



State of the market 2014

The residential retail markets for electricity and natural gas

November 27, 2014

PREFACE

The *Alberta Utilities Commission Act* gives the Market Surveillance Administrator a broad mandate to oversee Alberta's electricity and retail natural gas markets from the perspective of competition and economic efficiency – the fair, efficient, and openly competitive legislative standard. While the MSA's focus has traditionally been the wholesale electricity market, the Minister of Energy's Retail Market Review Committee recommended that the MSA strengthen its role in the retail market.

In response, the MSA set out to canvas and assess the key factors that promote or interfere with competitive outcomes and economic efficiency with a view to identifying areas where the MSA could make a difference in discharging its mandate in the retail space. The outcome of the assessment is summarized in this report.

As a first step we have chosen to focus our attention in this report on the residential consumer segment of the retail market because it has the most customers. However, in telling the residential story we also provide information on how the other market segments differ.

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Overview

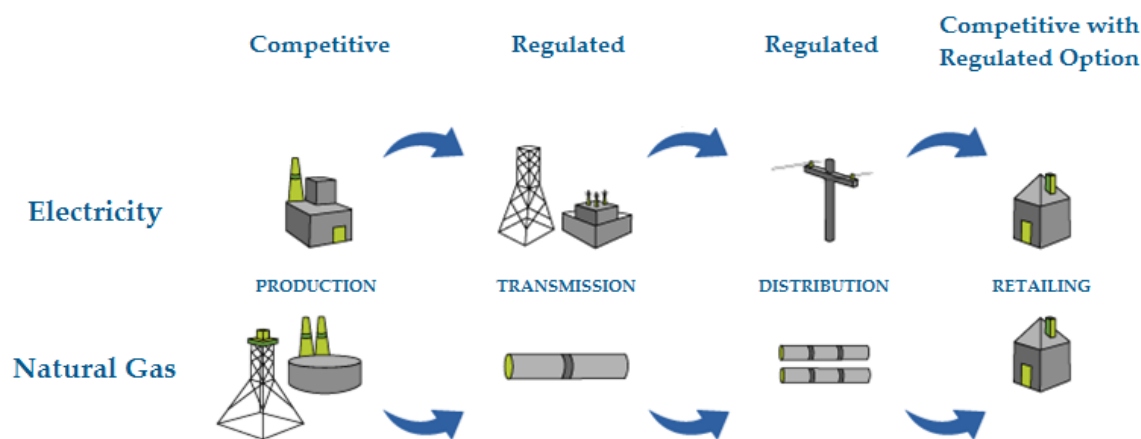
Our motivation

The purpose of this report is to assess the state of competition in the residential consumer segment of Alberta's retail electricity and natural gas markets in order to provide a basis for deciding how the MSA should go about administering its retail mandate. Are there obstacles impeding the delivery of the benefits of effective competition to consumers? What are realistic expectations for the residential market and are the potential efficiency gains related to the underlying wholesale markets?

What We Looked At

The provision of electricity and natural gas to residential consumers in Alberta relies on a combination of regulation and competition. Electricity and natural gas are produced by firms competing with one another over price and market share. For both commodities, competition is relied upon to determine new investment. The transmission and distribution of electricity through wires and natural gas through pipelines is regulated. Competition is not relied on for transmission and distribution as duplication of wires and pipelines by competing firms would be extremely expensive. Retailing for both electricity and natural gas is provided by competitive firms, but there is also a default-rate option for residential customers. A summary is provided in Figure 0.1 below.

Figure 0.1: Electricity and natural gas service relies on a combination of regulation and competition



This report is focused on assessing the state of competition and efficiency in electricity and natural gas retailing in Alberta. A competitive retail sector is not necessary in order for consumers to benefit from competition between firms in the *production* of electricity and natural gas. Even if retailing were completely regulated some of these benefits could flow through to consumers. The extent to which these benefits would flow through to consumers would depend on the nature of the regulation.

The starting premise of our analysis is that wholesale electricity and natural gas markets are competitive. The MSA's *State of the market 2012* conveyed the MSA's view that the Alberta wholesale electricity market was effectively competitive. In the case of wholesale natural gas markets, we rely on Alberta's price for natural gas being integrated with a very liquid and competitive North American marketplace.

To organize our analysis and conclusions we have described the market in terms of structure, conduct, and performance:

- **Structure** – market definition, vertical and horizontal integration, market power and concentration, entry and expansion conditions including barriers to entry, and metering technologies. Product differentiation is considered in the conduct section.
- **Conduct** – product differentiation and diversity, availability of product information, the impact of co-branding, and consumer complaints and requests for information.
- **Performance** – evidence of competitive pressure on cost, preferences and product availability, and evidence of whether retail competition enhances competition in the wholesale market.

The competitiveness and efficiency of a market also depend on the interaction and feedback between market structure, conduct and performance. Structure, conduct and performance are the subject of separate chapters in this report. Each chapter provides distinct insights, but they should be considered together for a complete view of the market. From this starting point we assess the potential benefits and costs that might be attributable to retail competition. Competitive electricity and natural gas retailing has the potential to add some important benefits and it is an assessment of these that forms the bulk of this report. Some of these benefits apply to both natural gas and electricity, but many are specific to electricity alone as a consequence of electricity's key characteristic: it produced and consumed simultaneously, i.e., it is difficult to store / hold in inventory. The potential benefits include:

- **Superior wholesale procurement:** Competitive retailers might be able to achieve lower costs by forward contracting for power with generators / producers or by purchasing their own generation or production. This aspect of market conduct is discussed in Section 1.5.1.
- **Dual fuel and behind-the-meter applications:** Competitive retailers might also provide advice on energy efficiency or offer complementary products and services such as energy audits, smart thermostats, or furnace cleanings. This aspect of market structure is discussed in Section 1.5.2.
- **Installation of smart meter and control technologies:** In electricity, competitive retailers might create pressure that leads to the adoption of new metering or other control technologies in a manner superior to regulation alone. Both might be ways for consumers to shift consumption and reduce their bills. This aspect of market structure is discussed in Section 1.6.
- **Hedging market price risk for consumers:** Competitive retailers can offer a variety of products with different price attributes that help consumers manage price volatility. This aspect of market conduct is discussed in Section 2.1.1.
- **Favourable terms and conditions:** The terms and conditions on which consumers make purchases are of significant importance to them. Competition pressures retailers to compete for consumers on this basis. This aspect of market conduct is discussed in Section 2.1.2.
- **Green power:** Competitive retailers may offer to offset energy consumption with green credits. This aspect of market conduct is discussed in Section 2.1.3.
- **Dual-fuel arrangements:** Competitive retailers might bundle services together, resulting in lower administration costs and the convenience of a single utility bill. This aspect of market conduct is discussed in Section 2.1.4.
- **Pressure on cost:** Competitive retailers have clear incentives to seek lower costs. This includes acting on opportunities for product and organisational innovation generally associated with the competitive process. This aspect of market performance is discussed in Section 3.1.
- **Product availability develops in accordance with consumer preferences:** In regulated markets, consumers have to take what the regulator decides to offer. In a competitive market consumer

pressure, backed by a willingness to change retailers, pressures retailers to provide the products that consumers want most. This aspect of market performance is addressed in Section 3.2.

- **Supporting robust competition in the wholesale market:** A key benefit to society from retail competition would be if it leads to further efficiency in the wholesale market. The potential is greatest in electricity markets, where forward contracting by retailers reduces the incentives for generators to influence wholesale spot prices, increases the number and diversity of buyers in the wholesale market, and reduces investment risk for generation. For natural gas the potential for further improvement in the wholesale market is less obvious with competition driven by a broader North American market. This aspect of market performance is addressed in Section 3.3.

Some of the benefits listed above are about competition providing an incentive to lower costs for consumers. Most are about increasing choice beyond a simple default-rate offering. Consumers are likely to value both. The distinction between lower costs and greater choice is an important one.

There are also potential costs or problems that might be associated with competitive retail markets:

- **Retail market power:** Barriers-to-entry might allow existing retailers to maintain prices higher than average cost or, in other words, exercise market power. The existence of such barriers does not necessarily imply that it would be worthwhile to undo them since the associated cost may be substantial. This aspect of market structure is discussed in Section 1.4.
- **Confusion over options:** A multitude of offers could be confusing to consumers, potentially causing them to sign a contract at a higher price (or worse terms) than otherwise. The problem here is not with the existence of choice but with the availability of accurate product information. This aspect of market conduct is discussed in Section 2.2.
- **Co-branding of default-rate and competitive options:** Retailers who are affiliates of providers of default-rate services may have a legacy advantage over other retailers that is not derived from superior competitive performance. This may create a barrier to entry or to expansion by fringe firms. To the extent that co-branding facilitates consumer switching away from default-rate products, however, it may serve to enlarge the pool of consumers who are willing to consider their retail energy options and make the market deeper and ultimately more competitive. This aspect of market conduct is discussed in Section 2.3.
- **Undesirable or misleading sales practices:** In a competitive retail market there is the possibility for misleading advertising and other illegal sales practices (e.g., signing up customers without permission). Notwithstanding the existence of legal remedies, repeated incidents of such conduct may undermine consumer confidence in the retail market. This aspect of market conduct is discussed in Section 2.4.

What We Found

The retail market is competitive

Competition pushes incumbent firms to offer better value packages to consumers. In our assessment, we find the residential energy retail market to be competitive. This conclusion is tempered by noting that residential retail competition is not uniform across the province and some customers in some areas clearly lack the ability to choose. Collectively, the following findings support this conclusion.

Default-rate options for electricity and natural gas are critical features of the market

The single most important feature of electricity and natural gas retailing in Alberta is the provision of default-rate options; that is, residential customers can choose a competitive retailer or a default-rate from their local distribution company.¹ This feature has the potential to influence retail competition. Default-rate options have the advantage of offering a degree of protection to consumers in the event there is a lack of competition. However, they have the potential disadvantage of inhibiting the development of retail competition and the broader set of market opportunities that flow therefrom.

Barriers-to-entry are low but there is no retail competition in some areas of the province

On balance, we find that barriers-to-entry into the residential energy retailing services market are low (entry is 'ineffectively impeded'). This means that strategic entry deterrence is unlikely and any above-normal rates of return can be competed away by a combination of entry and expansion by incumbents. In some areas of the province customers have more limited, or no, choice of retailer. This may be for historical reasons or because in certain areas regulatory barriers hamper the entry of competitive retailers. These areas contain relatively few customers. The MSA has not undertaken any study of how costly it would be to reduce or remove these barriers to competition or, therefore, conducted cost-benefit analysis.

The absence of smart meters limits the scope of competition in electricity retailing but cost-benefit analysis should guide any consideration of their adoption

The metering technology used in Alberta restricts the nature of retail product offerings, limits the incentive for consumers to adjust their consumption in the light of the real-time wholesale market price, results in transfers among consumers, and may cause inefficient consumption decisions. Notwithstanding, due to the substantial fixed cost associated with the installation of a network of smart meters, should metering remain a regulated component of the electricity distribution system then their eventual adoption should be guided by cost-benefit analysis.

The retail market provides choice to consumers and contract terms are consumer-friendly

Consumers can choose from a variety of retail products that differ in ways that matter to them. They can choose to dampen energy price and total bill volatility, pay flow-through wholesale market prices, buy electricity and natural gas from a common retailer and receive a single bill, and select 'green' energy options. Contract prices for similar duration contracts have converged over time, partly due to the exit of relatively high-price offerings. This may be indicative of increased consumer responsiveness to market price signals, the increased availability of information over the internet, and increased scrutiny of door-to-door sales. Contract terms, especially regarding contract terminations, are very consumer-friendly compared to similar provisions in markets such as wireless communications. This enhances consumers' ability to switch among the available offerings and facilitates greater potential rivalry among retailers.

Co-branding may impact the competitive process

Of potential concern is that retailers may not be able to attract customers on the basis of superior competitive performance but due to an association with the provision of regulated services, either or both distribution or provision of a default-rate option. This is referred to as co-branding. The MSA finds some evidence to support that co-branding is a factor in explaining customer choice but it is difficult to isolate how much impact this has on competition. The MSA has undertaken no study of how costly it would be to reduce or remove this factor or, therefore, conducted cost-benefit analysis.

¹ The default-rate for residential retail customers in electricity is called the Regulated Rate Option; for natural gas it is called the default rate tariff.

Switching rates away from default-options are low and steady but switching is not always guided by the best information; better information could lower transaction cost and help consumers make better-informed decisions

Absent any significant changes to the retail sector, the MSA expects more customers to continue to move from default-rate to competitive products. Historical data do not suggest the rate of switching will be particularly high. The evidence suggests that a consumer's decision to switch sometimes follows a relatively high monthly price for the default-rate product rather than performance of regulated and competitive products over a longer time horizon. Consumers could make better decisions if more information regarding average bills was readily available to customers contemplating switching. This may reduce transaction costs for customers in finding the best offer for them. Some other jurisdictions have more effective tools to compare retail options.

There are few complaints about retailers' conduct

There are relatively few complaints about how retailers conduct themselves, suggesting that consumers are not significantly harmed by such conduct. Notably, firms that do not engage in door-to-door sales tactics, which is the primary source of allegations of forgery, misleading statements, and undue pressure, are much less likely to have complaints lodged against them.

New business models reduce cost

New retailers have entered the market and utilise a variety of business models clearly intended to reduce cost and limit risk, such as very high degrees of automation and electronic management.

