### **ENBRIDGE®**

#### Kansas Legislature Joint Committee on Energy and Environment -

#### **Flanagan South Status Report**

Planning and preparation for Enbridge's Flanagan South Pipeline Project continues as we move into the winter months. Land agents from our Land Services team have been working with landowners in all four states to negotiate easement agreements, at the same time the engineering team has been out meeting with county and township road supervisors and engineers to discuss road crossing methods and permit applications. Engineers have also been continuing to assess the proposed route from a constructability standpoint. The Project's environmental team has been meeting with state and federal regulatory agencies across the route, and has had staff on the ground conducting a range of surveys.

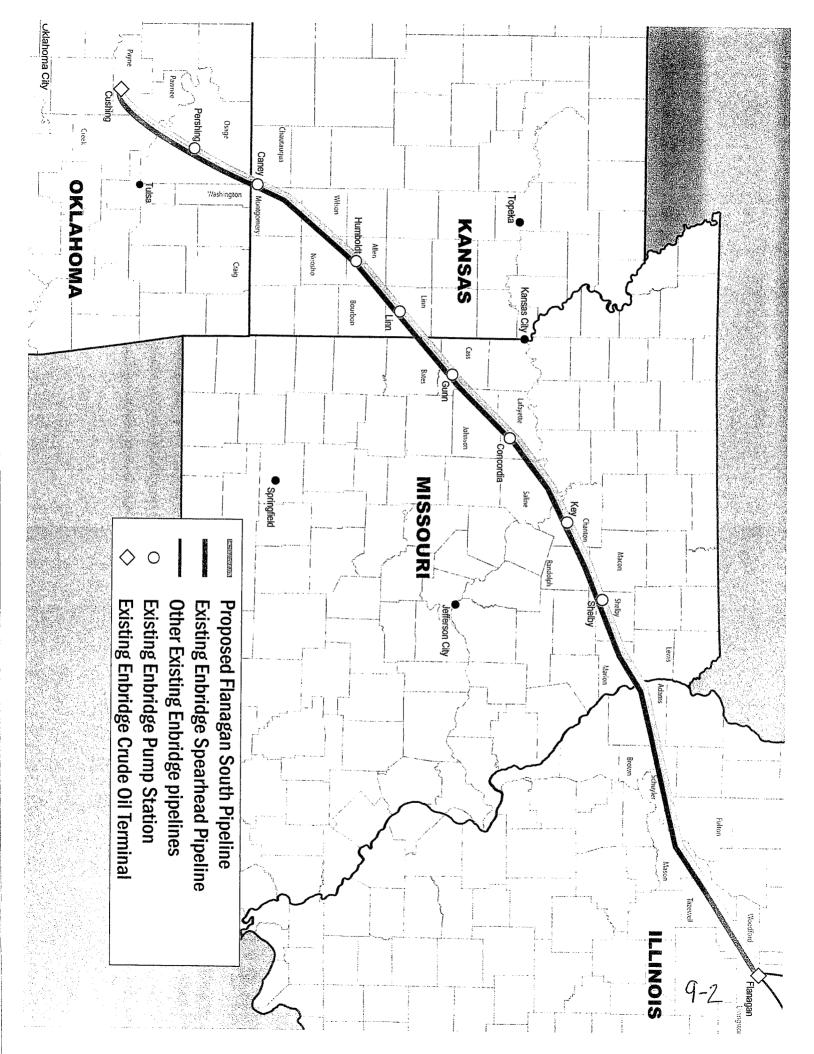
In October, the pipe mill began rolling the pipe that will be used for the Project. Construction on pipe yards to house this pipe began on the northern end of the line. The table below lists the proposed schedule to complete all 11 pipe yards by February 2013. Three of the 11 yards are already complete, and the Rushville, Ill. yard has already started receiving pipe on November 3 and is scheduled to be completed by the end November. The Project's Government/Public Affairs group provides notification to the communities affected by the haul route, including school districts, so they are aware of that pipe hauling equipment will be on the roads.

Percent		Yards	Estimate	Actual	Work
Complete			Start	Start	Complete
100%	1	Rushville, IL.	9/25/2012	9/28/2012	10/13/2012
100%	2	Salisbury, MO.	10/1/2012	10/2/2012	10/17/2012
100%	3	Concordia, MO.	10/8/2012	10/11/2012	10/30/2012
0%	4	Humboldt, KS.	11/12/2012	11/15/2012	
0%	5	Shelbina, MO.	11/12/2012	11/16/2012	
0%	6	South Pekin, IL.	12/1/2012		
0%	7	El Paso, IL.	12/1/2012		
		Garden City,			
0%	8	MO.	1/1/2013		
0%	9	Cherryvale, KS.	1/1/2013		
0%	10	Pershing, OK.	2/1/2013		
0%	11	Yale, OK.	2/1/2013		

The General Contractor selections will begin early next year in anticipation of a May 2013 construction start date for pump stations and an August 2013 start for the pipeline.

