

Alliance Pipeline: Founded By Rebels With a Cause



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Note: The illustrations within this article appear in large resolution at the end of the text.

About 15 years ago, a group of exasperated Alberta business executives conceived a natural gas pipeline idea so radical that it shook up the old order in Western Canada's energy business and still reverberates today.

The group comprised Alberta and British Columbia natural gas producers. Simply put, they wanted to make more money. They believed the price they were getting for their gas at the wellhead was too low. There wasn't enough pipeline capacity to move the plentiful and growing production of Western Canada to higher-priced U.S. markets. They were stuck too often with the low prices of the glutted local market. They resented that they were painfully slashing costs to save their bottom lines but didn't see pipelines helping them by cutting their own costs.

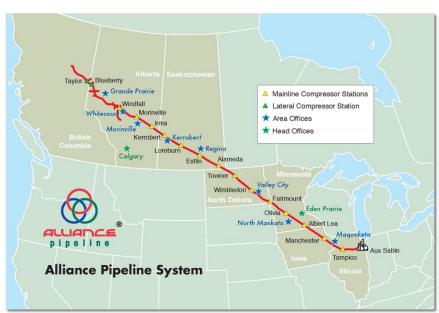
Money can be a primordial motivator, and in this case it inspired a game-changing idea: Let's build our own pipeline. This was indeed radical, as gas producers even today rarely own major gas pipelines in North America.

The Alliance Pipeline [1], which went into service 11 years ago, became one of the longest gas pipelines ever built, and at \$3.1 billion one of the most expensive. In a way, the story of Alliance's founding is like tales of other big projects that came into being, whether they were laying transcontinental railroads, launching rockets to the moon or developing Arctic oil fields. The common denominators are hubris and hustle, clarity of vision and tolerance of risk taking.

One thing is clear: Alliance's birth was a brawl. The cast of participants included entrepreneurs, oil men, an old guard that resisted change and bystanders who hoped to dodge collateral damage.

The story has roots in Canadian and U.S. steps from the late 1970s into the 1990s to deregulate their natural gas industries – including a historic document known as the Halloween Agreement – and the realignment of interests that followed.

Alliance also has linkages with Alaska. Alliance's backers and regulators avoided the missteps that helped keep plans for the 1970s-era Alaska natural gas pipeline on the shelf, by having the market, not politicians, pick the route. If the current Alaska gas pipeline proposal goes ahead, Alliance and competing Canadian pipelines would receive gas from the 1,717-mile pipeline spanning Prudhoe Bay to the Alberta-British Columbia border. And if the Alaska pipeline gets built, the North Slope gas producers could hold ownership interests, a concept that Alliance pioneered.



Map courtesy of Alliance Pipeline.

Alliance was a major coup for the people who backed it. "The development of the Alliance Pipeline project demonstrates how proactive producers can be effective in moving their gas to market," said author Margaret L. Healy in a history of the Alliance birth.

Gas industry upheaval

To understand how Alliance could even come about, one needs to understand the tumult that the U.S. and Canadian natural gas industries were undergoing in the 1980s and 1990s. The modern natural gas industry really is only two or three generations old, unlike its oil industry cousin, which took much of the shape it has today early in the 20th century as automobiles caught on and big oil fields were discovered in Texas. Before World War II, natural gas was the unwanted step-child of oil production. Lack of pipelines confined gas use to regions around the fields. Officially as much as one-fifth of the production was vented or flared just to get rid of it, although the true volume disposed of this way likely was much higher. The best money was made in the natural gas liquids – propane and butane – not in the more abundant methane that is used to heat homes and make electricity today.

Although gas production and consumption expanded dramatically from the 1950s into the 1970s as stronger and longer pipelines were laid to carry the methane, the interstate natural gas industry was constrained by heavy regulation – much of which is generally acknowledged now as having been misguided. Price regulation in particular caused supply shortages as drillers avoided hunting for gas fields. But in the late 1970s and 1980s, the U.S. and Canadian governments took a series of steps to strip away much of their regulation. In Canada, a key event occurred in a meeting room near Parliament Hill in Ottawa as children trick-or-treated in a snowstorm on Oct. 31, 1985. In reaching the so-called **Halloween Agreement** ^[2], the Canadians dismantled key elements of their decades-old legacy of government-controlled markets.

