” solution.

Whether you are handling the setup of your biodiesel facility or not, once you are operational, Methes can help you make sure that feedstock and the sale of your biodiesel are never a problem. As a leader in the biodiesel industry, we have the contacts to not only ensure that you always have sufficient quality feedstock available to produce ASTM quality biodiesel, but also that all of the fuel you produce is sold.

Quality production is by far the best methods to ensure a good reputation in biodiesel production. To achieve this goal your Denami 600 is constantly monitored on line by a team of experts at Methes. Our 24/7 toll free hotline provides you with all the technical support you may need. Any changes in feedstock condition which requires a software update, or any other software updates will be done online by Methes, giving you the peace of mind to focus on more important tasks.

In addition, we recognize that product testing is an integral part of any on-going biodiesel production. The ASTM 6751 testing is a recognized quality standard across North America, which consists of 16 tests. To perform these

tests accurately and consistently, specialized equipment and highly trained technicians are required. As part of our commitment to quality, we will perform IN-PROCESS tests consisting of 3 out of the 16 tests during your production process. With a 48-hour turnaround time on these IN-PROCESS tests, you will not only save on expensive lab equipment or the cost of hiring a lab technician, but also, still have access to reliable and consistent reports to track the quality of your biodiesel production.

When your biodiesel is ready to be shipped, the sample will be sent to a 3<sup>rd</sup> party accredited lab to conduct all of the 16 tests included in the ASTM 6751 testing standard. Through our partnership, you will have access to reputable laboratories across North America to ensure reliable and fast results.

Our unique business model, allowing for a true long-term partnership, makes it clear that it is in our mutual best interest to have the Denami 600 operate at its full capacity. We are committed to ensure that your business is successful, by return, making ours the same – a true win-win partnership; an innovation in this industry.

## Guarantee Statement

Methes guarantees that the Denami 600 to produce biodiesel meeting the ASTM 6751-06\*.

In the event that any hardware or software component fails to perform according to design; resulting in biodiesel not meeting the ASTM 6751-06 specifications; Methes will warranty these components and replace them at no charge to the client.

\* For the Denami 600 to produce ASTM quality biodiesel, Methes must approve the feedstock.

## Warranty Information

The Denami 600 is warranted to be free from defects from the date of facility commission. All labor is warranted for as long as the license fee is paid in full.

This warranty does not apply in the event of misuse, abuse, acts of God, or as a result of unauthorized alterations or repairs.

Warranty is void if date stamps or warranty seals are altered, defaced, or removed from any product.

Warranty applies only if Methes Energies Inc approves the feedstock used.

This warranty is in lieu of all other warranties, representations or conditions of any kind expressed or implied and no person is authorized to assume for us any liability in connection with the sale of these products and services.

Except as set forth above, Methes Energies Canada Inc. disclaims any warranty, expressed or implied, with respect to the equipment or its operation, including without limitation, any implied warranty of fitness for particular purpose or use other than for the production of biodiesel.

Methes Energies Canada and its employees will in no event be liable for any incidental, consequential or other direct or indirect damages suffered by the buyer, any of its employees, agents, or any other person arising out of or in connection with the use or performance of the equipment, even if they have been advised of the possibility of such damages.

## Option 1 - “Pipe-to-Pipe” solution

This solution includes the following:

1. An environmental checklist applicable to the location where the biodiesel facility is to be installed. The checklist addresses the following eight environmental areas that may be subject to regulatory compliance at biodiesel facilities:
  - Site Selection
  - Wastewater and storm water discharges
  - Underground and above ground storage facilities
  - Air emissions
  - Spill prevention and control
  - Solid waste management
  - Hazardous and Non-hazardous Waste management
  - Potable water
2. Biodiesel Production Hardware:
  - Methes Denami 600 Biodiesel processor
  - Production Rate @ 600 Liters per hour
  - Fully Tested Before Shipment
  - TSSA Registered
  - UL and CSA certified
  - Fully Automated
  - Continuous Flow Process
  - Guaranteed ASTM Biodiesel (using feedstock approved by Methes)
  - Certified Feedstock
  - 16 Weeks Construction Time
3. Other Hardware and Accessories:
  - Polishing Resin Removal Station
  - Feedstock Validation Chemical Kit
4. Commissioning and Onsite Training:
  - Methes onsite to oversee / supervise installation
  - Methes onsite for up to 10 business days to supervise installation and training on operating facility
5. Ongoing Support, Maintenance and Assistance:
  - Dedicated support line
  - Real-time / online monitoring of your unit
  - Extended Warranty (Parts and Labor) – Provided annually (No limit for 1<sup>st</sup> yr, up to \$25,000 CAD per year thereafter)
  - In-process Tests (D93, ASTM2709 & D6584). These 3 tests will be conducted on each sample received. Includes up to 3 samples per week; or 150 samples per year