More information can be found at www.enbridge.com/flanagansouthpipeline, or by calling Justin Stegall Direct Dial: 832-214-9337 / Cell: 713-305-5606, or email at: justin.stegall@enbridge.com.

Joint Energy and Environmental Policy Committee November 19 and 20, 2012 Attachment: 9





### **Project Details**

Ownership: Enbridge Pipelines (FSP) L.L.C., an indirectly wholly owned subsidiary of Enbridge Inc. (ENB on the NYSE).

**Length**: About 600 miles generally along Enbridge's existing Spearhead Pipeline route.

Pipe: 36-inch diameter pipe.

Capacity: 600,000 bpd, and together with the Spearhead Pipeline, Enbridge will be able to transport up to 775,000 bpd of North American crude oil from Illinois to Cushing, Okla., one of America's largest storage hubs.

Construction: Beginning mid-2013.

In-service Date: mid-2014.

Regulatory Approvals: Construction and operation is regulated by the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration's Office of Pipeline Safety. Various local, state and federal permits, approvals or clearances will also be required. Enbridge has been committed to safe and reliable operation of our pipelines for more than 60 years; this same commitment will be inherent in the design, installation, and operation of this pipeline.

Route: The Flanagan South Pipeline and pumping stations will generally be adjacent to the Spearhead Pipeline, with pipeline deviations in some locations to avoid congested areas or other features.

### Flanagan South Pipeline Project

Enbridge Energy Company, Inc., through its affiliate Enbridge Pipelines (FSP) L.L.C., is proposing to expand its existing pipeline system by constructing nearly 600 miles of new interstate crude oil petroleum pipeline.

The 36-inch diameter Flanagan South Pipeline will have an initial capacity of 600,000 barrels per day (bpd). The pipeline will be constructed mostly along the route of Enbridge's existing Spearhead Pipeline between the Flanagan, Ill., Terminal, southwest of Chicago, to Enbridge's Cushing, Okla., Terminal.

The Flanagan South Pipeline gives North Dakota's Bakken and western Canadian producers timely, economical and reliable options to deliver a variety of crude oil supplies to refinery hubs throughout the heart of North America or as far as the Gulf Coast. From Cushing, shippers can continue through the Seaway Crude Pipeline System to meet the crude supply needs of refineries along the U.S. Gulf Coast.

### Benefits of the Flanagan South Pipeline Project:

- Opportunities for temporary jobs during planning and construction.
- Local and regional economic boost from the purchase of local products and materials, continuing during construction and into operation as workers use local hotels, restaurants, and services.
- Long-term property and sales tax revenues.
- Synergies of expanding capacity along an existing pipeline system with existing pumping station sites and electrical power connections.
- Gulf Coast refineries, with more than 50 percent of U.S. refinery capacity, will have more access to growing North American crude oil production.
- North American energy security and economic stimulus as engineered materials are made in the U.S. and Canada, which assure quality and jobs. Transportation infrastructure for North American crude oil reduces our reliance on imports from less stable nations around the world.

### **Community Consultation:**

Learn more about the Flanagan South Pipeline Project as Enbridge meets with agencies, local officials, landowners and others over the coming months. Meanwhile, visit the project website, call our project hotline at 877-797-2650, or email <a href="mailto:flanagansouth@enbridge.com">flanagansouth@enbridge.com</a>.

9-3



# SAFELY TRANSPORTING NORTH AMERICA'S LARGEST RESERVE OF GRUDE OIL



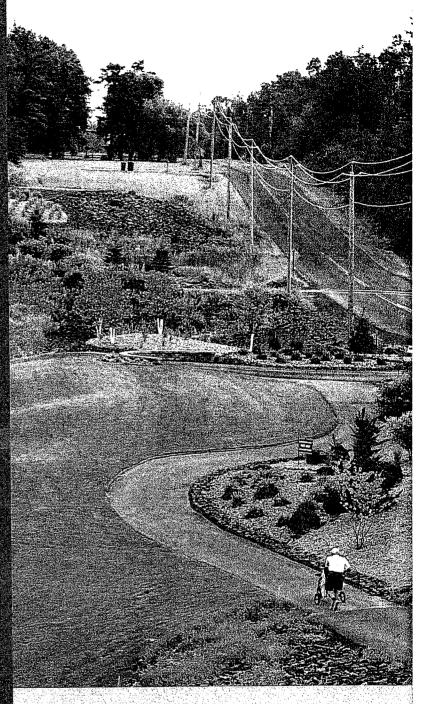


## A SAFE & RELIABLE ENERGY RESOURCE

Underground pipelines run alongside roads, powerline corridors and across farmland to safely and quietly deliver millions of barrels of liquid petroleum every day from the Canadian oil sands region to refinery markets in the U.S. Midwest and beyond.