The default-rate for natural gas outperforms competitive natural gas contracts

While retail electricity and natural gas are often sold by competitive retailers together (dual-fuel) there are some areas where competition in residential retail electricity and natural gas differ markedly. For a typical customer during the last few years, the default-rate product in natural gas results in lower average bills and, with bill smoothing options, lower volatility than comparable single-fuel offerings from the competitive market. We do not find the same pattern in single fuel electricity offerings.

Wholesale market feedback effects are important for electricity but not natural gas

Retail electricity and natural gas differ in an even more important way. Residential retail competition in electricity is likely to provide an important feedback effect for wholesale market efficiency. This is important because the sorts of efficiency improvements in retailing alone, such as pressure on administrative and customer acquisition costs, may only result in small savings to consumers over time. Much larger improvements in efficiency are likely to result if retail competition enhances competition in the wholesale market, thereby driving down the cost of energy on customers' bills. With respect to natural gas, the feedback effect is likely to be small to non-existent due to both the relative smallness of the residential natural gas market in Alberta and the wholesale market's continental scale. With respect to electricity, the feedback effect includes retailer investments in generation capacity and supporting forward market liquidity.

1. Structure²

1.1 Overview

This section of the report sets out our assessment of the structure of the retail markets for residential electricity and natural gas (referred to as ‘retail markets’ for the purposes of this report) and the implications for retail competition. We draw upon the MSA’s own report *Alberta retail markets for electricity and natural gas: A description of basic structural features* and the Retail Market Review Committee’s report *Power to the people*.

A number of questions are considered:

- What are the relevant geographic and product markets?
- How is competition affected by the existence of default-rate contracts?
- Are there material barriers to entry?
- What is the effect of vertical integration?
- What is the effect on competition of existing metering technologies?

A number of conclusions present themselves:

- There is considerable competition both among retailers and between retailers and both the RRO and DRT. The existence of default-rate options limit retailers’ ability to raise prices.
- The presence of a large firm that is vertically-integrated into retail services and generation is a key structural feature of the market. This structure provides important benefits to consumers.
- Other generators / retailers with some similar advantages could vertically integrate if they thought it would be profitable to do so. Indeed, these would be the lowest-cost entrants should the market signal that to be profitable.
- Entry into retail energy markets, while not easy, is a source of competitive discipline on incumbents. This means that firms with the requisite capabilities will (and have) entered the retail market when market conditions support cost recovery over time.
- The metering technology used in Alberta restricts the nature of retail product offerings, limits the incentive for consumers to adjust their consumption in the light of the real-time wholesale market price, results in transfers among consumers, and may cause inefficient consumption decisions. Notwithstanding, due to the substantial fixed cost associated with the installation of a network of smart meters, should metering remain a regulated component of the electricity distribution system then their eventual adoption should be guided by cost-benefit analysis.

1.2 Market definition

All consumers in Alberta have access to retail energy services. The focus of this report is on the state of competition in the supply of energy retailing services to residential consumers in those areas of Alberta

² A note on the data considered in this document. Unless otherwise noted, all data on retail consumption, site counts, and market share are from MSA, “Retail market database,” accessed in June 2014, while all retail energy contract data are from the Utilities Consumer Advocate, “Rates database,” accessed in June 2014, with analysis conducted by the MSA.

where retail competition is allowed. The reasons for excluding other retailers and consumers of energy retailing services are discussed below.

1.2.1 Geographic market

Our analysis is confined to consumers and retailers of energy retailing services in Alberta. Alberta consumers cannot purchase energy for delivery in Alberta from retailers outside of Alberta and consumers outside of Alberta cannot purchase from Alberta retailers. With certain exceptions, most energy retailers operate throughout the province. The exceptions (discussed in greater detail below) relate to electricity retail consumers located in areas served by self-operating Rural Electrification Associations (REAs), natural gas retail consumers located in areas served by natural gas cooperatives, and residents of Medicine Hat, for whom there is no choice of retailer. With the exception of these areas, the province of Alberta can be treated as a single geographic market for the purpose of analysing the state of competition in energy retailing.

1.2.1.1 Rural Electrification Associations, natural gas cooperatives, and the City of Medicine Hat

Natural gas and electricity transmission and distribution systems in Alberta were built through a combination of municipally- and privately-owned companies. In rural Alberta, distribution systems were built through the use of cooperatives formed by rural communities, referred to as rural electrification associations (REAs) and natural gas cooperatives. Self-operating REAs and natural gas cooperatives also provide retail services to their members; however, a number of REAs have outsourced all operational responsibilities to FortisAlberta or ATCO.

Pursuant to the *Electric Utilities Act*, customers located in REA areas are entitled to choose their retailer. In practice, competitive retailers do not offer retail products in REA areas that are self-operating due to the REA's non-compliance with the AUC's *Tariff Billing Code*.³ Natural gas cooperatives are given exclusive rights to retail gas within their area under the *Gas Utilities Act* and the *Gas Distribution Act*. The City of Medicine Hat has similar exclusive retailing rights for both electricity and natural gas. As such, much of the analysis included in this report does not include data from and may not be relevant to the City of Medicine Hat, or those areas where energy services are provided by self-operating REAs or natural gas cooperatives.

1.2.2 Product market

A product market is the set of retailers whose products consumers view as being close substitutes. Some groups of consumers may have better opportunities for substitution and thus have more competitive options than others. Our analysis is confined to the supply of energy retailing service to residential consumers. It excludes other categories of consumers on the grounds that they have different (generally better) competitive options. This is explained below.

1.2.2.1 Are residential, agriculture, and small / large commercial and industrial consumers, as well as streetlights, in different product markets?

Consumers in these groups, defined below in terms of their consumption levels, have sufficiently different characteristics that the MSA considers the energy retail services provided to each as a different product market. As stated above, this report considers the state of competition in the residential retail sector.

³ Non-compliance of this type means the data necessary to set consumer bills is in a non-standard format and has the effect of substantially raising the cost to competitive retailers serving consumers in such areas.

- The groups, as discussed further below, differ in the average level and degree of seasonality of their consumption.
- Commercial organisations may have greater comfort or lower cost in weighing supply options. This need not imply greater uptake of competitive contracts since a particular the default-rate product may be desired by some consumers who then actively choose it and cannot easily be distinguished from consumers who have made no active choice. In any event, the proportion of consumers who have selected a competitive contract varies widely across customer classes. In electricity, approximately 42% of residential sites, 26% of agricultural sites, 56% of small commercial and industrial (C&I) sites, and 91% of large C&I sites are served by a competitive retailer; in natural gas, approximately 45% of residential sites, 37% of small C&I sites, and 66% of large C&I sites are served by a competitive retailer.
- The majority of (66%) of residential retail electricity consumers are located in the eight municipal service areas, which is the case for a minority of small C&I (41%) and large C&I (35%) and no substantial agricultural consumers.⁴
- The group of agricultural consumers, many of whom are either served by a self-operating REA or natural gas cooperative, are difficult to reach by competitive retailers. On the other hand, the offers made by competitive energy retailers (with few exceptions) to small consumers tend to be available on the same terms to residential and agricultural consumers alike. This suggests that agricultural consumers situated in contestable areas of the province are not in a different product market than residential consumers.

A list of firms licenced by Service Alberta to retail energy products to small consumers (residential, agriculture, and small C&I) is provided in Appendix B. The MSA understands there to be a variety of specialised retailers, including many listed in Appendix B, that target large consumers, often with bespoke products, that are not required to be regulated by Service Alberta. This suggests that energy retailers actively distinguish among their potential consumers.

The overlap of retailers offering electricity and natural gas retailing services, as well as the commonality of dual-fuel offerings from them, suggests consumers may be able to easily substitute among them. This results in a common product market.

1.2.2.1.1. How large are the various market segments?

There are five broad categories of electricity and natural gas customers:

- residential customers,
- large C&I customers (distinguished by annual consumption in excess of 250 MWh and 8,000 GJ, respectively, of electricity and natural gas),
- small C&I customers (consumption below the thresholds noted above),
- agricultural and irrigation customers, and
- other customers (largely streetlights).

Unmetered customers, primarily oilfield services in Fortis Alberta's⁵ service area, are included in the small C&I customer class. Table 1.1 sets out the number of sites per category as of December 2013 and consumption during that year.

⁴ MSA (2014), "Alberta retail markets for electricity and natural gas: A description of basic structural features." Figure 2.1, p. 5.

Table 1.1: Residential customers represent the majority of sites but a small share of total consumption

		Retail						Non-retail
		Residential	Small C & I	Large C & I	Agriculture	Other	Total	
Electricity	Sites (# of retail)	1,361,984	182,599	16,897	106,755	55,592	1,723,827	—
	Sites (% of retail)	79%	11%	1%	6%	3%	100%	—
	Consumption (GWh)	9,463	7,864	29,371	1,754	300	48,752	28,698
	Consumption (% of retail)	19%	16%	60%	4%	1%	100%	—
	Consumption (% of total)	12%	10%	38%	2%	0%	63%	37%
	Avg. per site (GWh / site)	0.007	0.043	1.738	0.016	0.005	0.028	—
Natural gas	Sites (# of retail)	1,111,423	89,132	2,262	2	0	1,202,819	—
	Sites (% of retail)	92%	7%	0%	0%	0%	100%	—
	Consumption (PJ)	138.5	69.5	58.8	ND	0.0	266.8	—
	Consumption (% of retail)	52%	26%	22%	ND	0%	100%	—
	Avg. per site (GJ / site)	125	780	25,986	—	—	222	—

Notes:

1. Percentages may not sum to 100 due to rounding.
2. 'ND' indicates that a value is Not Disclosed because there are insufficiently many sites to effectively obscure confidential information.
3. For electricity, non-retail consumption is calculated as the difference between retail consumption and Alberta Internal Load of 77,451 GWh in 2013 (AESO (2014), "2013 annual market statistics").

1.2.2.1.2. How variable is demand?

Whatever the effect of seasonality on price, seasonality of demand, especially for natural gas, can lead to considerable variation of bill totals (in dollar terms) over the year which creates scope for retailers to develop and market products that smooth or reduce this volatility. This suggests that residential, agriculture, and small / large commercial and industrial consumers are in different product markets.

Electricity and natural gas demand is seasonal, particularly for residential customers. Demand for these products peaks in Alberta during winter due to relatively greater heating and lighting requirements. Due to the relatively energy intensity of space heating, the seasonality of natural gas demand is more marked than electricity. There is relatively little seasonality to electricity demand from large commercial and industrial consumers. Figures 1.1 and 1.2 illustrate monthly electricity and natural gas consumption, respectively, by consumer class category.

⁵ Ibid.

