Appendix 3: Alberta's Electricity Industry
An Overview

“At its point of use, electricity is one of the cleanest, most efficient forms of energy.”


The physical system

Every electricity system includes the following components (Ronayne 2001):

- generation (production of electricity)
- dispatch (coordinated control of generation and transmission to meet the demand for power)
- transmission (wires, equipment and services that support high-voltage electricity transportation)
- distribution (wires, equipment and services that support low-voltage electricity transportation)
- retail (customer services related to electricity purchasing, metering and billing)

Market structure and governance

Alberta’s electricity industry includes four inter-related energy markets. A liquid, competitive wholesale market is the foundation of a well-functioning retail market.

- The **wholesale market** (also called the “power pool” or the electricity “spot market”) is where electric energy is bought and sold in real time. Generators offer to sell their electricity production to the power pool and are paid the pool price if their offering is dispatched. Retailers bid to buy the power they need to supply their customers. Industrial consumers bid to buy the power they need for their operations.
- The **forward market** is where electricity is bought and sold before the physical commodity is actually produced. The physical forward market involves the delivery of electricity in the real-time wholesale market, but payments from buyers to sellers are made outside this market. The forward financial market involves the trading of financial contracts that are derived from the electricity commodity. Delivery involves the flow of cash, not the flow of electricity.
- The **ancillary services market** is where the Alberta Electric System Operator purchases electricity reserves and other services to ensure the safe, efficient and reliable operation of the electricity system.
- The **retail market** is the point of intersection between retail electricity providers (and default rate providers) and their customers. It is the final delivery end point for electric energy, where billing takes place.
CHARACTERISTICS OF AN EFFECTIVE ELECTRICITY MARKET

1. The delivery of electricity is reliable.

2. The market is fair, sustainable and competitive.

3. The building of new generation supply is driven by predictable, understandable market price signals that support investment, recognize the required lead time and provide a foundation for economic growth.

4. Clear, stable policy and regulations provide investor and consumer confidence. Suppliers are confident they have opportunities to compete and they can move their product to market. Purchasers are confident about their ability to access supply at competitive prices.

5. No participant wields market power (influence over market operations) that results in unwarranted transfers of wealth.

6. A flexible, adaptable structure supports the operation of a competitive market without the need for government intervention.

7. Market structures satisfy the needs of all participants, including industrial, commercial, farm and residential consumers.

8. Market structures provide certainty for new and existing participants.

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1 Adapted from the Department of Energy’s 2005 document, Alberta’s Electricity Policy Framework.
The Physical System

Generation

Until 1996 (Alberta Advisory Council on Electricity 2002), Alberta’s electricity system was dominated by three vertically integrated utilities regulated by the Alberta Energy and Utilities Board (now the Alberta Utilities Commission). As of August 2012, Alberta has 105 generating units with a total capacity of more than 14,000 megawatts (AESO 2012e).

Since 1998, privately owned companies have invested $11.5 billion to add 6,800 megawatts of new generating capacity in the province (DOE n.d.-b; AESO 2012k). In Alberta, private investors decide when to build new capacity and assume the risk with regard to the type, timing and location of their investments. Investors are free to construct any type of generation they choose, at any point in time and in any location. Decisions about the need for and investment in electricity generation are guided by competitive market forces.

SOME OF THE WAYS ELECTRICITY IS GENERATED

- **Coal-fired generation**: Coal burned in furnaces heats water to create steam that spins turbines to generate electricity.

- **Gas-fired generation**: Turbines are induced to spin by the high-speed rush of compressed air that has been heated by burning natural gas. In some plants, the exhaust from gas-fired turbines is run through equipment that extracts heat that can be used for other purposes.

- **Cogeneration**: Cogeneration uses waste heat produced in the process of generating electricity. Industrial facilities can use this heat for their plants and industrial processes. They can also use it to produce additional electricity to sell or to power their operations. Oil sands and other operations that produce steam and electricity in the same facility can increase the net energy yield from the primary fuel from 30–35% to 80–90%.

- **Microgeneration**: Since 2008, Alberta consumers have had the right to generate their own power and to receive credit for any power they send into the provincial grid. Microgeneration must use renewable, environmentally friendly energy sources (such as solar panels or wind turbines) to generate electricity for the consumer’s own needs.
Alberta’s coal-fired generators provide the electricity system with base load. This is because these generators tend to run constantly, since taking them off-line takes time and incurs future maintenance costs (AUC 2011a).