## Option 1 - "Pipe-to-Pipe" solution - continued

6. The client will need to provide the following:
  - Name of city where biodiesel facility is to be installed
  - Building suitable for biodiesel production (zoning – Heavy Industrial)
  - Provide and prepare the biodiesel site/building according to the environmental checklist provided by Methes
  - Provide and set the tank farm according to the guidelines provided by Methes
  - Perform Fire and Safety Inspections
  - Power, compressed air, boiler and high speed Internet
  - Obtain all of the permits necessary for biodiesel production
  
7. Some of the additional equipment / items, not included in the price, required to operate your facility – one week production:
  - Compliant site / building for the production of biodiesel
  - Air compressor – Nitrogen generator 20 CFM / 90 PSI
  - Boiler 500,000 BTU
  - 3 X 60,000L tank for finished product
  - 2 X 60,000L tank for feedstock
  - 1 X 60,000L for Glycerin
  - 1 X 40,000L for Methanol (double wall)
  - Outside concrete platform / pad for methanol tank, or 2 hour Class 1, Dev 2 fire rated room (280 square feet)
  - Interconnecting piping
  - Level monitoring in all tanks
  - Containment area around all tanks
  - Truck-loading (with pumps)
  - Filters for Biodiesel, Methanol and Feedstock
  - Safety shower and eye wash station
  - Epoxy coated flooring

## Option 1 - "Pipe-to-Pipe" solution - continued

### Pricing:

"Pipe-to-Pipe" Solution:	\$ 849,500 USD*
On-going License Fee:	\$ 0.03 USD / Liter
Maintenance and Service:	INCLUDED as part of License Fee
In-process Tests:	INCLUDED as part of License Fee

\*Excludes applicable taxes and freight

### License Agreement

- \$0.03 cents per liter of biodiesel produced, pro-rated quarterly
- Annual Service, including parts and labor, as well as traveling within North America. (No limit for 1<sup>st</sup> yr, up to \$25,000 USD per year thereafter)
- Includes all programming and software upgrades
- Methes will provide in-process testing for methods ASTM D93, ASTM2709 & ASTM D6584. These 3 tests will be conducted on each sample received. Includes up to 3 samples per week; or 150 samples per year

## Option 2 – Turn-key “Production Line” solution

This solution includes the following:

1. An environmental checklist applicable to the location where the biodiesel facility is to be installed. The checklist will address the following eight environmental areas that may be subject to regulatory compliance at biodiesel facilities:
  - Site Selection
  - Wastewater and storm water discharges
  - Underground and above ground storage facilities
  - Air emissions
  - Spill prevention and control
  - Solid waste management
  - Hazardous and Non-hazardous Waste management
  - Potable water
  
2. Biodiesel Production Hardware:
  - Methes Denami 600 Biodiesel processor
  - Production Rate @ 600 Liters per hour
  - TSSA Registered
  - UL and CSA certified
  - Fully Automated
  - Continuous Flow Process
  - Guaranteed ASTM Biodiesel (using feedstock approved by Methes)
  - Certified Feedstock
  
3. Additional equipment / items included:
  - Polishing Resin Removal Station
  - Feedstock Validation Chemical Kit
  - Air compressor – Nitrogen generator 20 CFM / 90 PSI
  - Boiler 500,000 BTU
  - 3 X 60,000L tank for finished product
  - 2 X 60,000L tank for feedstock
  - 1 X 60,000L for Glycerin
  - 1 X 40,000L for Methanol (double wall)
  - Outside concrete platform / pad for methanol tank, or 2 hour Class 1, Dev 2 fire rated room (280 square feet)
  - Interconnecting piping
  - Level monitoring in all tanks
  - Containment area around all tanks
  - Truck-loading (with pumps)
  - Filters for Biodiesel, Methanol and Feedstock
  - Safety shower and eye wash station
  - Epoxy coated flooring

## Option 2 - Turn-key “Production Line” solution – continued

4. Commissioning and Onsite Training:
  - Methes onsite to oversee / supervise installation
  - Methes onsite for up to 10 business days to supervise installation and training on operating facility.
  
5. Ongoing Support, Maintenance and Assistance:
  - Dedicated support line
  - Real-time / online monitoring of your unit
  - Extended Warranty (Parts and Labor) – Provided annually (No limit for 1<sup>st</sup> yr, up to \$25,000 CAD per year thereafter)
  - In-process Tests (D93, ASTM2709 & D6584). These 3 tests will be conducted on each sample received. Includes up to 3 samples per week; or 150 samples per year
  
6. The client will need to provide the following:
  - Name of city where biodiesel facility is to be installed
  - Building suitable for biodiesel production (zoning – Heavy Industrial)
  - Provide and prepare the biodiesel site/building according to the environmental checklist provided by Methes
  - Perform Fire and Safety Inspection
  - Power and high speed Internet
  - Obtain all of the permits necessary for biodiesel production
  