Deregulation uprooted the role of pipelines. Before they not only owned the transportation link between producers and consumers, they owned the gas within their pipes. Deregulation took away their ownership of the gas – letting producers, gas buyers or a new layer of gas marketers play that role, an arrangement that persists today.

"With the unbundling of pipeline transportation services and establishment of open access, hundreds of buyers and sellers entered the market. Gas is now sold directly by producers, aggregators, and a variety of marketing companies and brokers to LDCs (local gas utilities), industrial, commercial and residential consumers," the Canadian National Energy Board said in a **1996 look back at 10 years of natural gas deregulation** [3].

Some pipeline companies branched into new businesses to maintain their growth. For example, NOVA Gas Transmission, which owned the big gas pipeline network within Alberta, expanded into the province's petrochemical industry.



On Nov 30, 1999, workers welded the Alliance Pipeline where it crosses U.S.-Canada border. Photo courtesy of Alliance Pipeline.

Into this new era stepped entrepreneurs such as John Lagadin, a Calgary businessman who started a company called Direct Energy Marketing a few months after the Halloween Agreement was inked. A decade later Lagadin was to play a pivotal role in the founding of Alliance.

Winners and losers

The Western Canada gas industry had its ups and downs adjusting to deregulation. Production boomed, doubling between 1986 and 1995. Exports to the south soared to feed a U.S. economy that was red hot by the mid-1990s. The early 1980s completion of the Albertato-the-Lower 48 legs of the proposed Alaska gas pipeline turned out to be timely, even though the northern portion from Alaska got shelved. Western Canada pipelines were running full.

It was the full pipelines that chafed Western Canada gas producers. "Canadian producers were receiving much less for their gas than (U.S.) Gulf Coast producers because there was insufficient pipeline capacity to move the gas out of Alberta," Healy wrote in her Alliance history.

Canadian pipelines had little incentive to quickly boost their capacity because, until Alliance Pipeline came along, "they faced almost no competition," Healy wrote. Producers depended on NOVA to gather and move gas within Alberta and on TransCanada to pipe the gas out of Alberta.

"In contrast, Gulf Coast producers had their pick of major interstate pipelines to deliver as much gas as they could produce to rapidly expanding markets in the Northeast," Healy wrote. "As a result, large-volume industrial end users preferred to rely on more accessible Gulf

Coast supplies instead of Canadian supplies – even if the Canadian gas was cheaper – due to inadequate Canadian pipeline capacity that frequently interrupted gas deliveries during peak demand periods."

The 1996 NEB analysis of deregulation noted: "Despite the doubling of cash flow from exports, the upstream petroleum sector has not enjoyed strong financial results in the last decade. Return on investment averaged only 4 percent per year between 1986 and 1994. These mediocre returns are reflective of the lower price environment for natural gas and crude oil and the competitive structure of the sector."

An **NEB report from 1999** ^[4] described the situation this way, "From 1996 to 1998, natural gas producers faced a situation of constrained pipeline takeaway capacity from the WCSB (Western Canada Sedimentary Basin, the geologic swath that houses the region's rich oil and gas resources). Average natural gas production was flat at about 15.4 bcf/d (billion cubic feet a day) during this period and exports of natural gas increased only marginally, slowing significantly from average double-digit growth over the previous five years. The constraint in pipeline takeaway capacity from the WCSB resulted in an oversupply situation in Western Canada; consequently, natural gas prices in Canada dropped and remained low relative to other markets, such as the U.S. Midwest, until pipeline expansion projects were announced."

The centerpiece of those expansion projects was the Alliance project then under construction. The mostly 36-inch-diameter pipeline would span 1,875 miles from Western Canada to suburban Chicago, with a capacity to carry 1.3 bcf/d, allowing 16 percent more gas to be exported than the export volume of 1997. (With expansions, Alliance today is 1,984 miles of pipeline and 1.5 bcf/d of capacity, according to the pipeline's website.)

Sketch on a napkin

The story of Alliance's conception reads like it was scripted by Hollywood.

The setting: The Elephant & Castle pub in downtown Calgary, Alberta.

The cast: Two petroleum industry pals.

The prop: A napkin.

This meeting took place in 1992, **according to one account** ^[5]. Steve Haberl and Glen Perry were having drinks after work. Haberl worked for Sceptre Resources, a Canadian producer, and Perry for Direct Energy Marketing, the company Lagadin started soon after the 1985 Halloween Agreement was reached. Direct Energy bought gas from producers, arranged transportation and sold it to end users, Lagadin said in a recent interview. The company knew well the vexation producers felt about the wellhead prices they were enduring.