Enbridge has been transporting crude oil produced from western Canada's oil sands region since 1999. Our pipeline system is a safe and reliable way to transport this vital energy resource. While we aren't there yet, we continue to work toward a goal of zero pipeline spills.

Pipelines are the safest way to transport petroleum from oil reserves to refineries.

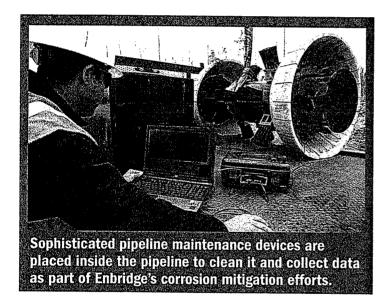


### Is there more risk in transporting crude oil from the oil sands?

No. All crude oil must meet pipeline quality specifications to be transported in our pipelines. These strict specifications were made so Enbridge could prevent damage or internal corrosion to pipes, pumps, and other facilities. Many years of transporting heavy oil sands crude proves there is no evidence that pipelines delivering oil sands crude are more susceptible to internal corrosion than other pipelines transporting heavy oil from conventional sources.  $\Omega_{-6}$ 

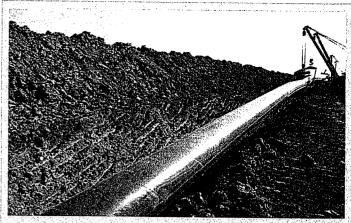
### **Sophisticated Monitoring and Controls**

Our maintenance and monitoring system is aimed at avoiding incidents for our entire pipeline system, whether it's transporting natural gas liquids or crude oil (including heavy crudes, dilbit, and light grades of oil from North Dakota). To ensure reliable delivery, our pipeline system is closely monitored 24-hours a day, seven days a week. Enbridge makes safety a high company priority by investing heavily each year in maintaining sophisticated pipeline control systems, implementing internal pipeline inspections, performing regular aerial inspections, and utilizing other measures to check for compromises and ensure our pipelines are running safely.



### **Preventing Pipeline Corrosion**

U.S. and Canadian pipeline safety regulations and standards are very comprehensive. They require prevention, monitoring, and mitigation to avoid both internal and external corrosion. U.S. regulations require pipeline operators to monitor for corrosiveness of materials transported.



According to the U.S. Department of Transportation Incident Reports Database, there have been no spills—none—caused by internal corrosion in pipelines carrying crude oil from the oil sands.

Federal inspectors check for our compliance with these regulations. Pipeline Operators monitor for corrosion using internal inspection devices and other technologies to detect early signs of internal corrosion before a leak occurs.

### Enbridge uses many tools to mitigate common causes of corrosion including:

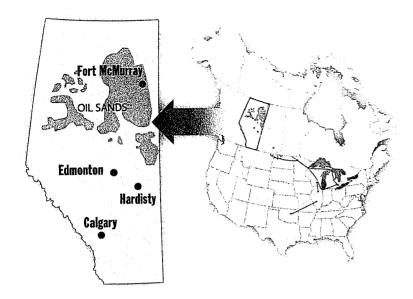
- Lab testing where we receive crude oil to ensure it meets quality and product specifications.
- Tools used inside of the pipe—known as scraper pigs—clean impurities that can lead to corrosion where there is internal corrosion risk.
- Adding corrosion inhibitors.
- Using biocides that kill corrosion-inducing microorganisms.
- Cathodic protection and external coatings that protect against external corrosion.