Natural gas–fired generators produce two types of generation (AUC 2011a):

- Cogeneration is used in upgrading facilities and in bitumen production from oil sands projects. Cogeneration facilities have a high utilization rate because they are needed to produce electricity and steam needed for industrial operations.

- Peaking generation typically runs only during high demand or peak periods. It has lower utilization rates than cogeneration.

Alberta’s electricity policy framework, market design and transmission system support the development of all forms of electrical generation—“whether it’s large-scale, local, fossil-fuel based or renewable” (AESO 2012k, p. 9).

Dispatch¹

“Demand in Alberta follows fairly consistent daily, weekly, and seasonal patterns. Peak demand is highest during the winter, followed by summer, while spring and fall are the lowest. Demand is higher during the day (on-peak hours) than during the night (off-peak hours), and weekdays are higher than weekends.”

—Alberta Innovates Technology Futures, Energy Storage, p. 22.

In systems such as Alberta’s, where there is no infrastructure to support the economical storage of electricity, power must be used at the same instant it is produced. This means generating plants must produce electricity in real time, as consumers demand it. Peak demand typically occurs around dinner time on cold, dark winter evenings when people are cooking and using appliances and electronics (AESO 2012k). When there is increased demand for power, generation plants must start up additional turbines to produce the needed electricity.

The Alberta Electric System Operator monitors an interconnected electricity grid and dispatches power to meet Albertans’ needs. Each section of the grid interconnected with neighboring sections to facilitate emergency support, coordinated operations and electricity purchases and sales. Minute-by-minute, hour-by-hour monitoring keeps the electric system physically stable as demand rises and falls, as generating units are ramped up or ramped down and as emergency situations are managed (DOE 1996b; Utilities Consumer Advocate n.d.-c).

The Grid

Alberta’s “interconnected electric system”—“the grid”—is an interconnected network of generating plants, substations and power lines that links with grids in other jurisdictions. Electricity grids provide utilities with alternative power paths in emergencies, and they make it possible for network participants to buy and sell power from each other and from other power suppliers (Centre for Energy 2012b).

Interties

Interties are power lines that connect Alberta’s electricity system (grid) to other jurisdictions. Alberta’s grid is currently connected to British Columbia’s and Saskatchewan’s.² A third intertie—connecting with Montana—is under construction and is expected to be operational in 2012 (AESO 2010b).³

Interties act like a gate that can be opened or closed to allow the movement of electricity into or out of the province (AESO 2009a). They provide access to emergency power when Alberta’s generators are unable to produce enough to meet demand, or when severe storms cause transmission equipment failures. They also facilitate the import and export of power. Interties make it possible for Alberta to export surplus power. When the wind is blowing at a level that produces more power than Albertans can use, interties provide a market where the surplus can be sold. When electricity is less expensive


² The Alberta–Saskatchewan intertie uses high-voltage direct current technology (HVDC).

³ The Alberta–Montana intertie is a “merchant intertie.” This is a transmission line built and operated by a private investor that is not a regulated utility for the purpose of selling transmission capacity, usually to generators or load customers who want to transmit power over the intertie.
in other markets than in Alberta, cheaper supply can be imported over the interties (AESO 2010d and AESO 2009a).

Interties are critical for the reliable operation of the transmission system and for the integration of wind power into the grid.

Alberta’s interties were built to import or export about 1,150 megawatts of electricity—enough to supply every city in Alberta except Calgary and Edmonton (AESO 2007). Congestion on the system means that both of Alberta’s interties operate at less than full capacity.

**Transmission**

When electricity is transported over long distances, resistance in the wires converts some of the energy to heat. To minimize this power loss (“line loss”), step-up transformers change the low-voltage electricity produced by generators to high-voltage, which moves more efficiently along transmission lines. Step-down transformers at more than 500 substations across the province reduce the voltage to a level that can be used to power homes and businesses.

Power generators depend on reliable transmission lines to carry electricity from where it is produced to where it is needed.

Electricity transmission in Alberta is managed and regulated as a single, integrated province-wide system. The Alberta Electric System Operator oversees the transmission system to ensure that it operates safely, efficiently and reliably. The AESO oversees the design and use of the system, and ensures non-discriminatory access at fair prices.