Figure 1.1: Monthly electricity consumption by rate class

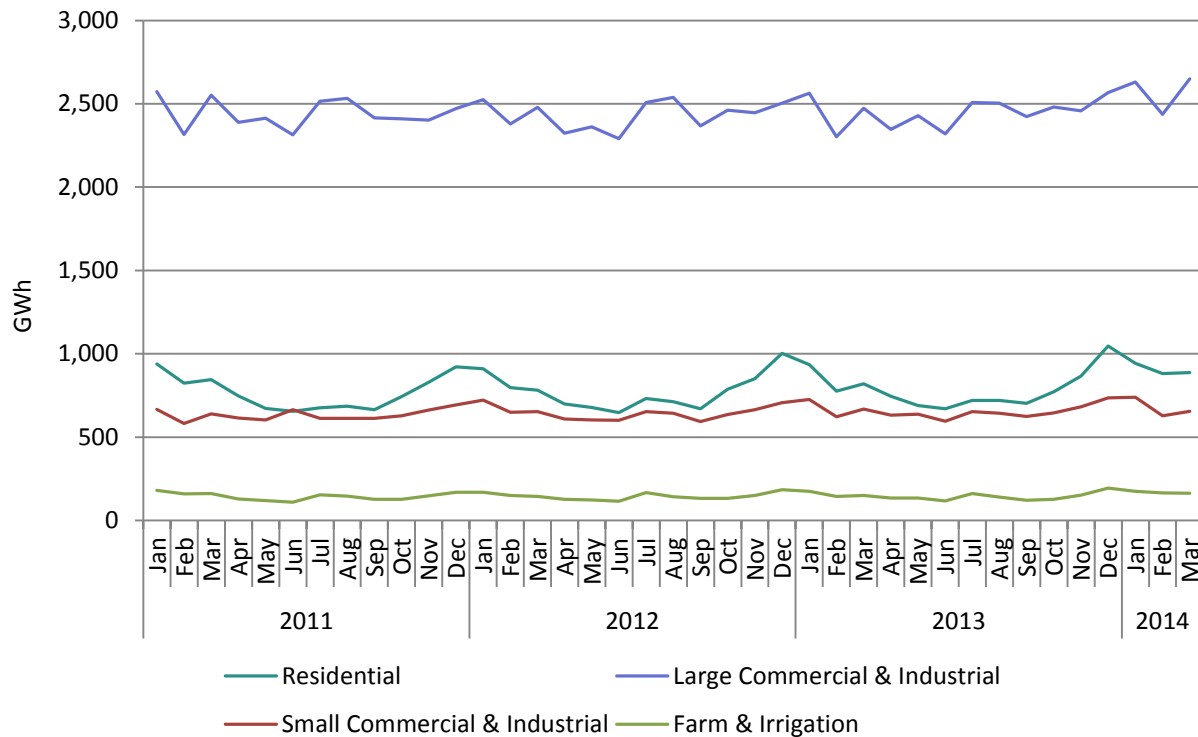
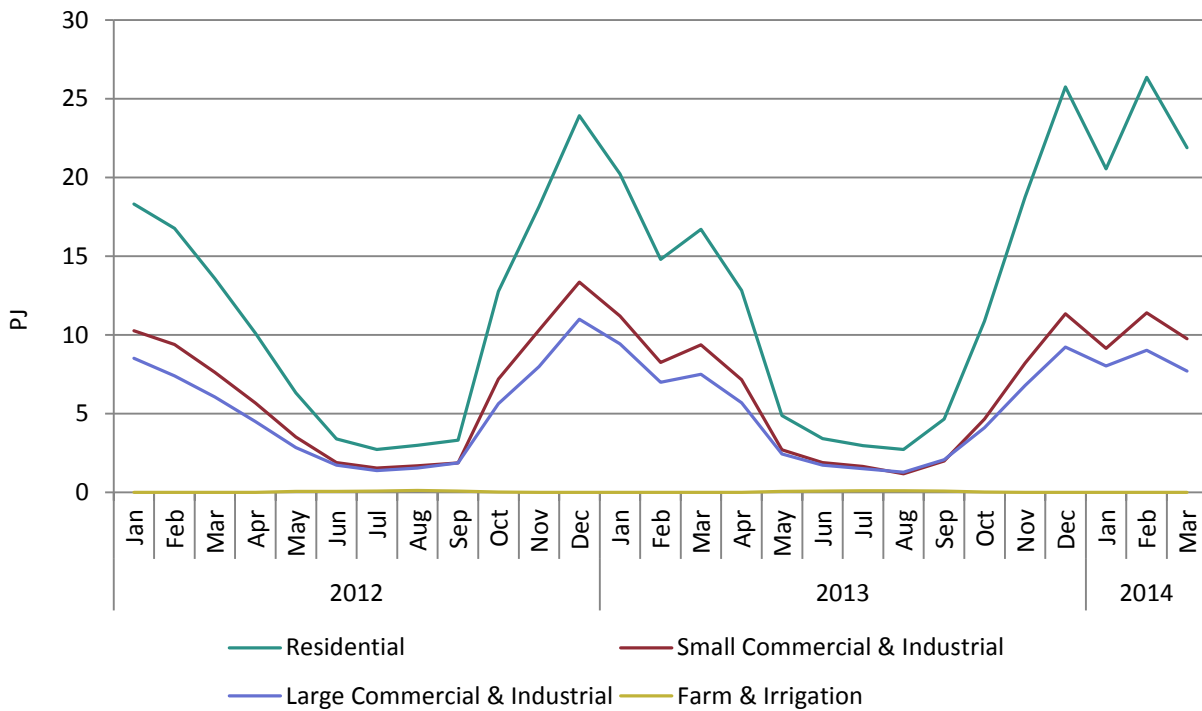


Figure 1.2: Monthly natural gas consumption by rate class



With respect to natural gas, while seasonality of demand can affect the price of the underlying commodity, this effect is substantially offset by the ability to accumulate natural gas inventories during

low-demand periods for use in high-demand periods. As well, the relevant wholesale natural gas market⁶ likely extends well-beyond Alberta and may be North American in scope.

Since it is not currently possible to store electricity, the slighter seasonality of its demand can have a more substantial effect on its price. There are, however, a number of features of the electricity market that offset this effect:

- As described by the MSA's *State of the market 2012 report*, the wholesale electricity market is Alberta-wide in scope (including limited interconnection capacity with neighbouring jurisdictions).
- Wholesale market prices are determined by the interaction of demand from all consumers. As a result, substantial variability of demand from a small segment of the market (such as residential consumers) may not impact the wholesale price dramatically.

1.2.2.2 Extent of the product market

Suppliers of energy retailing services differ in their characteristics. Retailers distinguish themselves from each other on the basis of: contract prices, durations, terms, and conditions; customer service; brands and reputations; marketing practices; targeting certain customer segments; green characteristics; and by bundling electricity and natural gas retail services. If the services offered by a retailer are not viewed as close substitutes by residential consumers that retailer should not be counted as a competitor in the market although it might still be viewed as a potential competitor. This raises a number of questions that are considered below.

1.2.2.2.1. Are default-rate retailers in a different product market?

The Government of Alberta requires the provision of a default-rate option by distribution system owners (or another designated retailer) to all electricity and natural gas customers in their distribution area. With regard to electricity, consumers with annual consumption less than or equal to 250 MWh are eligible for the Regulated Rate Option (RRO) price. Other electricity consumers must also be offered a default contract, but its terms are not regulated. With regard to natural gas, all consumers are eligible for the same default rate, called the Default Rate Tariff (DRT).

Eligible consumers are enrolled on default-rate contracts unless they explicitly choose to sign a competitive contract. While many consumers have opted to do so, there are consumers who have left competitive contracts and returned to default-rate contracts. This suggests that consumers view default-rate retail contracts as substitutes for competitive contracts and that they are in the same product market. On the other hand, not all consumers on default-rate contracts made a conscious choice to be so. Some may have compared the various offers made by all retailers, others may have decided that the effort required to make such a comparison was unlikely to be worthwhile, and others may not even know in principle that there was a choice to be made. These are, in effect, choices made by consumers and are common to all (i.e., non-energy) retail markets. This has implications for the interpretation of the proportion of consumers who have explicitly chosen a competitive contract because those who have not may have done so for the variety of reasons stated. Therefore, the MSA considers default-rate retailers to be in the same product market as competitive retailers.

1.2.2.2.2. Are renewable energy retailers in a different product market?

Several electricity retailers sell renewable energy products. In general, consumers pay a premium in exchange for a commitment from the retailer to either support the electricity production from a

⁶ Monitoring of the wholesale natural gas market, whatever its definition, is not within the MSA's mandate.

renewable energy generator or acquire offsets. A typical premium is 2 ¢/kWh or about one-fifth of the underlying energy price (a lesser fraction of the delivered price). Given the large magnitude of this price difference, it may be the case that consumers of renewable energy regard more conventional electricity offers as being poor substitutes, in which case renewable energy retailers may comprise a distinct product market. The importance of this conclusion on an assessment of competition is limited by what the MSA understands to be relatively low up-take of products of this nature. Nevertheless, these products represent an important aspect of product variety that responds to consumers' desires that is expected to be provided by competitive retailers.

1.2.2.2.3. Are self-retailers and on-site generators in a different product market?

Consumers can choose to become self-retailers and perform the functions of retailers themselves (discussed below); in essence, this amounts to an energy consumer vertically integrating into the energy retail market. Since there are meaningful costs associated with being a retailer, as discussed at length below, becoming a self-retailer generally makes economic sense only for large energy consumers (i.e., make instead of buy); other consumers are likely better-off hiring a retailer to do this on their behalf (i.e., buy instead of make). As such, self-retailing is not a good substitute for residential consumers.

Electricity consumers can also choose to install generation capacity at the site of their consumption; in essence, this amounts to vertically integrating into the electricity generation market. This type of dedicated generation capacity is generally referred to as behind-the-fence generation capacity, though for small consumers it is typically referred to as micro-generation capacity. Given that nearly all of these consumers remain connected to grid and use it to sell electricity when production exceeds consumption and buy electricity when consumption exceeds production, the retailing function remains necessary and such consumers remain in the product market.

1.3 Market power

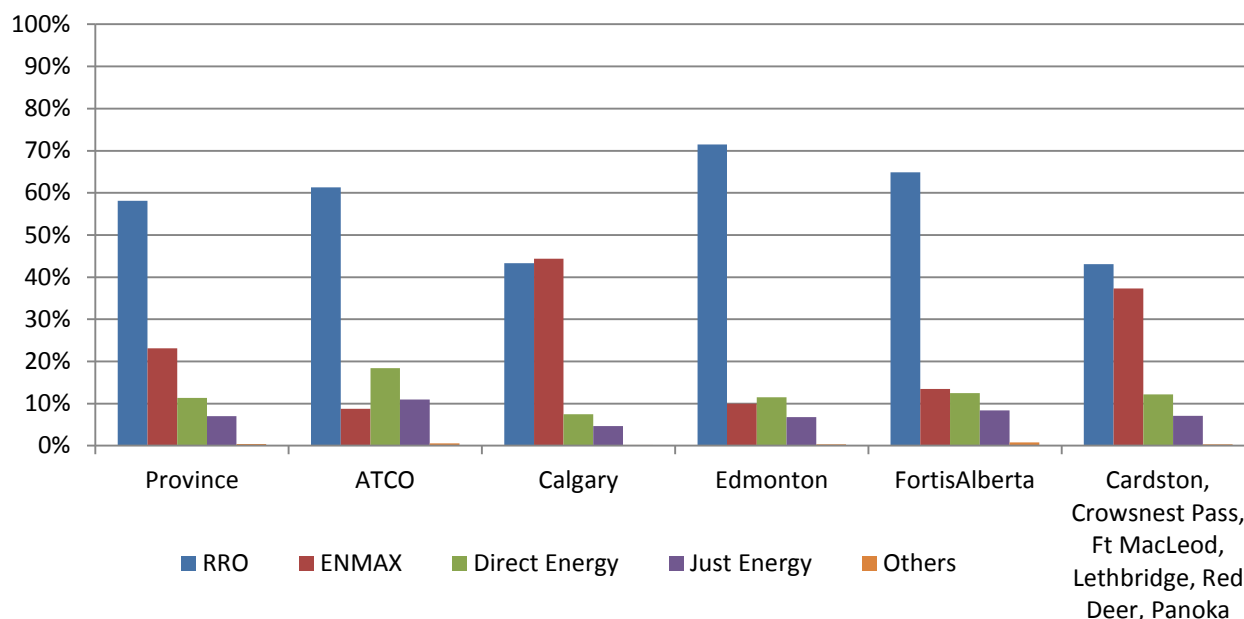
Market power is the ability of a firm to 'give less for the same' or 'give the same for more' than what would be observed in a competitive market. While the exercise of market power typically involves raising price above the average cost of the marginal supplier, it can also involve reducing the quality of the good or service (such as reducing customer care or adding onerous terms and conditions) while maintaining price. Less technically, vigorous competition pressures retailers to offer better value to consumers; weak competition lacks this effect. When competition is weak, firms have market power.

Though not always the case, market power is generally a greater concern in highly concentrated markets where conditions limit the threat of entry from new competitors or the expansion of incumbent fringe retailers. This section discusses concentration, with entry conditions discussed in the next.

1.3.1 Concentration of default rate vs competitive contracts

1.3.1.1 Residential electricity market shares

In addition to RRO providers, there are four retailers offering market contracts to residential customers: ENMAX, Direct Energy, Just Energy, and the UtilityNet & Partners boutique retailers (22 brands counted as one). As of May 2014, ENCOR, owned by EPCOR, has been established as a competitive retailer. Of these retailers, only the three main mass market retailers operate province-wide; the Utility Network & Partners retailers each operate in selected distribution areas. Figure 1.3 shows market share of residential electricity sites by load settlement zone as at March 2014.

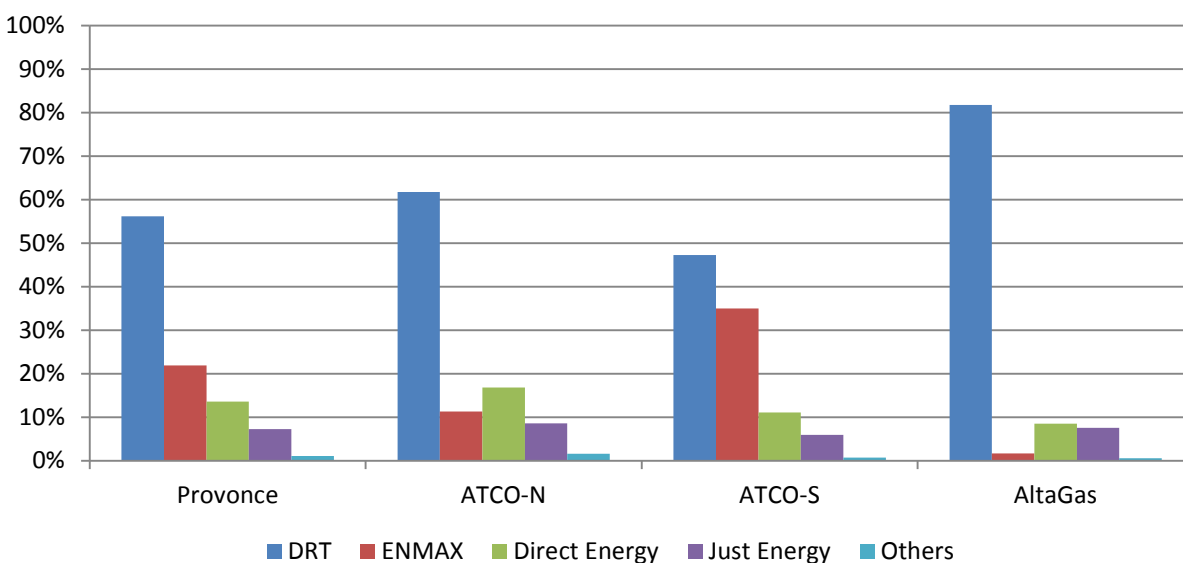
Figure 1.3: Market share of residential electricity sites by distribution zone, March 2014

RRO providers dominate the residential market in the province, accounting for nearly 60% of all residential customer sites, though this is persistently declining. The balance of the market is split largely among the three main competitive retailers: ENMAX, Direct Energy, and Just Energy. There are significant differences among distribution zones. The proportion of consumers on competitive contracts is significantly higher than the provincial average in Lethbridge and the zones where ENMAX provides the RRO, while the proportion on competitive contracts is materially lower in Edmonton (though this may change with the recent entrance of ENCOR into the market).