### Learn more about the oil sands and pipeline safety at:

- Government of Alberta oilsands.alberta.ca
- American Petroleum Institute api.org/ aboutoilgas/oilsands/index.cfm

- Canadian Assoc. of Petroleum Producers capp.ca
- U.S. Department of Transportation, Office of Pipeline Safety – phmsa.dot.gov/pipeline

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### The Difference Between Oil Sands Oil and Other Crude Oil

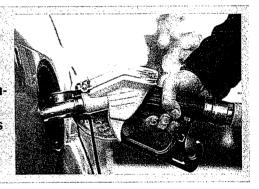
It's comforting to know that right here in North America, in addition to other energy resources, there are billions of barrels of recoverable petroleum from a region in western Canada referred to as the "oil sands region." And potentially there is enough oil in this region for more than 100 years of production. Canada has one of the largest oil reserves in the world, and 97 percent of these reserves are in the oil sands. This resource has made Canada America's number one crude oil supplier and helped reduce U.S. dependence on Mideast oil.

The raw product in the oil sands is called bitumen, a form of dense oil that does not flow in its natural state. Processing is needed to separate sand and extract the bitumen oil. Once this occurs, the crude oil resembles other heavy crudes transported by pipeline throughout the nation. There are two ways the bitumen is processed. Either it is upgraded and initially refined to form "synthetic oil" or syncrude, or it is diluted to create

a liquid with the viscosity and density to flow in a pipeline (diluted bitumen or "dilbit"). Either way, the quality of the crude oil meets pipeline and shipper specifications to deliver to refineries and in turn meets their requirements for quality.

While called "oil sands" and sometimes referred to as "tar sands" or DilBit (for diluted bitumen), there is no significant difference in transporting this heavy crude oil than the normal product specification and quality assurances required for transporting other petroleum commodities. Heavy crude, like DilBit, is no more and often much less volatile than transporting natural gas, butanes, jet fuel and other energy products that are delivered safely every day. When compared to crude oil from California and other countries, there is little difference in key components.

Heavy crude
is refined into
fuel, asphalt,
and countless
other petroleumbased products
used by millions
of Americans
everyday.

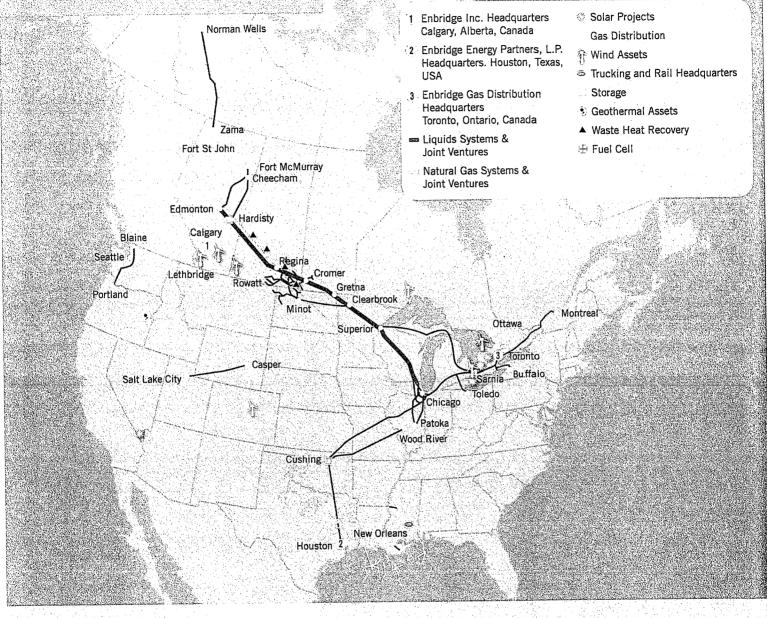


In fact, refineries in the U.S. have for decades used Canadian heavy crude from both conventional fields in western Canada and the oil sands region as another resource of reliable North American crude oil supply. Once delivered to the refinery, this heavy crude oil, syncrude or dilbit becomes fuel to operate vehicles, fuel our military, make asphalt for roads and roofs, serve as feedstock for our farms' fertilizers and countless other petroleum-based products used by millions of people every day.



## Enbridge is a leader in the safe and reliable delivery of energy in North America.



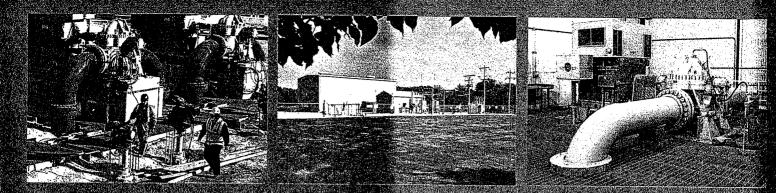


We transport energy, operating the world's longest, most sophisticated crude oil and liquids transportation system. We have a significant presence in the natural gas transmission and midstream businesses, onshore in Texas and Oklahoma and offshore in the Gulf of Mexico.