Economies of scale make the transmission system a natural monopoly, which remains regulated in Alberta’s restructured electricity system. Seven utility companies are responsible for transmission services in the province (AUC 2012a). These companies’ “own, operate, build and maintain the system of high-voltage power lines and other electrical equipment that moves power from generators to towns, cities and large industrial customers” (AESO 2012k). Each company is responsible for reliable, economical operations in its area.5

Alberta relies on a “robust, unconstrained, congestion-free” transmission system to balance electricity supply and demand and ensure the reliable distribution of power throughout the province (AESO 2010b). Generation plants are out of service 10–15% of the time, but since transmission lines are almost always available (99% of the time), power can be redirected to compensate (AESO 2010e) when facilities shut down or cannot supply the electricity that consumers need.

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4 The Transmission Regulation of Alberta’s Electric Utilities Act identifies utilities that provide transmission services as “transmission facility owners” or TFOs. Although TFOs own the lines and facilities, the transmission system is centrally administered by the AESO (the Alberta Electric System Operator).

5 Unlike distribution system owners, transmission facility owners do not have exclusive service areas. Nevertheless, transmission facility ownership is still broadly reflective of distribution service areas. Alberta’s major municipalities—Calgary, Edmonton, Lethbridge and Red Deer—own most of the transmission facilities within their city limits. Non-municipal transmission facilities owned by Atco Electric or AltaLink generally reflect their associated distribution service area boundaries.
Distribution Systems

Distribution systems move electric energy from the high-voltage transmission system to individual customers’ homes and workplaces. Distribution power lines and facilities operate at 25 kilovolts or less. Most Albertans receive electricity from such distribution lines, which carry power that has been stepped down to a lower, usable voltage.\(^6\)

Alberta’s distribution system ownership reflects the province’s electricity history. Calgary, Edmonton, Red Deer and Lethbridge own their own systems, as do the municipalities Cardston, Fort Macleod, Crowsnest Pass and Ponoka. Forty-one rural electrification associations still provide distribution service in rural Alberta. The rest of the province has been assigned to one of two major distribution utilities, FortisAlberta Inc. (generally in southern Alberta), and Atco Electric (generally in northern and southeastern Alberta).

Electricity distribution costs are closely linked to the number of customers per kilometre of line. Municipal costs per customer are generally less than the costs per customer in sparsely populated rural areas.

The distribution system, like the transmission system, is a natural monopoly. Most of Alberta’s distribution lines and facilities are owned and operated by four utility companies\(^7\).

Alberta’s four major distribution facility owners are regulated by the Alberta Utilities Commission, which approves the distribution tariff they are allowed to charge customers for the use of their services. Municipally owned distribution systems outside of Edmonton and Calgary are regulated by local city councils. Elected boards of directors regulate distribution systems operated by REAs (DOE 2012f).

Distribution system owners (also called “wire owners”) are responsible for building, maintaining and financing the portion of the electricity system that delivers energy to customers’ homes and business. In performing this role, they enter into agreements with retailers—the companies from which consumers buy their electricity.

Distribution system owners are responsible for:

- delivering electricity
- maintaining the distribution network, including upgrading and replacing power lines and facilities
- responding to power emergencies such as outages or fallen lines
- installing, maintaining and reading electricity meters
- providing consumption data and tariff billing information to retailers
- providing a default rate (the Regulated Rate Option, or RRO) to eligible customers in their service area (AUC 2012a; Epcor n.d.-c; DOE 2012e)

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\(^6\) Very large industrial customers may be connected directly to the transmission system and purchase power directly from generators (AESO 2009g).

\(^7\) Enmax and Epcor are municipally owned. Atco Electric and FortisAlberta are investor owned.
The Alberta Electric System Operator is responsible for managing and operating the wholesale electricity market and for managing the ancillary services required to keep the province’s electricity system stable. The AESO’s System Coordination Centre is staffed 24 hours a day, seven days a week (AESO 2011a).

The AESO manages the bid-offer process through which participants submit their prices for supplying power to and receiving from the pool. It determines the merit order (the ranking of supply offers according to price) and schedules the dispatch of energy, determining the overall schedule for which generating units should run. AESO system controllers use a highly specialized computer-based energy trading system to match real-time electricity supply offers with demand bids, and post this information on the AESO website.

The AESO’s energy trading system also receives electricity metering data and performs financial settlement and billing functions for the wholesale market. This ensures that distributors and retailers pay for the power they purchase for their customers, and that generators receive payment for the power they supply.

The AESO recovers its costs for managing the power pool through a tariff that is charged to power pool participants.

The Wholesale Market

Alberta’s wholesale energy market (the power pool) is an open-access, energy-only[^8] competitive market for electric energy supply. The Electric Utilities Act stipulates that all electricity traded in the province will be bought and sold through the pool. All generators are obligated to offer their power into the pool and are paid the hourly pool price for the energy they produce. The price is determined through supply and demand and set by the power pool itself. This means that market forces, not regulators, drive the industry.