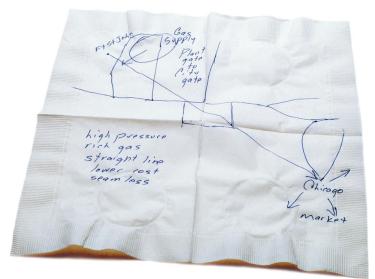
At the time, competing proposals to expand pipeline capacity between Alberta and California were slugging it out – one project backed by a pipeline company and one backed by producers. (The pipeline company eventually won the battle.)

The two men mused in the Elephant & Castle: Why were no pipeline companies proposing to take more Canada gas to the Chicago area, where it could flow into major pipelines that converge there?

Perry sketched out the pipeline route on a napkin – a nice straight line from British Columbia to Chicago. Not that hard. Make it a high-pressure line and you might have good economies of scale.

"I must admit we were a little into our cups at that time, so we were dreaming dreams of grandeur," Perry said a few years later. "It kind of hit the harsh light of reality over the next couple of years as we tried to see if anybody was interested in it and basically the idea died."

Lagadin said that after Perry did a serious analysis it was clear the idea of piping dry gas – methane – to Chicago was a loser.



Perry's sketch of the Alliance Pipeline idea on a napkin. Image courtesy of Alliance Pipeline.

By 1994, with producer frustrations mounting, Lagadin said he had an inspiration: What if the pipeline delivered wet gas to Chicago? What if instead of separating liquids – propane, butane and ethane – from the methane near the wellhead, the liquids flowed with the gas stream all the way to Chicago, essentially moving the wellhead to the Midwest? Liquids enriched methane brings a higher prices; the hottest action in Lower 48 shale gas production today is occurring in **gas plays that are rich with liquids** ^[6].

At the time, Western Canada's NGL production stayed home as feedstock of Alberta's growing petrochemical industry. Lagadin asked Perry and a team of cohorts to study if piping wet gas – the liquids and methane together – under high pressure to market would make financial sense. It did. Lagadin, Perry and the Direct Energy crew then shopped the idea to producers headquartered in Calgary.

In 1995, 22 Canadian gas producers and marketers united to study the idea's merits formally. "In some ways these producers developing new pipeline systems were better suited for today's more competitive gas transportation market than traditional interstate pipeline developers, at least at the feasibility stage," Healy wrote in her Alliance history.

"For starters producers enjoy an inherent optimism because, despite the wide swings in industry fortunes, oil and gas producers must persistently believe in healthy oil prices going forward to justify the risks they take. Pipelines, as regulated entities, are incentivized to be more cautious by regulations designed to protect the public interest."

The study results supported going ahead, and in June 1996, two new companies with common ownership formed: One to build the line in Canada and the other to build the U.S. pipeline. They applied for permission from Canada's National Energy Board and the U.S.

Federal Energy Regulatory Commission. They had commitments from 37 shippers that subscribed to use 98 percent of the pipeline's capacity for 15 years – about half the gas would come from the producers that founded Alliance. Those two regulators, NEB and FERC, became the setting for the battle that followed.

The fight

As has happened with other big gas pipeline proposals aiming to enter an underserved market, entrenched interests thought the Alliance idea was terrible.

Key foes were TransCanada and NOVA. As was said, NOVA owned the vast network of pipes within Alberta, and TransCanada owned a key pipeline system that moved gas to Eastern Canada and the U.S. Midwest and East.

ALLIANCE PIPELINE AND ITS KEY COMPETITORS



Alliance would be an expensive option for consumers, TransCanada and NOVA warned regulators. It would be much more cost effective to let them expand their pipeline systems, they said. Besides new construction, as opposed to expansions, disrupts more of the environment (Alliance construction affected 12,000 acres in the United States alone) and causes more clashes with private land owners over eminent domain. Regulators historically had been averse to allowing duplicate pipe.

The petrochemical industry had a separate beef. The Alliance project included a new \$365 million gas processing plant called Aux Sable southwest of Chicago. At Aux Sable, the liquids would be separated from the methane, with each then traveling to its ultimate user.