We generate energy, expanding our interests in renewable and green energy technologies including wind and solar energy, geothermal and hybrid fuel cells.

We distribute energy, owning and operating Canada's largest natural gas distribution company, and provide distribution services in Ontario, Quebec, New Brunswick, Vermont and New York State. The company employs approximately 6,500, primarily in Canada and the United States. Enbridge also manages several investment options that trade on the Toronto and/or New York stock exchanges, including Enbridge Inc. (ENB); Enbridge Income Fund (ENF); Enbridge Energy Partners (EEP); and Enbridge Energy Management, L.L.C. (EEQ).

To learn more about Enbridge, visit our websites at enbridge.com or enbridgeUS.com.



Open air and enclosed pump station units are designed to increase the pressure in the pipeline in order to maintain flow to keep the liquid petroleum moving at about walking speed.

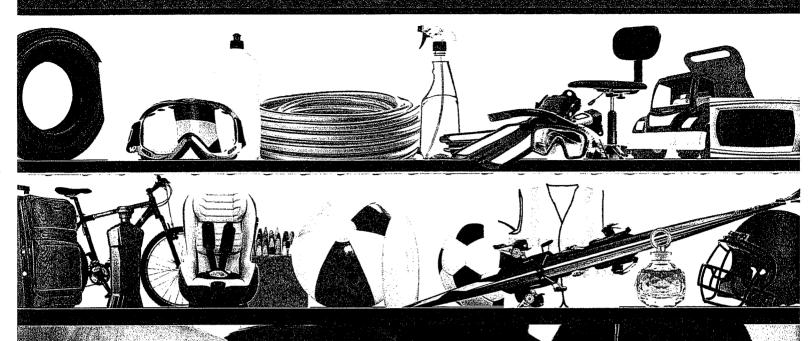
### **Pumps Keep Oil Moving**

Pump stations play a vital role in moving crude oil through the Enbridge pipeline system. In general, pump stations contain one or more electrically driven pumping units, and they are strategically located to boost internal pipeline pressure and flow within safe operating limits of the pre-tested pipeline. Pump stations then move the crude oil through the pipeline and on to the next station or to its final market destination. Typically, pump stations are situated 40-60 miles apart; however, their exact location is determined by a variety of factors, including engineering design, terrain, power availability and delivery needs.

Enbridge pump stations are designed, built and landscaped to minimize visual impact. As well-maintained facilities, they generally have little effect on nearby landowners or the community. Typically, pump stations are located on several acres and include the pump units themselves, which are coupled with electric motors, the electrical switchgear equipment and above ground valve controls as well as one or more small auxiliary or support buildings. Stations can include above ground as well as underground piping. Station facilities are secured and fenced, with lighting designed to provide security yet minimal disturbance to neighbors. A qualified Enbridge technician maintains one or more stations.

### **Fast Facts On Pump Stations**

- Enbridge's pump stations are carefully designed and built to meet or exceed federal safety regulations as well as national and industry building and fire codes and relevant environmental regulations.
- The pipeline and station piping are designed as fully enclosed systems, in part so that petroleum and vapors do not escape. No crude oil is stored at pump station sites.
- Although a major release at a pump station is highly unlikely, Enbridge personnel are trained and prepared to respond immediately.
   All pump stations are monitored 24-hours per day from a state-of-the-art control center, and multiple on-site detectors and transmitters are employed to promptly initiate remote shutdown and isolation, if needed.
- Enbridge stations meet state and local noise standards. Typical background noise levels in a rural setting are approximately 40 decibels at a distance of 300 meters. That is equivalent to the hum of a refrigerator at about a quarter mile away.
- Enbridge operates some 115 pump stations along our US liquids pipeline systems.
- Enbridge's 60 years of operating experience, protection equipment and emergency procedures have helped it minimize and prevent impact to the public.