Similarly, the market share held by each competitive retailer differs significantly by zone, even though each retailer's contract offers are uniform across the province. For instance, consider the cities of Calgary and Edmonton. The proportion of residential electricity consumers on the RRO in Calgary is 42% while it is materially greater at 72% in Edmonton, meaning that 57% and 28% of consumers in Calgary and Edmonton, respectively, are on competitive contracts, i.e., the up-take of competitive contracts is more than twice as high in Calgary compared to Edmonton. The report considers this in more detail in section 2.

1.3.1.2 Residential natural gas market shares

The market shares for residential gas sites in Alberta, as detailed in Figure 1.4 below, follow a broadly similar pattern to those observed in electricity. The percentage of residential natural gas customers on the default rate is similar to the ratio in electricity, with different proportions of consumers on default-rate contracts across the three distribution zones. AltaGas Utilities was the last zone to become *Tariff Bill Code* compliant, which permitted competitive retailers to enter. This is likely the reason why it has the highest proportion of residential customers on the default rate. As with electricity, market shares of the competitive retailers differ markedly across the different zones.

Figure 1.4: Market share of residential natural gas sites by distribution zone, March 2014

1.3.2 Countervailing power

Countervailing power is the ability of a buyer of goods or services to exercise market power, bypass a retailer through vertical integration, importing or other means, or induce retailers to compete more aggressively against one another. In the retail energy market, the ability of individual residential consumers to exercise countervailing power is limited.

Customers cannot import gas or electricity from elsewhere in the province or the country and are limited to products available in their distribution zone. Countervailing power in the retail electricity market might involve the installation of a micro-generation unit to self-supply, such as photovoltaic panels (in which case a consumer may stay with a retailer but pay a lower total bill, i.e., buy less from the retail market), or becoming a self-retailer. Due to the intermittent nature of most micro-generation units, residential users also need to install rechargeable batteries to go completely off-grid (and complete the bypass). Although the cost of such technology has significantly declined in last five years, they still have higher long run marginal cost per MW than conventional generation assets. As of January 2014, there were 888 micro-generation sites with a combined capacity of 4.5 MW in Alberta.⁷ As such it represents only a very small fraction of residential needs. Regulations facilitating micro-generation development in Alberta were extended in December 2013.⁸ Self-retailing, on the other hand, is only cost effective for large consumers.

1.4 Entry conditions

Competition pushes incumbent firms to offer better value packages to consumers. Incumbent firms compete with each other and also face the threat of entry of new competitors. To the extent that potential entrants must overcome barriers to entry, competitive pressure is lessened. The existence of barriers-to-entry does not imply that a market is uncompetitive; rather, it is the extent to which entry barriers reduce competitive pressure that matters. This requires a comprehensive assessment that is qualitative in nature.

⁷ ADOE (n.d.), "What is micro-generation?"

⁸ ADOE (n.d.), "Micro-generation fact sheet."

Entry barriers are more than just costs of entry; rather, they are cost asymmetries between entrants or expanding fringe firms respectively and established incumbent firms. Barriers to expansion (market penetration) by fringe firms are sometimes called mobility barriers. For ease of exposition we will refer to barriers to either entry or market penetration as entry barriers. Entry barriers are important because they inhibit the competitive process by conferring cost advantages on incumbent firms that are not based on superior competitive performance. Normal costs of doing business that are faced by all firms do not create advantages for incumbents over entrants or fringe firms attempting to expand.

Some entry barriers are the result of public policy. These are often referred to as regulatory barriers to entry. These arise when regulations that have been deemed to serve some public interest (e.g., public safety) also have the side-effect of protecting incumbent firms against competition from potential entrants. Whether regulations of this nature are beneficial on balance or whether their side-effects could be reduced requires case by case consideration possibly involving the application of cost-benefit analysis.

Some entry barriers are the result of strategic behaviour of incumbent firms against potential entrants. These are called strategic barriers to entry. New entrants and fringe expansion may be dissuaded if incumbents can credibly threaten to fight it, thereby rendering it unprofitable. Conduct of this type is of particular concern to the MSA as it may indicate an attempt on the part of a market participant to actively impede competition and would likely result in an investigation and potential enforcement action. Since this form of anti-competitive conduct is difficult to distinguish from competition on merit, the MSA relies on a variety of sources of information regarding market practices including information from market participants in its assessments.

With respect to entry barriers overall, on balance, we find that entry into the residential energy retailing services market is 'ineffectively impeded.' This is a technical term meaning that strategic entry deterrence is unlikely and any above-normal rates of return can be competed away by a combination of entry and expansion by incumbents.

As a general matter, entrants do not have to be new to the broader electricity industry for entry to be competitively meaningful. Indeed, firms in other segments of the industry, perhaps most importantly other aspects of the retail market (e.g., C&I retailers) would face far lower barriers to entry than would a retail entrant new to the entire industry. The appropriate standard for measuring barriers to entry is, therefore, not of a generic entrant but of the lowest cost entrant. This standard is consistent with the fact that the most recent entrants into the retail energy markets have been by Utility Network & Partners and ENCOR by EPCOR. In each case, the entrant was an existing participant in another segment of the broader Alberta market: load settlement services in the case of Utility Network & Partners and distribution and RRO provision in the case of ENCOR by EPCOR. The recent entry of ENCOR is likely to increase the intensity of competition as it expands outside of Edmonton.

A variety of considerations regarding entry are discussed below.

- **Market knowledge:** Participation in the market requires that retailers understand the market. Retailers must satisfy, on an ongoing basis, a number of conditions in order to remain in business. In addition to general licencing requirements, they must satisfy various financial requirements related to hedging activities and various prudential requirements (discussed further below) that can vary substantially from month-to-month, causing cash-flow to vary similarly. A barrier is created to the extent that a retailer affiliated with a default-rate provider can gain an advanced understanding of the retail energy market at lower cost than a retailer without such an affiliate. For example, such firms may be able to share staff among its competitive and regulated segments.

- **Prudential requirements:** All retailers are required to possess sufficient financial reserves or lines of credit to meet a number of financial security (prudential) obligations. Retailers must post four main forms of credit: (i) a security of \$250,000 to obtain a marketing license (a separate security is required for each of electricity and natural gas); (ii) collateral to the Natural Gas Exchange (NGX) to protect the exchange and counterparties from default by the retailer; (iii) security deposits to distribution system owners to protect against the non-payment of distribution tariffs; and (iv) a security deposit to the AESO to protect against default on wholesale energy purchases (electricity only). The NGX requires collateral as insurance, which involves the posting of an initial margin and making ‘mark to market’ margin payments for in-the-money forward positions. The amount of security to be provided to distribution system owners and the AESO is governed by legislation. However, this is not a standardised process and AESO prudential requirements depend on (are correlated with) spot market outcomes that are volatile. The AESO and distribution system owners have discretion to reduce or waive security required for firms with good credit ratings, which may benefit retailers that are large or government-owned. Further, the method in legislation for calculating the amount of security to be provided by retailers has enabled distribution system owners to use different timeframes to determine the amount of security required, based on differences in billing cycles. Since these requirements are faced by all retailers, they do not constitute a barrier to entry or market penetration.
- **Lack of standardisation across service zones:** The business practices, e.g., prudential requirements and retail service agreement cancellation rules, of distribution providers vary from zone to zone. This lack of standardisation raises costs faced by retailers (which are especially important to small retailers) and is a barrier because it affects retailers differentially, providing an advantage to affiliates of the local default-rate retailers.
- **Government ownership of retailers:** Private investors may face disadvantages if government-owned retailers were able to access lower-cost capital or have other advantages as a result of their ownership status. In the Alberta market, two government-owned distribution companies have competitive retail affiliates. Barriers are created to the extent that advantages are obtained other than through competitively superior performance. In principle, competition is protected by restrictions imposed on distribution companies to prevent them from providing favourable treatment to their affiliated retailers or the affiliated retailer’s consumers. These protections are contained in the electricity and natural gas retailer Codes of Conduct, and are broadly equivalent to limitations and conditions on government ownership of generation assets contained in the *Electric Utilities Act*.
- **Customer acquisition:** Customers do not switch plans or retailers frequently and all retailers, new entrants and incumbents alike, face high customer acquisition costs. These costs include establishing a brand in which consumers have confidence, an expensive (e.g., advertising and market research efforts) and time-consuming endeavour. To the extent that the affiliates of default-rate retailers acquire customers at a lower cost than other retailers there may be a barrier to entry or market penetration. However, to the extent that affiliates of default-rate retailers are better able to attract customers away from default-rate options, the pool of consumers considering competitive options may expand and ultimately result in a deeper and more competitive retail market.

Mass market retailers require significant investment in branding and marketing channels, including establishing a brand online and through print and visual media and engaging in electronic, paper, telemarketing and / or door-to-door sales. Retailers also have to ensure compliance with energy marketing regulations, which build in additional consumer protection

requirements around standard provision of information and cooling-off rights. An indicator of the cost of customer acquisition is that price retailers have been willing pay to acquire an existing customer book. Customer acquisition is expensive: based on sales of retail customer books across North America, Direct Energy estimated that the value of a customer has averaged \$226, which can be used as a proxy for the cost of customer acquisition.⁹

- **Developing a billing engine:** As retailers in Alberta have the responsibility for billing customers, new entrants need to develop a custom billing engine that interfaces with the data systems of each load settlement agent. Direct Energy and Just Energy used the billing engines of ATCO and EPCOR respectively when they first entered the retail market in Alberta. Subsequently, Just Energy built its own billing engine. As well, new retailers can enter the market as affiliates of Utility Network & Partners thereby gaining access to its billing engine. As such, this does not seem to constitute a meaningful barrier.
- **Marketing restrictions:** Marketing restrictions are structural restrictions on competition. To the extent they apply to all retailers they are not barriers to entry. These restrictions could, however, amount to barriers to entry if new entrants face different customer acquisition costs than incumbents as a result. For example, co-branding of its competitive and default-rate products could constitute a barrier to entry. Limiting co-branding of the RRO does not resolve this issue entirely as some firms will still have competitive brands co-branded with regulated assets.
- **Forward market liquidity:** Given the variable nature of spot prices in Alberta's wholesale gas and electricity markets, access to gas contracts and electricity forward and derivative contracts is a key requirement for a new retailer to manage its cash flows.¹⁰ Given Alberta's status as a leading gas producer, the wholesale gas market is very liquid both on a contract and spot price basis. The electricity exchange-traded market, by contrast, is relatively illiquid both in terms of total volume traded, depth of liquidity into the future, and the type of contracts traded. This can result in entry being more costly for independent retailers but is not a barrier in the sense that this condition is faced by incumbent firms which may rely on forward contracts as well. Moreover, the option to vertically integrate is available to all firms if they believe they would benefit from doing so, though it may make less sense for a small retailer.
- **Treatment of non-payments:** The most a competitive retailer can do in the event of non-payment is cancel a consumer's contract, shift them to the default-rate option, and privately pursue legal action against the individual. This may be relevant from a scale perspective if the ability to handle non-payment differs based on size. Even in this case it may be best seen as a start-up cost.
- **Default-rates:** The existence of default-rates such as the RRO and DRT for eligible customers can act as a barrier to new competition in two ways. First, the default-rate can affect the level of customer engagement in the retail market by reducing the incentive to search out an electricity and / or gas retailer. Second, the default-rate can act as a price ceiling or a price-to-beat. Where the default-rate is set too low, or below an efficient retailer's cost structure, it can act as a disincentive for new entry or expansion by existing retailers. If the default-rate does not properly reflect the costs of default providers, its existence can distort competition and be a source of inefficiency. A well-designed default-rate product would not limit the ability of competitive retailers to design and offer alternative products that consumers may find desirable.

⁹ Direct Energy (2012).

¹⁰ An inability to pass on variable wholesale energy costs can be due to the fixed price nature of their retail contracts or the time delay between paying for wholesale energy and receiving payment from customers.

- **Affiliate providers of default-rate products:** Some competitive retailers are affiliated with providers of the RRO and DRT. To the extent that these firms benefit, say from gaining knowledge of the market that spills over from the regulated to the competitive segment of the firm, they will have gained an advantage not available to all firms in the market. Since knowledge of this type can be very costly to obtain, this can be a barrier or expansion of fringe firms.
- **Minimum scale:** There is a variety of potentially fixed costs associated with operating in the energy retail market. Firms are required to incur these costs to enter the market, but cannot begin to recoup them until they have gained a sufficient number of customers. The minimum number of customers necessary for the firm to break-even is called the firm's minimum viable scale.
- **Rural Electrification Associations, natural gas cooperatives, and the City of Medicine Hat:** as discussed in Section 1.2.3, entry of competitive retailers into some of these areas is either explicitly restricted by statute / regulation or prevented due to incompatibility of information systems. These restrictions are regulatory entry barriers.