It would be catastrophic to export some of Western Canada's gas liquids on Alliance, the petrochemical companies argued. Their industry would be starved for feedstock and burdened by higher prices. Canadian workers would lose jobs.

Customers of existing gas pipelines got in the fight. Gas shippers locked in to long-term contracts worried their rates would rise if other shippers in the same pipeline defected to Alliance. The utilities they fed gas to had similar worries, although some liked the idea of Alliance competition. Before regulators, critics tried to exploit every vulnerability they perceived in the Alliance project.

Regulators dissected just about every aspect of the Alliance proposal in response to actual or anticipated criticism, as they do for major gas pipeline projects. How would stream crossings affect fisheries? Could the project avoid clearing sparse prairie woodlands? Were Alliance's shipping rates fair? Was it proper to require shippers to include NGLs in their gas streams? Would the compressor stations be too noisy?

In the United States, even the Federal Aviation Administration was swept up in the maelstrom, urging FERC to move cautiously. Would there be an air-safety issue if pilots started using the pipeline right of way as a visual reference? Would trenching during construction accidentally cut power to airports and navigational aids?

The regulatory wheels turned methodically through 1997 and 1998. The National Energy Board hearings in 1998 lasted an exhausting 77 days. TransCanada and NOVA poured paperwork on the NEB, filing 2,500 requests for information. Then, a plot twist developed that prompted those two major voices against Alliance to withdraw their objections.

Construction and aftermath

In the midst of the Alliance fight, TransCanada and NOVA executives decided that their best path forward into the 21st century was to merge. The merger needed regulatory approval, and Alliance loaded its cannons to object.

Not surprisingly, the two sides called a truce and engaged in a classic case of logrolling to avoid a stalemate. TransCanada and NOVA dropped their opposition to the Alliance project. The Alliance owners stepped aside to let the merger pass. Regulators soon sanctioned the Alliance project – FERC in September 1998, contingent on Canadian approval, and the NEB in November that year.

To the petrochemical industry, the NEB said the evidence strongly demonstrated that Western Canada gas reservoirs held an ample storehouse of gas liquids, enough to feed that industry for many decades at affordable prices.

As for the pipeline itself, the regulators basically reasoned that pipeline competition is good for consumers and that the Alliance owners presented a financially and environmentally sound project. Commitments from gas producers and other gas shippers to fill the Alliance line for 15 years is persuasive evidence that the marketplace wants the project, they said.

In this way, the regulators' reliance on shippers to determine the winner sidestepped a flaw of the 1970s Alaska gas pipeline project. That project was driven ahead as much by the U.S. Congress, the executive branch and Alaska politics as by the market, with low market prices and high construction costs eventually killing the Alaska portion of the line. In fact, by law

North Slope producers were denied ownership interests in the pipeline, barring from the table key stakeholders in seeing the gas project go forward. (That prohibition was removed later.)

In spring 1998, a syndicate of 42 international banks agreed to lend up to \$2.6 billion to build Alliance. Alliance construction began in February 1999 and the pipeline started service on December 2000, just over 15 years after the Halloween Agreement that made Alliance possible. The pipeline was finished on schedule, but the \$3.1 billion cost was about 25 percent greater than Alliance's initial construction estimate. The gas producers that founded Alliance got out of the pipeline ownership business quickly, most selling their shares before construction started and retreating to their comfort zones.

In 1997, Alliance's roster of 19 owners included such big petroleum companies as Chevron, Gulf, Occidental, Unocal and Petro-Canada. When Alliance started service three years later, the ownership roster involved five companies, all of them in the pipeline business.

Lagadin sold his Alliance interest to a gas pipeline company in 1997. He also sold his interest in Direct Energy, which now is much larger and owned by British energy conglomerate Centrica.

The Alliance pipeline today is a partnership of two big companies, Calgary-based pipeline giant **Enbridge Inc.** ^[7] and Fort Chicago Partners, an arm of **Veresen Inc.** ^[8], a pipeline and energy business also based in Calgary.

Enbridge, Veresen and Williams own the **Aux Sable Liquid Products** ^[9] plant 50 miles southwest of Chicago, not far from the end of the Alliance line. Aux Sable is one of North America's largest gas processing plants, with capacity to process 2.1 billion cubic feet of natural gas into 102,000 barrels of NGL products each day. It currently processes about 1.6 bcf a day into roughly 70,000 barrels of ethane, propane, butane and pentane.