## PETROLEUM: FUELING OUR LIVES



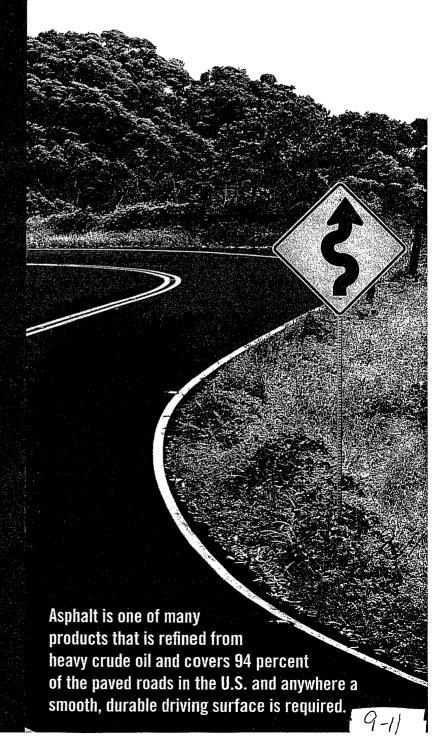


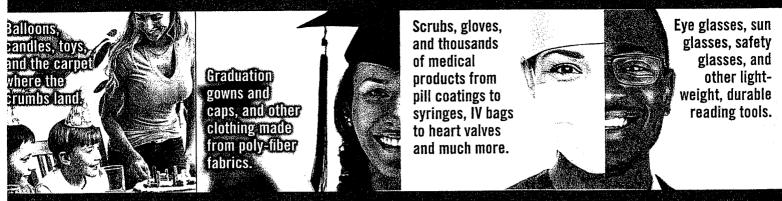


## THE WORLD'S MOST VITAL SOURCE OF ENERGY

For more than 150 years, petroleum products have been transforming our way of life — from how we fuel our cars to how we heat our homes, from the clothes we wear to the household products we buy, as well as how our food is grown, harvested, and delivered to our tables. Even with the welcomed development of alternative fuels, petroleum will continue to fuel 70-80 percent of our energy needs for decades to come, according to the U.S. Energy Information Administration.

Refineries receive crude oil delivered by pipeline, railway, and ship with the vast majority of crude oil in the Midcontinent delivered by pipeline. The crude oil can then be turned into gasoline, diesel, jet fuel and many other useful petroleum products. Products we use and depend on every day are delivered to us using petroleum. It would be hard to imagine a world without petroleum — one where gasoline, electronic devices, aspirin, and plastic containers would not exist.





### LIFE AS WE KNOW IT TODAY WOULD NOT BE POSSIBLE WITHOUT PETROLEUM.

Enbridge safely transports more than 2 million barrels of crude oil a day, delivering it to refineries around the Great Lakes, Oklahoma, and the U.S. Gulf Coast. These refineries turn this crude oil into various petroleum products.

One barrel of crude oil (42 gallons), when refined, can produce about 19 gallons of gasoline and 10 gallons of diesel fuel, both of which can be used to harvest food, transport products, heat homes, and sustain our military. The remainder of that barrel of oil can be made into some 6,000 other possible products from petroleum feedstock. Just a few examples are shown in this handout.

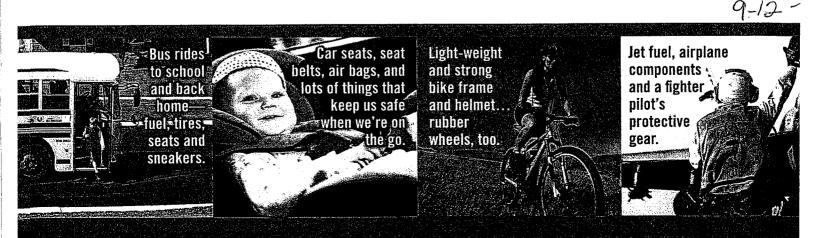
Many things beyond gasoline come from products derived from petroleum.

### A LOT MORE THAN GASOLINE...

According to the U.S. Energy Information Administration, on average, Americans use nearly 20 million barrels of petroleum products every day. Oil and natural gas contribute to our health and well-being through a myriad of medicines, medical supplies and health and safety products. Other products made from petroleum by-products can be found virtually everywhere in healthcare including prosthetics and implants, sanitizing cleaners, and even the ambulance that needs to get you to the hospital fast.

An estimated 900 million tubes of lipstick are sold around the world every year. Not only is lipstick derived from petroleum, the PVC pipe in homes and about 50 percent of the new Boeing Dreamliner's<sup>TM</sup> primary structure, including the fuselage and wing, is made of modern composite materials originating from oil and natural gas.

Without petroleum your car would not run and would be a lot less safe. Laminated windshields, nylon air bags, and polyester seat belts provide added safety. Other features like stereos, speakers, and computers make those road trips a lot more fun.



### MURE THAN HALF OF THE CRUDE OIL REFINED IN THE UPPER MIDWEST IS DELIVERED To refineries by the enbridge pipeline system.

### So what's in a barrel of oil? More than you think...

Enbridge transports more than 80 different liquid petroleum commodities across North America including natural gas liquids and heavy, medium, and light grades of crude oil. As an interstate common carrier, all of the products we transport must meet strict pipeline quality specifications posted with the Federal Energy Regulatory Commission (FERC).