1.5 Vertical and horizontal integration

Retailers act as the intermediary between consumers and the upstream elements of the supply chain. Retailing electricity and gas involves billing for a bundle of services: transmission and distribution services, wholesale procurement of electricity and natural gas, and billing services. As transmission and distribution charges are regulated pass-through costs, price competition occurs on energy usage fees and administrative charges; retail product differentiation occurs in relation to characteristics such as type and length of contract and payment options.

The nature of retail competition is materially affected by infrastructure investments in upstream markets. The type of electricity meter installed by distributors, for example, determines the ability of retailers to offer time-of-use tariffs, services around provision of information on real-time consumption, and demand-side management products. Similarly, investment decisions regarding renewable generation may influence the provision of 'green' products by retailers.

1.5.1 Vertical integration

Vertical integration occurs when a firm operates at various stages of a production process. These are just particular solutions to a long-standing decision facing all firms: do they 'make' or 'buy' their inputs (alternatively, though less commonly, 'consume' and 'sell' their outputs). In the retail energy markets, this occurs in two main ways:¹¹

- firms engaging in 'gentailing' where electricity generation / natural gas production and retailing activities are undertaken by the same firm; and
- distributors undertaking retailing activities, either as the provider of the relevant default-rate option or as a competitive retailer.

There are potential benefits to firms vertically integrating. From the retailer's perspective, vertical integration (at least partially) resolves the wholesale procurement problem while providing a meaningful input cost hedge; from the generator's perspective, vertical integration provides a hedge on production revenue. In each case, transaction costs associated with interaction with the forward market are reduced.

¹¹ In general it does not matter whether a firm vertically integrated upstream (i.e., a retailer entering the generation market) or downstream (i.e., a generator entering the retail market). The point is that a single firm operates at multiple stages of production process.

In a competitive market where profitability can be competed away by responses from both rival firms and consumers, the benefit of such a strategy may flow to consumers in the form of lower prices or more favourable terms and conditions (see Section 2.1.2 for a discussion of terms and conditions).

While it has potential benefits for consumers, vertical integration might also impede competition if it results in advantages in one market that are conferred by regulation in another rather than competitively superior performance (such as that described in the previous paragraph). These include the costs identified as entry barriers in the discussion related to entry conditions. For example, default-rate providers appear to have preferential access to placing marketing materials in their customers' billing envelopes. Where the default-rate provider has a competitive affiliate, this is an advantage not associated with superior competitive performance that is not available to other retailers and therefore is a barrier to entry. Even if it does increase entry barriers, vertical integration may be beneficial to consumers on balance.

1.5.1.1 Gentailers

The term 'gentailer' refers to firms which are highly involved in both generation and retail of electricity or production and retail of natural gas. The main benefit to the retailer is the creation of a natural hedge between the market segments. A retailer can use its own production assets to supply itself, reducing the need to acquire hedge contracts to manage price and volume risk. This may reduce the cost of managing cost / price volatility compared to stand-alone retailers and also, in the case of electricity, reduces the financial prudential requirements established by the Alberta Electric System Operator (AESO) to limit its credit exposure. As identified in the MSA's *State of the market 2012*, vertical integration by a retailer can also benefit the wholesale market through the development of new capacity.

While some natural gas retailers in Alberta own gas production facilities, they are not operated in concert with their retail load. The natural gas wholesale market is sufficiently liquid that there is a lesser cost advantage to be gained through operating as a vertically integrated entity whereas there clearly is for electricity. A consequence of vertical integration in electricity is that the liquidity of forward markets is reduced as generators (sellers) and retailers (buyers) leave the market. While, in principle, an equal decline of supply and demand in a market has no obvious effect on market outcomes, if liquidity in forward markets, particularly exchange-traded contracts rather than bilateral contracts, falls below a 'critical mass', some traders may deem the market to be too risky and exit.

The level of vertical integration in the Alberta electricity market is relatively low by international standards. For example, in the UK, Australia, and New Zealand electricity markets, all of the major mass market retailers own generation assets. In the Alberta electricity market, ENMAX is the only gentailer in the residential retail market.¹² ENMAX originally acquired generation capacity via power purchase arrangement (PPA) auctions in 2000 and has since outright acquired its own generation capacity and invested in natural gas-fired and renewable generation capacity. By contrast, EPCOR divested its generation assets in 2009 and formed a separate generation corporation, Capital Power.

1.5.1.2 Distributors engaging in retail activities

A number of natural gas and electricity distribution system owners engage in retail activities in Alberta. This is largely a consequence of the requirement that each distributor provide a default service to its customers, whether directly or through a third party retailer. Three major electricity and gas distributors have designated an unrelated retailer to fulfill this requirement on their behalf – ATCO Electric and ATCO Gas has designated Direct Energy and FortisAlberta has designated EPCOR. Of the distributors

¹² There are gentailers that operate in other segment of the market, e.g., the commercial and industrial segment.

that provide the default rate through their retail arm, until May 2014, only ENMAX offered competitive market contracts. EPCOR sold its competitive retail business to Just Energy (then Alberta Energy Savings LP) in 2004, but re-entered the competitive market under the brand “ENCOR by EPCOR” in May 2014.

There are a number of benefits to a distribution system operator, particularly one that provides its own default-rate offering, integrating into competitive retail, including:

- cost savings from eliminating duplicative services, such as operating a single call centre and billing system; and
- leveraging the brand awareness and loyalty associated with distribution entity into retail.

Distributors also provide various services to energy retailers, including supplying the load settlement information used for billing retail customers and facilitating the migration of customers between retailers. These services are crucial to retailers operating in each distributor’s region. As such, distributors are subject to codes of conduct designed to prevent potential discrimination by distributors against third party retailers. These codes are designed to:

- prevent the regulated distributor and its retail affiliates from advertising or representing that supply from them would be more reliable than supply from other retailers;
- prevent the regulated distributor from discriminating against the customers of any retailer; and,
- maintain the confidentiality of consumers’ personal data, including consumption quantities.

Electricity codes of conduct compliance plans are subject to approval and enforcement by the MSA, while natural gas codes of conduct compliance plans are subject to approval and enforcement by the AUC.¹³ REAs are also bound by the electric *Code of Conduct Regulation* and have compliance plans approved by the MSA.

1.5.2 Horizontal integration

Horizontal integration occurs in retail markets when retailers sell multiple products, which may mean operating in multiple product markets. In the context of this report, these include:

- Retailers offering both electricity and natural gas products, both in a separate and bundled format (referred to as a dual fuel contract);
- Retailers associated with a municipality that bundle electricity and / or natural gas supply with other municipal utilities such as water and waste removal;
- Retailers offering secondary services such as insurance, maintenance, and repair services for air conditioning units and furnaces; and
- Retailers providing solar photovoltaic systems to residential users.

These are alternative packages available to consumers as a result of competitive retailing. As with vertical integration, these can result in significant cost savings that may be gained by consumers in the form of lower prices as a result of competition among retailers, as well as greater convenience. We briefly discuss the first two structures; the MSA has little reason to believe that the latter adversely affects competition.

¹³ It is expected that in 2015 the AUC will oversee all codes of conducts.

1.5.2.1 Dual-fuel retailers

A common feature of competitive retail energy markets worldwide is that retailers tend to offer both electricity and natural gas. Given the similarity of activities involved and overlapping customer base, there is a relative ease of entry between the markets and potential cost savings. By supplying both electricity and natural gas to their customers, retailers are able to realise economies of scope in marketing, administration, billing, and customer handling. In addition to these potential cost savings being gained by consumers as a result of competition, consumers can also benefit from the convenience of a single bill for their energy costs.

Dual-fuel customers have the potential to be 'stickier' than single fuel customers in that they are less likely to switch a single fuel to another retailer, even in the face of a better value offer. If the economies of scope or customer preference for dual-fuel contracts are significant, a new entrant may have to offer both products in order to compete. This is a common feature in retail markets where consumers expect retailers to have available a variety (of some kind) of products to choose from and, to compete effectively, retailers offer sufficient variety.

1.5.2.2 Provision of other services

In addition to retailing electricity and / or natural gas products, EPCOR and ENMAX provide billing consolidation services for other utilities such as water and waste collection services. As with dual-fuel contracts, the advantage of providing a bundled billing service is achieving economies of scale and scope for the retailer and convenience for the consumer. As discussed in the context of entry conditions, however, potential advantages of this sort cannot be replicated by retailers not owned by the local municipality and therefore raise potential barriers to new competition. Given that billing consolidation of this type may produce benefits along the lines of those associated with vertical integration, however, their benefits may outweigh their possible anti-competitive effects.

Competitive retailers also provide advice on energy efficiency or offer complementary products and services such as energy audits, smart thermostats, and furnace cleanings.

1.6 Metering technologies

For small consumers, including residential consumers, natural gas and electricity meters are read periodically, usually monthly, by the distribution system operator. The cumulative amount by which the meter has moved ahead indicates how much of the commodity the consumer has consumed between meter readings. As such, meters of this type are called cumulative meters. The meter reading may or may not be done remotely; the key point is that the readings occur sufficiently far apart that nothing is recorded about the hourly or daily consumption profile. The total consumption charged to individual consumers is based on meters read in this way or is forecasted by the distribution system operator and 'trued-up' upon an actual meter reading.

For larger consumers, meters are read far more frequently (and therefore remotely). Such meters are called interval meters. Smart meters are interval meters that may have other characteristics. In many jurisdictions, interval / smart meters are commonly available to small consumers as well as large.

The MSA's *State of the market 2012* found the Alberta wholesale electricity market to be effectively competitive. While there were numerous aspects to the analysis leading to that determination, one important characteristic was that the wholesale market's price volatility reflected variation of on- and off-peak generation cost differences. While the wholesale market price signal can provide meaningful information to both consumers and producers about differences in the value of electricity over time, this signal is unavailable to customers with cumulative meters.

Use of cumulative meters means that period-specific consumption data is not collected. Instead, it is assumed that all consumers in a given area have the same load profile, known as the Net System Load Shape (NSLS).¹⁴ This has a number of effects on the market, including:

- It restricts the nature of retail product offerings;
- It denies consumers the opportunity to adjust their consumption in the light the real-time wholesale market price and may, therefore, result in inefficient consumption decisions; and,
- It results in transfers among consumers and potentially inefficient consumption decisions.

While there would be economic benefits from adopting smart metering, there are also costs. Adoption should be guided by comparison of the total costs and benefits of doing so, some of which are manifested in the retail market and some of which are not. A proper test would carefully consider all of these. While costs associated with the installation of smart meters are relatively straight-forward to conceptualise and measure, benefits of better informed and therefore more efficient consumption decisions are more difficult to predict.

As the importance of smart meters is, in one way or another, largely dependent on the variation of wholesale prices, especially within the day, and wholesale natural gas prices exhibit very little of this, interval meters for natural gas would not have nearly as great a benefit as they would for electricity.

Were smart meters available to consumers in Alberta, it would be possible for retailers to offer products that utilise their ability to record particular consumers' period-specific consumption. The issue is not that any such retail offerings are valuable (this is not known), rather the issue is that the absence of such metering technology renders such offerings infeasible.

The most obvious retail product whose offering is restricted is true wholesale market flow-through. Existing flow-through products must assume the consumer's consumption follows the NSLS for the reasons discussed in the section above. As such, a consumer cannot directly benefit from avoiding consumption in high-wholesale price hours because their meter would only observe a reduction of total consumption if they did so, i.e., nothing can be attributed to a given hour with present metering. With smart meters, however, a particular consumer who avoided such consumption could benefit directly. A less obvious but equally important example is that smart meters would make it possible for retailers to interact dynamically with the wholesale market, including ancillary service product markets. To the extent they could help consumers manage their consumption, this would allow them better manage their load shape and associated risks. In a competitive market, these gains could, to varying degrees, be shared between the retailer in the form of additional profit and consumers in the form of lower prices.

A critical point that is often over-looked is that Alberta's wholesale electricity spot market provides a price signal that varies substantially across hours, enough to potentially incentivise effective demand responsiveness. Even compared to another energy-only market, ERCOT (Texas), the distribution of spot prices in Alberta is such that if any wholesale electricity market could provide a price signal for demand response it would be the one in Alberta.¹⁵

¹⁴ The NSLS is calculated based on total metered consumption in a service area minus the sum of all known consumption, including interval meters, deemed consumption, profiled consumption, and 'unaccounted for energy' (UFE). In short, the NSLS is essentially what is left over after all known consumption has been counted. One exception is that ATCO makes use, to some extent, of research profiles (as alternative to NSLS that is statistical in nature) so as to better account for different classes of consumers.

¹⁵ "Notes for a small market: The energy-only market in Alberta," *Electricity Journal* 27(4), 2014, Figure 1.

2. Conduct

This section is concerned with issues related to the way retailers and consumers choose to behave. A number of questions are considered:

- Has retail competition resulted in a range of products being offered to consumers?
- Has competition occurred in the non-price characteristics of retail contracts?
- Is good quality information about retail options available to consumers?
- Does co-branding distort market outcomes?
- Do consumers avail themselves of the ability to complain about the conduct of retailers and is there evidence of systematic misconduct on the part of retailers?