In 2011, about 160 generators, suppliers, wire owners, buyers, sellers and traders participated in Alberta’s wholesale market, generating trades of approximately $8 billion (AESO 2012g; 2012n).

### The Importance of Price Signals

In a competitive marketplace, prices are like traffic lights. Long periods of high prices indicate a shortage of supply, and companies that can provide supply have the opportunity to turn a profit. In the electricity market, high wholesale prices tell investors that power supply is tight, and that new generation is needed to meet growing demand. In this sense, high prices are like a green light for investors to enter the market and get a piece of the action. When electricity prices are low, there is less opportunity for sellers to make a profit. Low prices are a red light for potential investors.

Price signals “support investment in the electricity sector and provide a foundation for economic growth” (AESO 2012a, p. 5). Investors rely on the accuracy of market price signals to make appropriate business decisions. Consumers rely on market price signals to adjust their consumption behaviour, buying less when prices are high and more when prices are low.

[^8]: In an energy-only market, generators are only paid for the actual electricity they produce and offer to the market. In a capacity market, by contrast, generators are paid for the availability of their capacity to supply energy: they receive a fee whether energy is produced or not.
How Pool Price Is Determined

**Offers to sell, bids to buy**

One day before they wish to sell it, power generators and importers offer their electricity supply to the power pool (wholesale market) for sale at a given hour of their choosing at their own chosen price.

For each hour of the day, offers are sorted from lowest to highest in a list called the **merit order**. As electricity demand shifts throughout the day, AESO system controllers use the merit order to dispatch power to the transmission grid and balance supply and demand. The lowest-priced power is dispatched first, followed by the next lowest and the next lowest, until all the electricity supply required for that particular hour has been used.

Every minute, offers of electricity supply that are submitted by generators and dispatched by system controllers set a system marginal price (SMP). At the end of each hour, the 60 one-minute SMPs are averaged to calculate the pool price for that hour. The average pool price for 2011 was $76.22 per megawatt hour (AESO 2012).

The pool price serves as the reference price for setting financial electricity contracts.

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**Ancillary Services**

Maintaining the reliability of the electricity system requires that supply and demand are maintained in balance. To maintain this balance, the system must be able to respond to normal fluctuations. It must also be able to respond to unexpected events such as generators failure or sudden, unexpected ramping up or down of wind generation (Alberta Innovates Technology Futures 2011).

Ancillary services are electricity reserves and other services that ensure the safe, efficient and reliable operation of the electricity system (AUC 2011a). Ancillary services can relate to the normal operations of the system or to operations during or after a disturbance to normal operations, like when a storm takes down power lines or a generator fails. They can be active in real time, or available on standby.

The Alberta Electric System Operator procures and manages ancillary services, and recovers these costs through system access fees and tariffs paid by the generators and distribution system owners that are connected to the provincial grid. Except where there is a location-specific need that only certain eligible generators can meet, the AESO typically procures ancillary services through a competitive process—typically through the Alberta Watt Exchange (Watt-Ex) trading platform (AUC 2011a; Alberta Innovates Technology Futures 2011). Black start services are procured through bilateral contracts (Alberta Innovates Technology Futures 2011).

The most common type of ancillary services relate to reserves—supplies of energy that can be called on when needed to balance supply and demand.

- **Operating reserves** can be called into service, on short notice, to balance supply and demand from moment to moment and protect the system in the case of unexpected disturbances. Operating reserves take the form of generating capacity that the AESO can dispatch or load that can be reduced on demand.

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**OFFERS TO SUPPLY**

Since 2007, Alberta’s power pool has had the “must offer, must comply” rule. Under this rule, each generating asset in the system has an identified maximum supply capacity that it can provide under optimal conditions. Unless they can identify an operational constraint that justifies offering less, all generators must offer their maximum capacity to the power pool. Each day, generators submit up to seven hourly price quantity blocks for each hour of the next seven days. The total quantity offered each day must equal their approved maximum capacity (Alberta Innovates 2011).

The maximum price at which a generator can offer power for sale is $999.99 per megawatt hour. The lowest is $0.
Operating reserves take the form of regulating reserves (used to balance small, real-time changes in supply and demand) or contingency reserves. The contingency reserves include spinning reserves (standby generation that can be called into service quickly when there is a system failure) and supplement reserves that backstop other severe system failures (Alberta Innovates Technology Futures 2011; Electric Utilities Act).