**Light grades** of crude that Enbridge transports are produced in western and central Canada, although a growing amount comes from the Bakken Formation primarily in western North Dakota, and can be refined into:

- gasoline,
- diesel, and
- jet fuel.

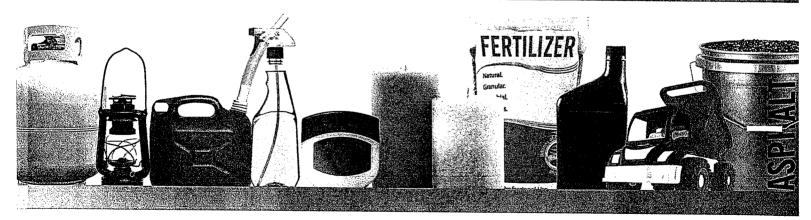
These fuels make it possible to transport food, school children, travelers, and workers.

Heavy grades are transported in batches with various grades of medium crude oil by Enbridge from western Canada's conventional and oil sands resources. Heavy crude is produced throughout the world from California to Venezuela to Mexico, and it offers the most versatile product refining including:

- ingredients for countless products from fertilizers to plastics;
- fuels, heating oil, lubricants; and,
- asphalt for roads, roofs, runways, and the like.

Canadian heavy crude oil has been a secure, reliable and growing resource for refineries in America's heartland for decades. Its key components are similar to heavy crude oil from California, Nigeria and other locations around the world.

### TALL OF THESE PRODUCTS ARE MADE FROM HIGHLY VERSATILE HEAVY CRUDE



### Learn more about petroleum products at:

- American Petroleum Institute api.org/oil-and-natural-gas-overview.aspx
- U.S. Energy Information Administration Energy Explained at www.eia.doe.gov/energyexplained

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## EMERGENCY PREPARED

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ENBRIDGE





## TRAINED AND PREPARED TO RESPOND

Enbridge and our system of pipelines reliably transports secure supplies of North American petroleum we all use every day. While our goal is zero leaks, we remain prepared should an emergency occur as no means of transportation is risk-free.

Enbridge takes its responsibility for pipeline safety seriously, and we have emergency response plans in place to work promptly and effectively with local emergency responders. Enbridge employees also conduct extensive training and regularly meet with and train with local emergency responders. Our Emergency Response Plans meet or exceed regulatory requirements and are reviewed and approved by the Office of Pipeline Safety, the federal pipeline safety regulator.

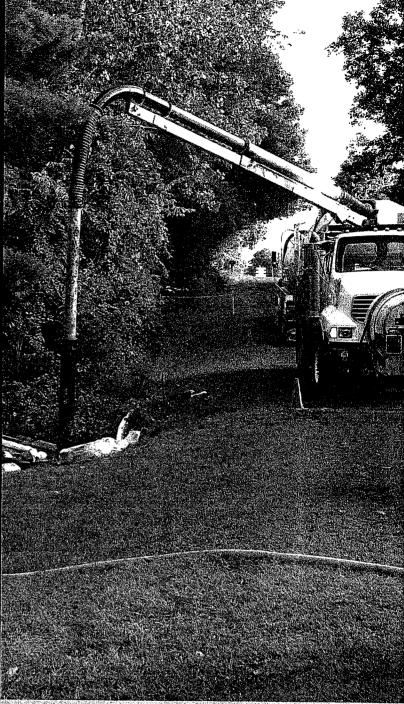
In the unlikely event of a leak, Enbridge will act swiftly to shut down the pipeline, contain the release and protect the safety of the public. Under the oversight of the Office of Pipeline Safety and environmental agencies, Enbridge will complete a safe repair and resume shipment of product to regional refineries, while completing cleanup and moving toward long-term restoration of the area affected. Enbridge representatives also will work with affected



landowners to compensate for damages caused as a direct result of an incident.

Our emergency response plan directory provides protocol

and recognized resources.



### Reliable, safe delivery of energy

While underground pipelines are the safest way to transport petroleum, there are still risks involved. Enbridge is prepared to respond with extensive site specific emergency response readiness, including:

- Personal Protective Equipment and air quality monitors;
- Containment and absorbent booms, and skimmers;
- Vacuum trucks and heavy equipment; and,
- Contractors for on-call assistance.



## Stages of Response, Cleanup and Recovery are Swift and Comprehensive

Any incident is one too many, and Enbridge, working with regulators, continues our efforts to reach an ultimate goal of zero incidents along our pipeline routes.