A number of conclusions present themselves:

- A variety of different retail products have resulted from competition, including fixed-price, fixed-duration contracts, green options, and bundling.
- Critically, retail competition has also occurred in relation to terms and conditions. In particular, termination periods on competitive contracts are very small in Alberta even for 5-year contracts. This compares very favourably to similar conditions available in other markets such as wireless communications.
- Some other jurisdictions, such as the State of Queensland, Australia, have more effective tools to compare retail options.
- Co-branding may provide an advantage to retailers also engaged in either the provision of a default-rate product or regulated distribution services. It is noted that rates of switching away from default-rate electricity options have been higher in Calgary than in Edmonton.
- Consumers have reported concerns about potential misconduct of competitive retailers, but these have been relatively few in total and are largely limited to occasions of misconduct of retailers engaged in door-to-door sales tactics (which tend not to be used to market default-rate contracts).

2.1 Product differentiation and diversity

The number and diversity of retail energy offerings are important components of retailers' conduct in the retail energy market. Retail energy products vary by price, length of contract, stability of monthly bills, whether electricity and natural gas are bundled together or with other services, and whether the energy is environmentally friendly (green). As shown below, there is a broad range of electricity and natural gas products on offer in Alberta by a number of different retailers. As of mid-2014, 42% of residential electricity consumers and 46% of residential natural gas consumers had signed a competitive contract, indicating that consumers see value in choice beyond the default-rate options.

2.1.1 Fixed-price contracts

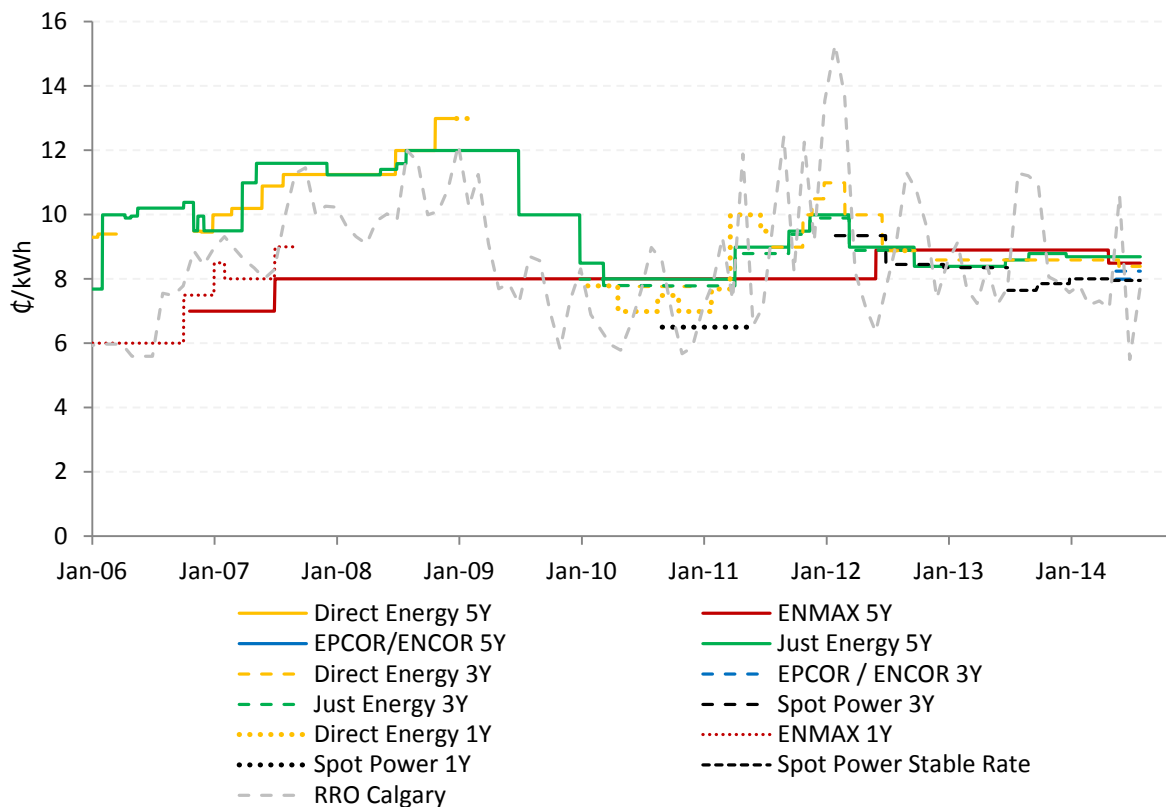
2.1.1.1 Electricity

Fixed-price electricity contracts are contracts where the price per kWh of electricity is set for the duration of the contract. From 2006 until very recently there were three main participants in the competitive retail electricity market: Direct Energy, ENMAX, and Just Energy (formerly Alberta Energy Savings). As described in Section 1, EPCOR participated in the early retail market and re-entered in May 2014 with its

ENCOR brand. Spot Power, the first boutique electricity retailer in Alberta, began to offer fixed-term contracts in September 2010 and was followed by additional boutique retailers using the UtilityNet & Partners system in 2011.

Figure 2.1 illustrates that between 2006 and 2010 a wide variety of contract prices were available in the market, with one of the mass market retailers (ENMAX) pricing significantly below its competitors. Since 2010, however, contract rates seem to have converged. The MSA believes that this could be indicative of increased responsiveness of consumers to price signals in the market, due in part to the increased availability of information over the internet and increased scrutiny of door-to-door sales. The price convergence of contracts of different durations is likely related to stable expectations of future wholesale prices since otherwise there would be little reason for them to converge. Consumer responsiveness may manifest itself as switching from high priced contracts to lower priced contracts, which may have caused the high price providers to lower their rates. This provides some indication of the competitiveness of the retail market.

Figure 2.1: Convergence of fixed-price electricity contract prices since 2010¹⁶



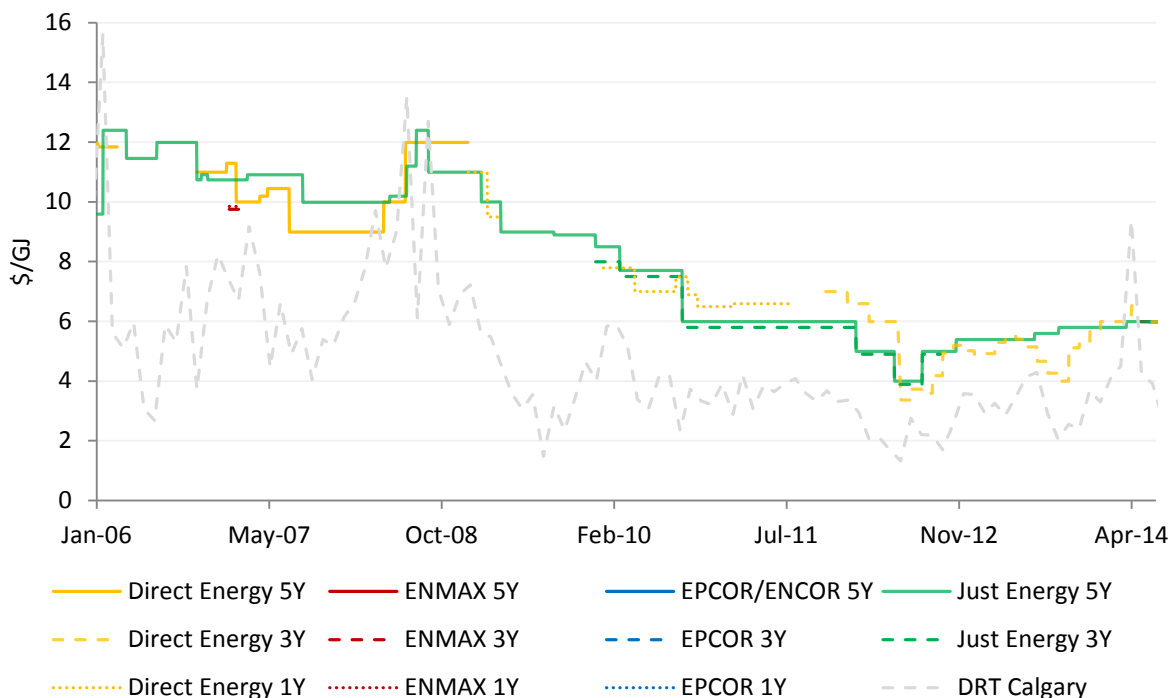
2.1.1.2 Natural gas

Fixed-price natural gas contracts smooth natural gas rates in a way similar to electricity contracts. However, in contrast with electricity, there were only two main providers of fixed-price natural gas contracts between 2006 and early 2014. ENMAX and EPCOR, however, re-entered the market in April and May 2014, respectively, with five-year contract options. As can be seen in Figure 2.2, between 2006 and 2014 the DRT rate was almost always lower than any fixed-price natural gas rate. This has deterred

¹⁶ In this chart Spot Power is used as a representative boutique firm.

many customers from switching to a fixed price contract; however, 23% of dual fuel customers, which account for 78% of customers who are on competitive contracts, chose a fixed-price natural gas contract, while the remainder chose a variable rate.¹⁷

Figure 2.2: Fixed-price natural gas contract prices almost always exceed the DRT



2.1.2 Terms and conditions

Critically, retail competition occurs in relation to terms and conditions. In particular, termination periods on competitive contracts are very short in Alberta, even for 5-year contracts. From a consumer's perspective, this compares very favourably to similar conditions available in other markets such as wireless communications.

Retailers attach certain terms and conditions to their contracts, in addition to term length and consumption-based prices. These include administration fees and early cancellation fees. These terms and conditions have a notable impact on the magnitude of consumers' energy bills, as well as their ability to switch providers.

Administration fees are fixed monthly charges that are levied on top of the energy charge. They range from \$5.50 to \$9 per site, varying by retailer (electricity and natural gas at the same residence would be two sites). Admin fees are rarely advertised by retailers and often are not readily available on retailers' websites. Occasionally customers must call the retailer or proceed to the online checkout before the admin fee will be provided. The lack of transparency in admin fees makes it more difficult for consumers to find a retailer's all-in price to make price comparisons. Any reduction in consumers' ability to compare prices may be a potential impediment to retail competition.

In many industries early termination charges are levied on contracts where a service or product is provided upfront, the cost of which is recouped over the term of the contract, e.g., mobile phones. Retail

¹⁷ An overview of these data is included in the MSA, "Annual retail statistics report 2014" (April 16, 2014).

energy contracts, however, rarely provide goods and services upfront; instead, contracts offer consumers a set rate for a fixed term. To offer this set rate, retailers may buy energy on the forward market to reduce their exposure to spot market prices. This involves a payment of a risk premium to the seller of the forward contract. As such, termination fees can be justified on the basis that forward market purchases were made to facilitate the consumers fixed rate. These purchases are likely not readily cancelled without incurring losses. Interestingly, some retailers have stopped charging cancellation fees—most contracts can now be terminated without penalty at any point, provided the requisite notice is given (generally 10 to 30 days). This may be a result of consumer demand for increased flexibility as well as competitive pressure between the retailers.

Table 2.1: Contract terms and conditions¹⁸

Retailer	Contract	Administration fee (monthly)	Cancellation notice	Cancellation fee
Boutique retailers	All contracts	\$5.50-\$6.95	10 days	N/A
Direct Energy	All contracts	\$9 for single fuel and dual fuel contracts	30 days	N/A
ENCOR	All contracts	\$7	15 days	No penalty (\$0)
ENMAX	EasyMax 5-year contract	\$7.10	30 days	N/A
ENMAX	Basic 5-year contract	\$7.10	N/A	\$95 per year for each year remaining for some contracts; not Easymax contracts
Just Energy	Price Protection Electricity / Natural Gas Program	\$6.90 per site or \$9.85 for two sites (dual fuel)	N/A	\$0.015/kWh or \$1.50/GJ, multiplied by the customer's anticipated energy consumption for the remainder of the contract, for a maximum of \$75 (of \$150 for electricity and natural gas) for each year remaining
Just Energy	Predict-a-Bill	\$6.90 per site or \$9.85 for two sites (dual fuel)	N/A	\$75 per year or partial year remaining

2.1.3 Renewable energy options

While it is impossible to determine whether the energy—electricity and natural gas—consumed by a residential consumer was produced in a renewable manner, Alberta consumers have the option to purchase and retire renewable energy credits (RECs) to “green” their electricity consumption. For electricity, one REC is issued per megawatt-hour of renewable electricity produced, e.g., wind and solar. Consumers can then, through either their energy retailer or an independent firm, purchase RECs to cover their consumption. Consumers can also purchase carbon offsets for their natural gas consumption.

¹⁸ This snapshot of terms and conditions is from August 2014.

These offerings add important product diversity to the market. It is important that the information made available about the environmental attributes of these products be clear, comprehensive, and transparent.

2.1.4 Dual-fuel arrangements

A number of retailers offer to bundle electricity and natural gas contracts, with potential for savings on energy expenditure as well as the convenience of receiving one bill. Customers generally have the option of choosing fixed or floating electricity and natural gas prices, based on their perception of future energy prices. Some retailers also discount the admin fee for dual fuel customers. One company recently offered “free” electricity for a year when customers sign a five-year dual fuel contract.

As at December 2013, 78% of customers on competitive contracts were on dual-fuel contracts. Of these, 58% were on fixed electricity and variable gas, 23% on fixed electricity and fixed gas, 0.07% on variable electricity and fixed gas, and 19% on variable electricity and variable gas. It appears that the convenience of dual fuel contracts is very appealing to consumers, and the majority prefer fixed electricity prices and variable gas prices.