- Transmission-must-run service is generation that must remain online and operating at specific levels in parts of the system where transmission is constrained and local infrastructure is insufficient to ensure reliable power delivery. It corrects for local imbalances between demand and supply.
- Black start service is provided by generators that can restart on their own (without an external power source) and re-energize the system in case of a black-out; reboot with no outside source of energy.
- Load shed service is provided by large industrial customers that can instantly and automatically shut down and reduce demand on the system when there is an unexpected disturbance.
- Dispatch down service provides arrangements to pay generators to reduce their output when transmission-must-run service must displace their offered supply from the merit order. It also accommodates transmission-must-run service that is out of the merit order.

Oversight

Alberta Department of Energy

The Department of Energy ensures that the development of the province’s energy resources is responsible, environmentally sustainable and in the public interest. “To assure Albertans of a long-term, reliable supply of competitively priced electricity,” the department develops acts and regulations to guide the “planning and operation of the transmission system, the connection of customers and the facilitation of the competitive electricity market” (AESO 2012h, p. 1).

The department’s mission is to assure sustained prosperity through the responsible stewardship, development and wise use of energy (DOE 2012a). To this end, it leads and supports the development of energy-related infrastructure, innovation, markets and regulatory systems.

Alberta Utilities Commission

The Alberta Utilities Commission defines rules and business practices and sets service quality standards for Alberta’s wholesale electricity market (AUC 2012a).

- AUC Rules 002 and 003 define service standards for distribution system owners, regulated rate providers and default supply providers.
- AUC Rule 004, the Alberta Tariff Billing Code, outlines rules and business processes related to site-specific billing consumption and billing information.
- AUC Rule 010 defines terms and conditions of service.
- AUC Rule 010 standardizes the presentation of historic usage information.
- AUC Rule 021 sets out system settlement code rules.
Alberta Securities Commission

The Alberta Securities Commission is the regulatory agency that administers the province’s securities laws. The commission registers agencies that sell securities and ensures their conduct complies with applicable laws and professional standards. It protects investors by ensuring that the information on which they base their investment decisions is timely and accurate.

The Alberta Securities Commission regulates the fair, efficient operation of Alberta’s capital market. Its responsibilities include overseeing of the Natural Gas Exchange (NGX) where wholesale electricity is traded.

Market Surveillance Administrator

The Market Surveillance Administrator is a monitor, reporter, investigator and advisor for Alberta’s electricity industry (AESO 2012h, p. 2).

The MSA conducts surveillance and investigation, and enforces practices that ensure fairness, efficiency and open competition in Alberta’s retail and wholesale electricity markets. It enforces the province’s electricity Code of Conduct Regulation, investigates and prosecutes anticompetitive behaviour, collects and analyzes market-related data and monitors the procurement and pricing of electricity sold at the default rate (the Regulated Rate Option, RRO) (MSA 2012b).

Competition Bureau

The Competition Bureau is an independent law enforcement agency established “to ensure that Canadian businesses and consumers prosper in a competitive and innovative marketplace” (Competition Bureau Canada n.d.). The bureau’s roles include ensuring truth in advertising, investigating anticompetitive activities and preventing abuses of market power.

The Competition Bureau administers Canada’s Competition Act, which governs most business conduct in Canada. The act includes both criminal and civil provisions aimed at preventing anticompetitive practices in the marketplace.
Here’s an example:9

A generator owns a plant that can produce 100 megawatts (MW) of electricity. In April, the generator sells 80 megawatts of this capacity for delivery during a block of agreed-upon hours in June. The sale price is $60 per megawatt hour (MWH). The transaction is registered with the AESO as a net settlement instruction.

Say that in June—in the actual hours covered by the agreement—the metered electricity volume that the generator (the seller) has sold to the power pool is 100 megawatts. The metered electricity volume that the buyer has purchased from the power pool is 90 megawatts.

In the absence of a net settlement instruction, the AESO would pay the generator for the 100 megawatts it supplied to the pool and charge the buyer for the 90 megawatts it purchased. The agreement between the generator and the buyer changes the calculation as follows.

When the AESO calculates the power pool settlement for the hours covered by the agreement, the generator is paid the pool price for 20 MWH (the 100 megawatts supplied to the pool less the 80 megawatts that was presold to the buyer). The buyer pays pool price for 10 megawatts (the 90 megawatts it purchased on the actual day less the 80 megawatts that was purchased in advance).