Among the 38 companies shipping gas in the Alliance pipeline this fall were companies also active in Alaska: BP, ConocoPhillips, Shell, Chevron and Apache, as well as the company Lagadin founded in the mid-1980s – Direct Energy Marketing. The published tariff to ship a thousand cubic feet of gas from British Columbia to Chicago is about \$1.50, though long-term contract shippers negotiated their own deals. Alliance is still running full, as its initial 15-year contracts with gas shippers don't expire until late 2015.

Meanwhile, the TransCanada/Nova system is suffering. Falling Alberta gas production in recent years has left their pipelines with plenty of spare capacity.

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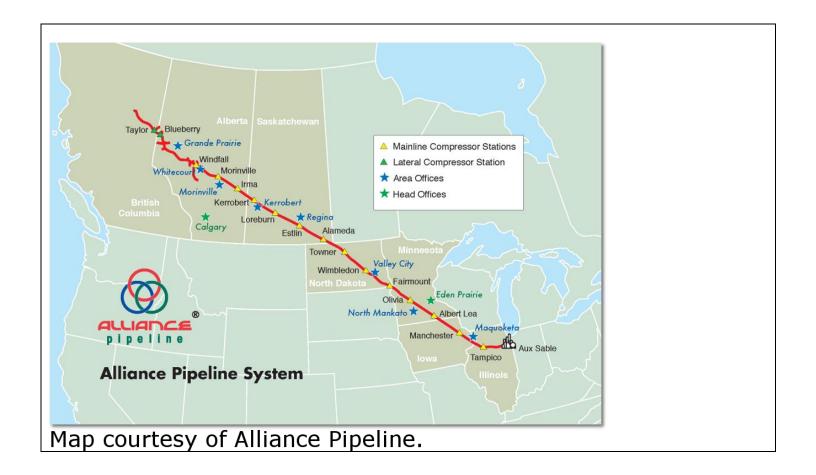
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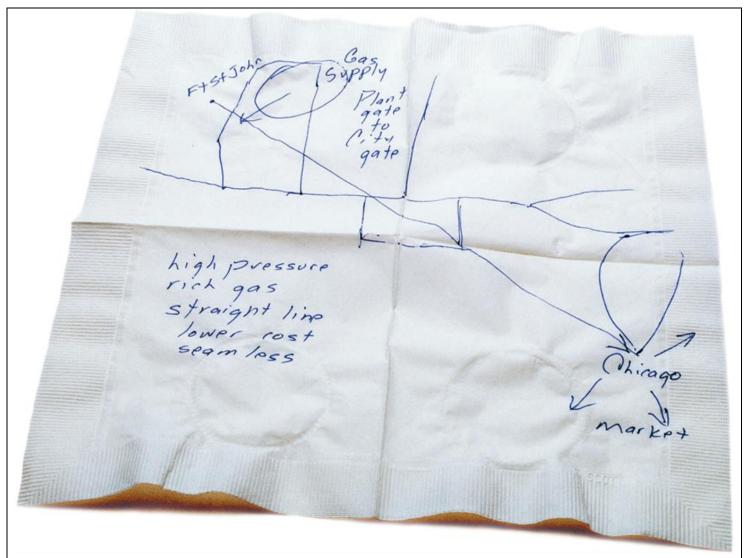
Links:

- [1] http://alliance-pipeline.com
- [2] http://www.albertaoilmagazine.com/2010/10/the-halloween-agreement-was-no-bogeyman-for-alberta%e2%80%99s-natural-gas-market
- [3] http://www.arlis.org/docs/vol1/AlaskaGas/Paper/ Report_NEB_1996_NaturalGasMarketAssessment.pdf
- [4] http://www.arlis.org/docs/vol1/AlaskaGas/Paper/ Report_NEB_1999_ShortTermNaturalGasDeliverability.pdf
- [5] http://www.gasandoil.com/news/n_america/7bbcaa521c26eee2051283841a43050d
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- [10] http://www.arlis.org/docs/vol1/AlaskaGas/Paper/Paper_OFC_2015/Bill_White.pdf





On Nov 30, 1999, workers welded the Alliance Pipeline where it crosses U.S.-Canada border. Photo courtesy of Alliance Pipeline.



Perry's sketch of the Alliance Pipeline idea on a napkin. Image courtesy of Alliance Pipeline.