2.2 Availability of product information

Easily accessible, clear and accurate information about products available in a market helps to facilitate informed consumer choice, which correspondingly facilitates competition on product merit. On the other hand, product information that is hidden, unclear or confusing is likely to deter consumers from fully participating in a market, because the time and effort costs of doing so are higher. In the Alberta retail energy market, product information is generally disseminated through retailers’ websites, advertising campaigns, door-to-door or phone sales, and general product information websites. Unfortunately, at times this information is unclear or potentially misleading, which makes it difficult for consumers to compare energy offers. Additionally, the variable nature of the default-rate for natural gas and electricity make it difficult for consumers to assess whether a fixed-price contract will be beneficial in the long term. In the MSA’s view, remedying these problems, perhaps in part by developing an easy to use independent price comparison website, would help to increase consumer engagement and facilitate increased retail competition.

2.2.1 Default-rates make price comparison difficult

The default-rates for electricity and natural gas vary by month and by location. This affects consumers’ participation in the competitive retail market. Since the rate is not province-wide, making a price comparison requires the consumer to first determine the applicable default-rate in their area. They must then make an assessment of the expected future default-rate. It is unlikely, however, that the majority of consumers make this complex assessment. Instead, many may simply compare the default-rate in the current month, or last few months, to the available competitive fixed rates available at the time. Below, this report analyzes switching data and concludes that consumers tend to switch to competitive contracts more readily after a month of high RRO prices. This may be a result of news articles publicising electricity prices or consumers’ reaction to receiving an expensive bill. As such, it is possible that consumers switch retailers / contracts in the hope of a better arrangement that may turn out otherwise. Indeed, consumers could fail to switch retailers and that may also turn out to be a poor decision.

Additionally, retail choice is not available in a number of areas of the province, including the city of Medicine Hat, self-operating REAs, and natural gas cooperatives. Consumers in those areas may be dismayed to learn they have no choice of retailer, even though competing retailers operate throughout most of the province.

2.2.2 Price comparison tools insufficient

The electricity or natural gas provided by various retailers does not differ in reliability or quality, only in price. As such, consumers' ability to make accurate price comparisons is of utmost importance. It is the MSA's view that the tools currently available, including retailers' websites and separate retailer-owned information websites are inadequate to facilitate easy, accurate comparisons.

First, product information on retailers' websites is often opaque and incomplete. To provide a specific example, certain retailers do not list admin fees, which can amount to a significant portion of monthly electricity or natural gas bills, on their websites, or they are only included in the fine print. While the Utilities Consumer Advocate's (UCA) website helpfully lists admin fees for each retailer, this may not be known to most consumers. Additionally, since the type of product offer varies across retailers, it is difficult for consumers to make apples-to-apples comparisons with only the information available on the websites.

At this time, the UCA offers a retailer search tool that provides information about the energy products that various retailers offer in the searcher's location. This information includes the name of the plan, the price per kWh or GJ, the administration fee, the notice required for cancellation and any applicable cancellation fees. This information is a good starting point for consumers looking to compare offers, but could be substantially improved. One potential improvement would be to add, for each plan, a yearly all-in energy costs for an average consumer. This would facilitate better comparisons between plans. That said, a poor comparison tool, whether it be over-simplified or use out-of-date information, may be worse than none at all.

In addition to the UCA's website, there is a number of retailer-owned information websites, separate from their company branded websites. One provides information about the various retailers in the Alberta market and the other provides price data. The retailer information website provides links to only the owner's competitive retailer, while the price data website provides links to all competitive retailers. Both websites disclose their owner in fine print. It is the MSA's view that while retailer owned information websites with accurate information may contribute to consumer education, it is important that any financial link between the website owner and a listed retailer be displayed prominently. This will provide consumers with the information to accurately assess the reliability of any information provided.

2.2.3 Queensland case study

When looking to make modifications to market features, it is often useful to look to other jurisdictions for best practices. In this case, we consider the State of Queensland, Australia. Australia has deregulated the wholesale electricity market on a national basis and left the retail side to individual states. In Queensland, competitive retail contracts were introduced in mid-2007. Since deregulation, 70% of retail electricity customers in south-east Queensland (where the majority of people live) have switched to a competitive provider,¹⁹ compared to 42% in Alberta. Similar to Alberta, the state has retained a default electricity rate. In contrast to Alberta, however, this rate is set on a year-ahead basis at a fixed price for the entire year and includes a markup intended to promote competitive retail options.

The difference in the proportion of consumers on competitive contracts may be attributable in part to better availability of price information in South East Queensland, specifically through an independent online price comparison tool for energy contracts. The price comparison tool is provided by the

¹⁹ Queensland Competition Authority, "Regulated retail electricity prices 2014-15" (May 2014).

Queensland Competition Authority, which is responsible for the retail electricity market.²⁰ When using this tool, energy consumers input their energy usage and are provided with an annualized total cost of energy under the default-rate, as well as under each available plan. Plans are listed from lowest price to highest price, and the potential savings over the default-rate are highlighted. Prices are total annual prices inclusive of all administration, transmission and distribution fees. Detailed terms and conditions can be found by clicking on the individual plan.

There are a few features of this tool that should be highlighted. First, it is provided by an independent body with no financial interest in the retail electricity market and is, therefore, not subject to perceptions of bias. Second, it compares plans on a yearly, total bill basis. Even if retailers differ in how they present prices, the tool presents them in a uniform manner. Consumers can compare prices on a common basis with confidence that all components of cost are included for each plan.

2.3 Co-branding

Co-branding is where two complementary brands are associated with the same product or service. In the context of the Alberta energy market, co-branding occurs when a provider of regulated services lends its brand to an associated competitive energy retailer, typically a subsidiary of the same parent company. The brands associated with regulated products may be especially well-known and may have been established, in part at least, as a result of regulation rather than a competitively superior characteristic. To the extent this is the case, co-branding may act as a barrier to new competition, which, as discussed in this section, would confer a significant competitive advantage to retailers affiliated with providers of regulated services.

While co-branding is ubiquitous, in many cases potential entrants have trusted brands that could overcome this effect. While co-branding may affect the retail energy market, to the extent it facilitates consumer switching away from default-rate products, over time it may serve to enlarge the pool of consumers who consider their energy retail options and make the market more competitive.

2.3.1 Types of co-branding in Alberta retail energy

In the Alberta energy market there are several varieties of co-branding:

- The provider of the default-rate option has a brand-affiliated retail competitor (e.g., Direct Energy in electricity and natural gas);
- The provider of the default-rate option is brand-affiliated with the local distribution company (e.g., EPCOR in electricity, AltaGas Utilities in natural gas); and
- The distribution company is brand-affiliated with the RRO provider and a competitive retailer (e.g., ENMAX, EPCOR).

In addition to the advantages conferred by regulation, ENMAX and EPCOR have a brand advantage because they are municipally owned. This is because some customers prefer to support their local community or perceive that a retailer owned by the city is more reputable or reliable. While there are measures in place to prevent any financial advantages accruing to a competitive energy retailer from its affiliation with a municipality, these measures do not cover such co-branding possibilities.

ENMAX and EPCOR may have a competitive advantage associated with the bundling of municipal services such as water and garbage with energy in the one bill. Other retailers are unable to offer this convenience to customers who can save transaction costs by consolidating several bills into one.

²⁰ Queensland Competition Authority, "Comparator" (n.d.).

Furthermore, as most retailers sell both electricity and natural gas contracts there is the potential for co-branded retailers to leverage their brand in one commodity when retailing the other commodity. This type of co-branding is not of concern to the MSA since the advantage is not a legacy of regulated monopoly status.

2.3.2 Co-branding may affect competitive outcomes

Co-branding in energy retailing can be a concern to the MSA if it exploits brand reputation that has not been competitively earned but has been conferred by the provision of a regulated monopoly service. Leveraging such a brand provides an unearned competitive advantage as it is unavailable to new entrants and it may persist for a long period of time.

In Alberta there are four main electricity distribution zones, each with a unique co-branding situation:

- ENMAX – ENMAX (through its wholly-owned subsidiaries) is the distribution company, RRO provider and has an affiliated competitive retailer ENMAX Energy;
- ATCO – there is co-branding between the RRO provider, Direct Energy Regulated Services (DERS), and its affiliated competitive retailer Direct Energy;
- EPCOR – EPCOR (through its wholly-owned subsidiaries) is the distribution company, RRO provider and has an affiliated competitive retailer ENCOR; and,
- FortisAlberta – there is co-branding between the RRO provider, EPCOR, and its affiliated competitive retailer ENCOR.

Co-branding can affect the competitive retail market in two distinct ways:

- It influences consumers not to exercise their option to choose a competitive contract; and
- It influences consumers who have decided to switch providers to choose a competitive retailer that is affiliated with the distributor and / or the RRO provider.

There is a group of consumers that prefer not to choose an energy retailer. This may be because energy constitutes a relatively small percentage of their household budget, an effect unrelated to co-branding, or because they believe that better options are unlikely to be available, an effect that may be related to co-branding. It is, however, difficult to differentiate between such consumers based on observed behaviour (i.e., neither would have been observed to have changed retailers).

Other consumers may, at some point, decide to switch to a competitive retail electricity or gas provider, perhaps in response to a spike in the default-rate. Typically, a consumer in this position would call up their default provider to cancel their service and obtain more information about competitive contracts. The *Electric Code of Conduct Regulation* and *Natural Gas Code of Conduct Regulation* dictate that RRO providers must inform consumers that the Alberta retail energy market is competitive and they are entitled to choose a retailer. A customer service representative can then, however, proceed to market the RRO provider's affiliate's competitive retail options to the consumer, who has already indicated she is interested in switching. This may give RRO providers that are also competitive retailers a potential customer-access advantage over their competitors.

2.4 Consumer decisions

2.4.1 Market shares

Market shares in the competitive retail energy market reflect the state and evolution of consumer decision-making. Decision-making may be active in the sense that some consumers have explicitly

weighed their options and made a conscious choice, which may indeed be to knowingly accept the default-rate option, and inactive in the sense that some consumers have not explicitly weighed their options and have been enrolled in the default-rate option.

In order to further consider the potential effects co-branding, Table 2.2 reports market shares in *competitive* electricity products (i.e., excluding the relevant default-rate product) by retailer in each load service zone. It is necessary to consider this information because the co-branding practices described above, as well as the proportion of consumers on default-rate contracts, vary across the zones. In the zone where ENMAX is both the RRO provider and the distribution company, 78.2% of competitive contracts are with its affiliate,²¹ while its comparable market shares are less than 40% in every other zone. In the zone where Direct Energy Regulated Services is the RRO provider, 47.6% of competitive contracts are with its affiliate, the highest of any competitive retailer in that zone. While other factors, such as independent retail advertising and quality retail customer service, may influence the market shares of ENMAX and Direct Energy in their regulated service zones, the market share differences between zones may reflect a co-branding effect. Notably, in the period between 2006 and 2012 ENMAX offered one of the lowest price energy contracts (province-wide), which may account for its larger market share across the province but not within any individual zone.

Table 2.2: Competitive electricity residential market shares, March 2014

Distribution zone	ENMAX	Direct Energy	Just Energy	Others
ENMAX	78.2%	13.2%	8.2%	0.4%
EPCOR	34.9%	40.3%	23.8%	1.1%
Fortis	38.4%	35.6%	23.8%	2.3%
ATCO	22.6%	47.6%	28.3%	1.5%

With respect to natural gas, there are three main distribution zones in Alberta: ATCO North and South and AltaGas. Direct Energy provides the default service in the ATCO North and South distribution zones and also offers competitive retail natural gas contracts. AltaGas provides the default service in its zone and does not participate in the competitive residential retail market, leaving no opportunity for co-branding. Table 2.3 reports market shares in *competitive* natural gas products (i.e., excluding the relevant default-rate product) by retailer in each zone.

Table 2.3: Competitive natural gas market shares, March 2014

Distribution zone	ENMAX	Direct Energy	Just Energy	Others
AltaGas	9.2%	46.5%	41.2%	3.1%
ATCO-S	66.4%	21.0%	11.3%	1.3%
ATCO-N	29.5%	43.9%	22.4%	4.2%

²¹ In Calgary, ENMAX has approximately 88% of all residential retail electricity contracts. See Figure 1.3.

In ATCO South, which overlaps with ENMAX's RRO and electricity distribution territories, ENMAX has a 66.4% share of competitive products, well above even the default-rate provider's competitive affiliate, Direct Energy. In ATCO North, however, Direct Energy, the default service provider, has the largest competitive market share at 43.9%. Additionally, the 98% of residential consumers who are on a competitive natural gas contract are also on a competitive electricity contract.²² This indicates that consumers may enter competitive natural gas contracts because they have switched their electricity contract and want to save on admin fees or have all items on one bill. This may mitigate some of the effects of regulated service co-branding on competition. It also stands as a good example of electricity-natural gas service co-branding.

2.4.2 Regulated service prices and switching rates

One of the primary factors influencing the number of consumers that switch from the default-rate to one of the competitive providers is co-branding. With respect to electricity, ENMAX is the only co-branded retailer for our period of analysis. In Calgary, where ENMAX is a co-branded retailer, it obtained 76% of new competitive customers over a period when all major retailers priced similarly. In Edmonton, it obtained only 19% of new competitive customers over the same period. This provides an indication that co-branding may affect consumers' behaviour in the retail electricity market. As stated above, while co-branding may affect the retail energy market, to the extent it facilitates consumer switching off of default-rate products, over time it may serve to enlarge the pool of consumers who consider their energy retail options and make the market more competitive.