Outside the power pool, the buyer pays the seller $4,800, as originally agreed—that is, 80 megawatts at $60 per MWh. Payments and charges made within the power pool, at the power pool price, settle the imbalance.

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9 Adapted from the Market Surveillance Administrator, An Introduction to Alberta’s Financial Electricity Market, p. 30.
Forward Financial Market

“Alberta's financial market offers a venue for electricity producers and consumers in the province to hedge price risks. Proprietary traders (participants whose activities are not backed by production or consumption of electricity) bring important liquidity to the market as well as assisting in price discovery.... The development of a strong Alberta electricity financial market is integral to the overall Alberta electricity market.”

—Market Surveillance Administrator, An Introduction to Alberta’s Financial Electricity Market, p. 1

Like the forward physical market, the forward financial market is where electricity is bought and sold before the physical commodity is actually produced. In the forward financial market, trades involve the flow of financial contracts and cash, not the flow of electricity.

The forward financial market provides a venue through which buyers and sellers of electricity can avoid exposure to real-time wholesale market prices. To do this, they use financial contracts to buy and sell ahead of time, thereby hedging price risks.

There are three main types of financial contracts:

- direct, bilateral agreements between two parties
- brokered over-the-counter agreements
- trades made through a regulated commodity exchange such as the NGX (Natural Gas Exchange).

HOW HEDGES WORK

The Alberta Electric System Operator works to ensure there is always enough generation to match customer demand. Retailers and other energy buyers do not need to do anything for this to happen: the system takes care of it.

But energy buyers might not like the price they have to pay for power in some hours. When supply is tight, the price can spike from $0 to $1,000 in minutes, and the bill must still be paid.

When a price spike has occurred, it is too late to do anything about it. Energy buyers—like car drivers—can’t buy insurance after the accident has happened.

In Alberta’s electric industry, the forward trading market allows both buyers and sellers to buy price insurance before the fact. It allows them to lock in future prices as they see fit.

The NGX: Trading through a Commodity Exchange

Commodity exchanges are the most mature and efficient forward market. They allow the efficient trading of large volumes of energy and eliminate the counterparty risks (the risk that one party may default) inherent in bilateral deals. The also allows buyers and sellers to trade anonymously.

The primary commodity exchange covering Alberta’s electricity market is the Calgary-based Natural Gas Exchange Inc. (NGX), which is regulated by the Alberta Securities Commission. The NGX offers a broad range of standardized electricity swaps (energy trades) covering various hours of the day and time periods from days and months to five years forward.
**Over-the-Counter Trading**

Brokers can act as middlemen to set up over-the-counter agreements. The end result is a bilateral agreement of one form or another. The terms of the agreement are often standardized to facilitate buyers’ evaluations of competitive offers.

**Bilateral Contracts**

The fundamental forward contract is a bilateral agreement: a seller agrees to provide a buyer with a defined volume of power over a specific time period for an agreed price.

Commercial bilateral agreements are thought to be quite common in Alberta. Their exact magnitude is not known because they are not reported to industry agencies.

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**SUCCESSFUL FORWARD MARKETS ARE LIQUID MARKETS.**

In a liquid market, there are many buyers and sellers with significant economic incentives to participate in the market. Market liquidity is particularly important in the electricity industry, where price volatility is extreme and the impact of holding a large open position could be disastrous.

If a market is not liquid, the spread between what a buyer is willing to pay and what a seller is willing to offer will increase. For example, if electricity generators enjoyed a “seller’s market,” they could command high prices in times of shortage—without concern that a competitor might undercut their offer.

In the third quarter of 2010, the Market Surveillance Administrator noted a drop in Alberta’s forward market liquidity. In electricity markets in Germany and the Nordic countries, traded volumes range between 760% and 960% of physically delivered volumes. In 2009, traded volumes in Alberta dropped to 81% of delivered volumes, raising serious concerns. Since 2009 the ratio of traded to delivered energy has generally been less than 100%. The Market Surveillance Administrator is conducting a review to examine the causes behind the reduction in liquidity (MSA 2012b).
Oversight

Alberta Securities Commission

The Alberta Securities Commission is the regulatory agency that administers the province’s securities laws. The commission registers agencies that sell securities and ensures their conduct complies with applicable laws and professional standards. It protects investors by ensuring the information on which they base their investment decisions is timely and accurate.

The Alberta Securities Commission regulates the fair, efficient operation of Alberta’s capital market. Its responsibilities include overseeing the Natural Gas Exchange (NGX) where wholesale electricity is traded.

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