Enbridge strives to protect our pipelines from corrosion, excavation damage, worker error, material failure or other threats. A comprehensive set of measures are in place to reduce and avoid pipeline incidents. In the unlikely event an incident should happen, our response involves:

#### **Discovery**

- A detectable drop in the pressure of petroleum being transported will trigger alarms on our 24-hour Pipeline Control System and prompt an automatic pipeline shutdown or signal trained operators to take action and initiate on-site checks if an abnormal condition is suspected. The Pipeline Control System or trained operators can remotely shut down pumps and close valves to isolate a section of pipeline.
- Routine surveillance by aerial patrol and other right-of-way inspections can identify abnormal conditions that may be a result of a release; and,
- Sometimes a release or unusual condition is reported by a member of the public or local emergency responders. Our public awareness program informs people who live and work along our lines what to do should they suspect a release.

### **Notifying and Reporting**

- There are strict notification and reporting requirements to ensure Enbridge alerts and mobilizes federal, state and emergency responders.
- Simultaneously, trained Enbridge response employees are notified and deployed. Enbridge has maintenance crews and a vast network of contract equipment and emergency resource personnel trained in emergencies staged all along our system.

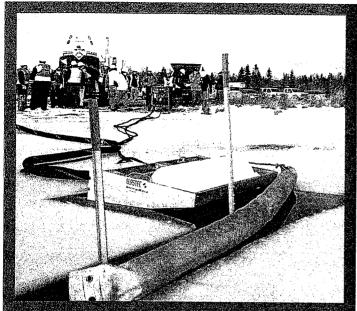
**Response and Containment** – Enbridge emergency response resources are positioned strategically across our pipeline system and can be mobilized immediately to respond to suspected emergencies as needed. This includes:

- Trained and qualified human resources, local contractors and suppliers.
- Developed relationships with area industry that allows access to cooperative response resources.
- Enbridge crews train and work in a unified approach with local emergency responders and governing environmental agencies.
- Incident response focuses on public safety.
- Containment and then product recovery activities depend on the site of the incident. Enbridge has absorbent and containment boom, vacuum trucks, skimmers, boats, and buoys that can be used to remove spilled product in water ways. Heavy equipment and other removal tools can be used for land recovery depending on soil and location.
- Communications equipment aligns working groups for affective and efficient response.

**Cleanup** — Depending on the nature of the site and scale of the incident, cleanup involves varying and coordinated operations with Enbridge employees and multiple federal and state agencies, and contractors. Soil will be removed or treated, water tested and the petroleum safely and swiftly removed from the impacted area.

**Restoration** — Our top priority is always committed to continuing our cleanup efforts until we have returned the affected area as close as possible to its pre-existing condition. Throughout this work, the safety of surrounding communities and the protection of the public, water and environment are of the utmost importance.

- In the United States alone, more than 2 million miles of pipelines deliver petroleum products and natural gas.
- Pipelines are the safest, most efficient and most reliable way to transport liquid and natural gas energy resources.
- Pipelines operate 24 hours a day.



Training exercises are conducted with a variety of scenarios, locations and at all times of year. We share the lessons we have learned through investigations from past incidents and review them within our company, with industry and with local responders. Proven techniques and equipment are used during training exercises and strategically positioned across our pipeline system for immediate access in an emergency.

### **Safe Community Grants**

Our "Safe Communities" program is dedicated to providing grants to first-responder organizations located along our pipeline route to help underwrite the cost of equipment or training.

This program is a voluntary opportunity for interested and qualifying organizations. It further builds relationships and supports organizations that would be an extension of our response team should an incident occur in that area.

Applications are available at: enbridgeus.com/community

### **Understanding Our Products**

Enbridge crews and local responders are familiar with our pipeline system and the petroleum products we transport. We have Material Safety Data Sheets (MSDS) that describe the various grades of crude oil and petroleum we carry that provide an additional resource so workers in close proximity to the products are aware and protected.

### **Community Relationships**

Our monitoring, testing, maintenance, response training, and community awareness together support overall pipeline safety. Enbridge maintenance and field employees go through annual training and we regularly invite participation from local first responders along our pipeline route and near our facilities.



Our public awareness program reaches out to people who live and work along our U.S. pipeline systems including:

- schools,
- excavators.
- farmers,
- · emergency officials, and
- public officials.

We also supplement mailing programs with in-person and group meetings. Local organizations and emergency agencies

interested in learning more or would like to plan opportunities for cooperative training can contact us at uspublicawareness@enbridge.com.

9-17