7. Some of the additional equipment / items, not included in the price, required to operate your facility – one week production:
  - Compliant site / building for the production of biodiesel
  - Fork lift

## Option 2 - Turn-key “Production Line” solution – continued

### Pricing:

“Production Line” Solution:	\$ 1,320,000 USD
On-going License Fee:	\$ 0.03 USD / Liter
Maintenance and Service:	INCLUDED as part of License Fee
In-process Tests:	INCLUDED as part of License Fee

\*Excludes applicable taxes and freight

\*Pricing subject to change to account for steel price changes

### License Agreement

- \$0.03 cent per liter of biodiesel produced, pro-rated quarterly
- Annual Service, including parts and labor, as well as traveling within North America. (No limit for 1<sup>st</sup> yr, up to \$25,000 USD per year thereafter)
- Includes all programming and software upgrades
- Methes will provide in-process testing for methods ASTM D93, ASTM2709 & ASTM D6584. These 3 tests will be conducted on each sample received. Includes up to 3 samples per week; or 150 samples per year

## Option 3 – Turn-key “Facility” solution

This option is a true turn-key solution. You tell us where you want your plant to be located and our team will go to work to deliver an operating biodiesel production facility. Starting with an existing building or selecting to build a new one, our team of experts will turn-over the key to the front door of your completed project, once it is running and producing ASTM quality biodiesel. This is a great option for individuals / corporations looking for a “no hassle” solution.

If this option is selected, Methes will meet with your project manager / management team and outline a plan of action based on mutually agreed criteria and objectives.

### Pricing:

Turn-Key “Facility” Solution:	TBD
On-going License Fee:	\$ 0.03 USD / Liter
Maintenance and Service:	INCLUDED as part of License Fee
In-process Tests:	INCLUDED as part of License Fee

\*Excludes applicable taxes and freight

### License Agreement

- \$0.03 cent per liter of biodiesel produced, pro-rated quarterly
- Annual Service, including parts and labor, as well as traveling within North America. (No limit for 1<sup>st</sup> yr, up to \$25,000 USD per year thereafter)
- Includes all programming and software upgrades
- Methes will provide in-process testing for methods ASTM D93, ASTM2709 & ASTM D6584. These 3 tests will be conducted on each sample received. Includes up to 3 samples per week; or 150 samples per year

## Denami 600 Specifications

### Safety

- Nitrogen-Purged System
- Positive air-purged electrical panel
- Explosion Proof, NEMA 4
- TSSA Registered
- ASME certifiable

### Air Emissions

- 150PPM methanol

### Noise Emissions

- 60 decibels

### Ease of installation

- Skid-mounted
- Tri-clamp connectors
- FAT-tested before shipping

### Utilities

- Boiler – 200,000 BTU/hr
- Steam or hot water
- Nitrogen – 10 CFM
- Water – 6 LPM
- Hydro – 11.2 KW (3 phase / 208 volts)

### Software

- Updates included as per licensing agreement

### Support

- Toll-free number
- Remote diagnostics makes troubleshooting quick and efficient

### Modular

- Expandable to higher production
- Volumes adding modules
- Modules can be monitored and controlled from one or multiple points, locally or remotely

### Operators required

- 1

### Accuracy of Flow rates

- 0.10% by mass

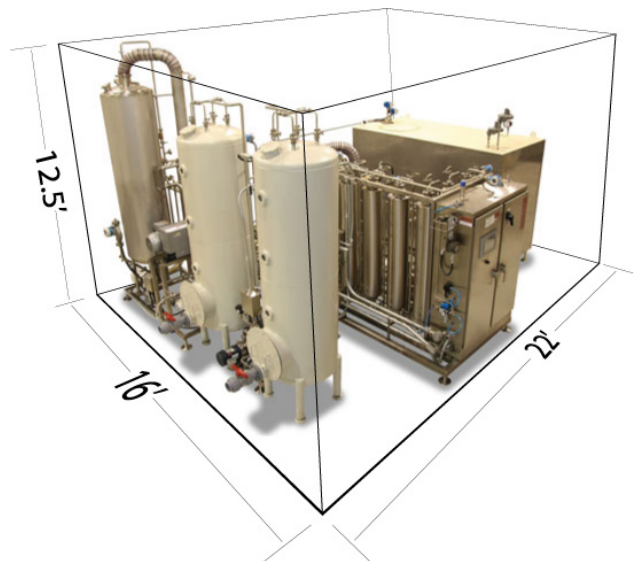
### Process Module

- Methanol recovery, 99% of excess methanol
- Methanol removal to under 0.2%
- Stainless steel construction
- Non corrosive
- Long service life – 15+ years
- Minimal moving parts

### Polishing Module

- Resin regeneration
- 2 tank system – Lead-Lag system
- Lowers polishing costs

Equipment footprint: (in feet)



The above information is based on a one unit setup.