The retail natural gas market may also be influenced by electricity co-branding, since it appears that most customers that switch to a competitive natural gas retailer use the same retailer as for electricity.

2.4.2.1 Electricity

Switching rates of residential consumers away from the RRO to competitive retailers are illustrated in Figure 2.3. It appears that trends in switching rates consistently lag corresponding trends in relative RRO prices by one month, indicating that residential consumers tend to switch to competitive contracts more readily after a month of high RRO prices. This seems intuitively plausible despite the public availability of RRO prices ahead of time; it is likely that residential electricity consumers respond to high RRO prices immediately after they see their bill for the previous month. Appropriately, then, the switching rate should be positively correlated with the ratio of the one-month lagged RRO prices to the current month competitive contract prices.

Overall, switching rates are significantly lower in Edmonton than in Calgary. This may be due to the fact that EPCOR, Edmonton's electric utility and RRO provider, did not offer competitive contracts until May 2014. As such, the role of co-branding is limited in Edmonton. On the other hand, if it were the case that consumers switching off the default-rate to a competitive contract with one of its affiliates resulted in consumers being more inclined to consider the options available in the market again in the future, then such switching may be viewed more positively as the first stage in an on-going decision-making process. There is little evidence one way or another on this particular matter.

The relationship between the RRO and switching is less pronounced in Edmonton than in Calgary. Figure 2.4 illustrates that consumers in Edmonton are not as responsive as those in Calgary to relative RRO prices. When the lagged RRO price is relatively low compared to the current best competitive offer, switching in both Calgary and Edmonton is also very low. However, as the lagged relative RRO price increases residents of Calgary switch at higher rates than Edmonton's residents.

²² MSA, "Annual retail statistics report 2014."

Figure 2.3: Switching in Calgary and Edmonton

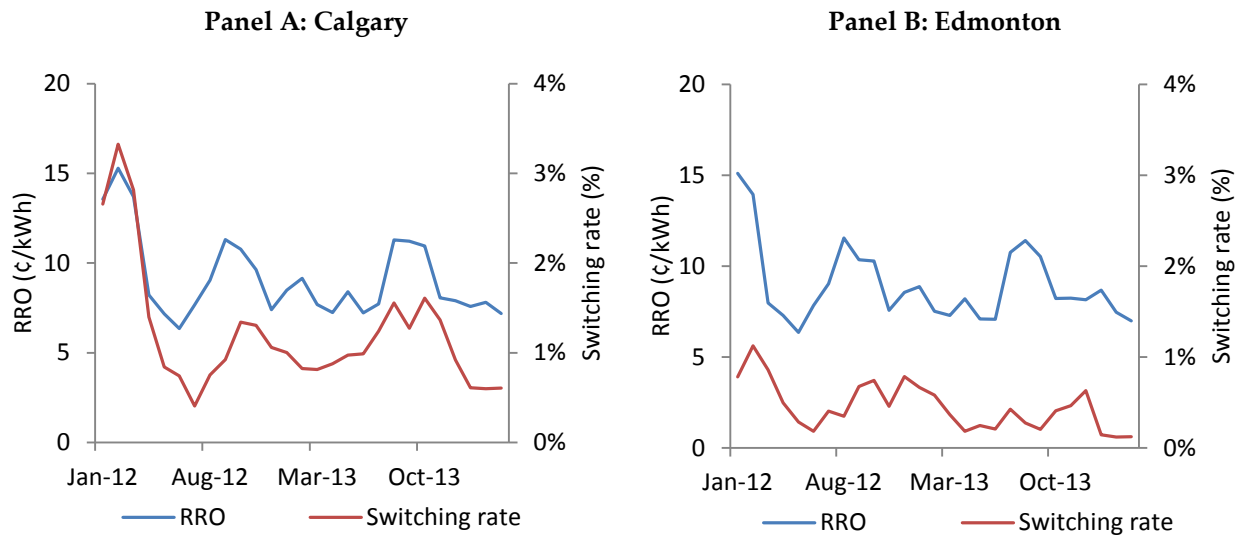
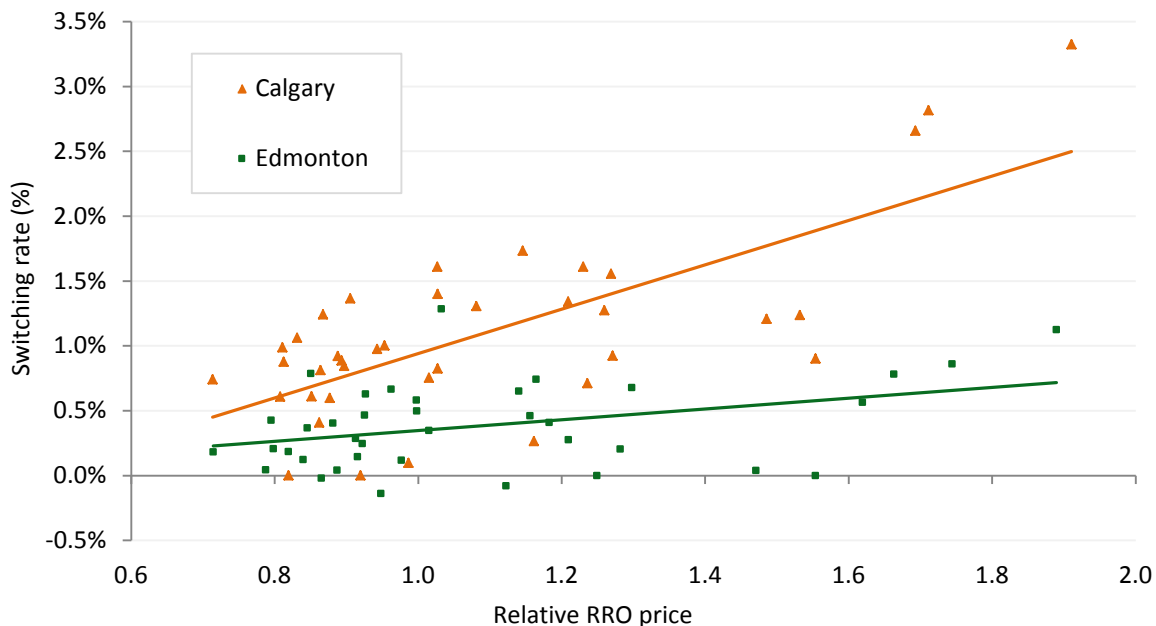


Figure 2.4: Switching lower in Edmonton than Calgary



2.4.2.2 Natural gas

Natural gas switching rates do not appear to be related to lagged relative DRT prices. Perhaps this is because this analysis only has data from 2011, and throughout this period natural gas prices have been extremely low and thus DRT prices would not have been much a driver in convincing customers to switch to competitive rates. Nevertheless, switching in the retail natural gas sector does happen and seems to track electricity switching fairly closely. In fact, lagged relative RRO prices explain switching in the natural gas sector quite well. The proportion of consumers on competitive energy contracts has been increasing over time, suggesting that when switching occurs for electricity contracts, it does too for natural gas contracts. This is likely driven by consumer preferences for a single energy bill or by special offers for signing up on dual fuel contracts (e.g., administrative discounts, rebates, and Aeroplan points).

2.5 Energy consumer survey²³

The preceding sections strived to answer a number of questions based on objective data analysis. What products are available at what price? What information is available? How is the market split among retailers? To which retailers do consumers switch? What has not been assessed is: Why do consumers switch? Why do they switch to certain retailers or not switch in greater numbers? To answer these questions Leger, on behalf of the MSA, conducted an online survey of about 2,000 electricity and natural gas consumers across the province, proportional to population in each region, in January and February 2014. Respondents were asked to rank a number of characteristics of energy retailers and contracts.

The survey found that consumers are principally interested in the price per unit of energy and the total cost of energy. It also found that consumers have reliability concerns and have a general preference for default-rate options. Finally, consumers indicated that they value the convenience of having all utilities on one bill, which is something only the municipally-owned retailers can offer.

2.5.1 Survey method

A key part of the analysis was done using MaxDiff analysis²⁴ to establish preferences. This method was chosen in part because the resulting scores are straight-forward to interpret, as they can be placed on a 0 to 100 point common scale and sum to 100.

A MaxDiff analysis was used to rank the following thirteen attributes:

- Price (the price you pay per kWh of electricity or per GJ of natural gas that you use in your home)
- Cost (total cost that you pay for the electricity or natural gas that you use in your home, including the cost of the energy [kWh of electricity or GJ of natural gas], retailer administration costs plus the costs to deliver the energy to your home)
- Reliability of the retailer (meaning few service interruptions)
- Customer service (meaning accurate bills and ease of access to customer support)
- Reputation of the retailer (meaning that you trust the name of the company providing the electricity or natural gas that you use in your home)
- Reputation of the utility (meaning that you trust the name of the utility responsible for getting the electricity or natural gas into your home) and prefer them as your retailer.
- Administration charges (these are retailer administration costs associated with customer service)
- Exit fees (a fee that would be charged if you wanted to exit a contract early)
- No exit fees (the provider would allow you to sign a contract, but also allow you to terminate the contract with 30 days' notice)
- Length of contract (contracts are usually offered for specific periods of time, i.e. 1 to 5 years)
- Special offers, i.e. money back offer

²³ All data cited and illustrated in this section are drawn from MSA, "Co-branding impact research report," Prepared by Leger for the MSA (February 26, 2014).

²⁴ MaxDiff (Maximum Difference) analysis requires consumers to compare sets of product attributes in sequence. At each stage, consumers are typically given four attributes and asked which they prefer most and which they prefer least. Repetition while randomising the four attributes allows a set of results to be collected that can be used to determine consumers' ranking of attributes.

- Name recognition (meaning I choose a retailer whose name is familiar to me)
- Regulated Rate (I prefer default-rate options for energy because they are regulated)

2.5.2 Survey results

The survey rankings in Figure 2.5 report that the price per unit of energy and the total energy cost are the most important factors to consumers when choosing an energy contract. The next highest ranked factors are a preference for the default-rate (because it is regulated by government) and service reliability (which is not affected by retailer choice). These results were essentially the same across the province.

Next, the survey looked at the differences in results between consumers on competitive contracts and customers on default-rates, which is shown in Figure 2.6. There is little difference in attitudes between the two groups for either electricity or natural gas. We would, however, expect that preferences for the default-rate would be much lower for consumers on competitive contracts than for those on default-rates; this is not the case.

Survey respondents were then asked their opinions of the statements in Figure 2.7. Notably:

- Many consumers are unsure whether their choice of retailer will affect reliability of supply (electricity or natural gas);
- Consumers state strong preferences for default-rate that are controlled by government;
- Consumers prefer to have all utilities on one bill; and,
- Consumers do not mind retailers selling both default and competitive offerings.

These results were uniform across the province.

Figure 2.5: MaxDiff rankings show that price / cost is most important to consumers

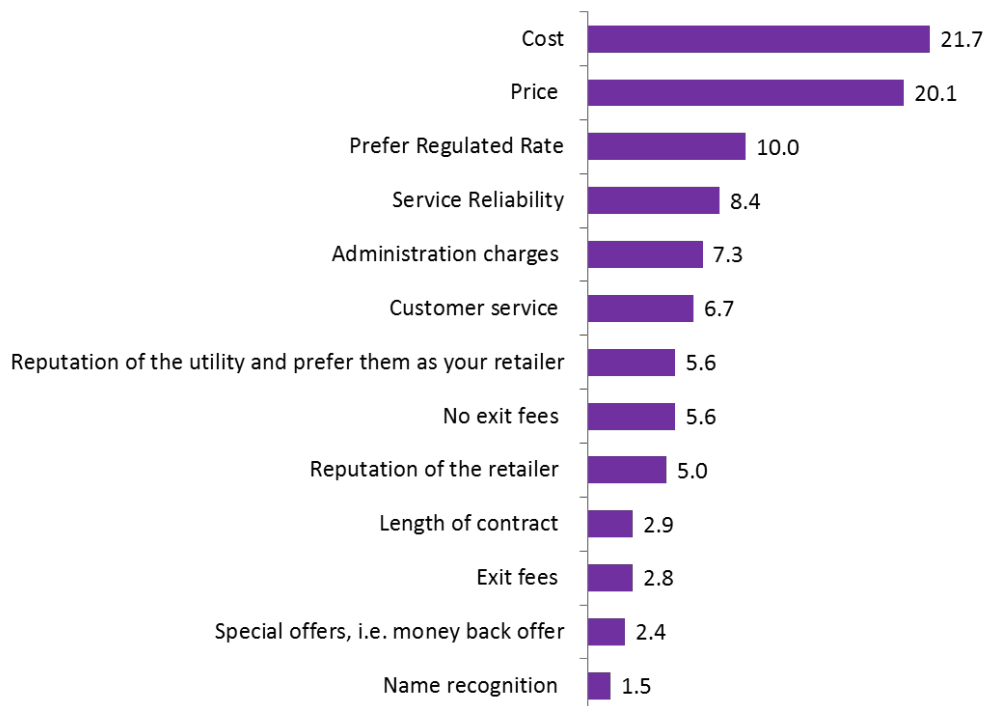


Figure 2.6: MaxDiff results are similar for consumers on competitive contracts and default-rate

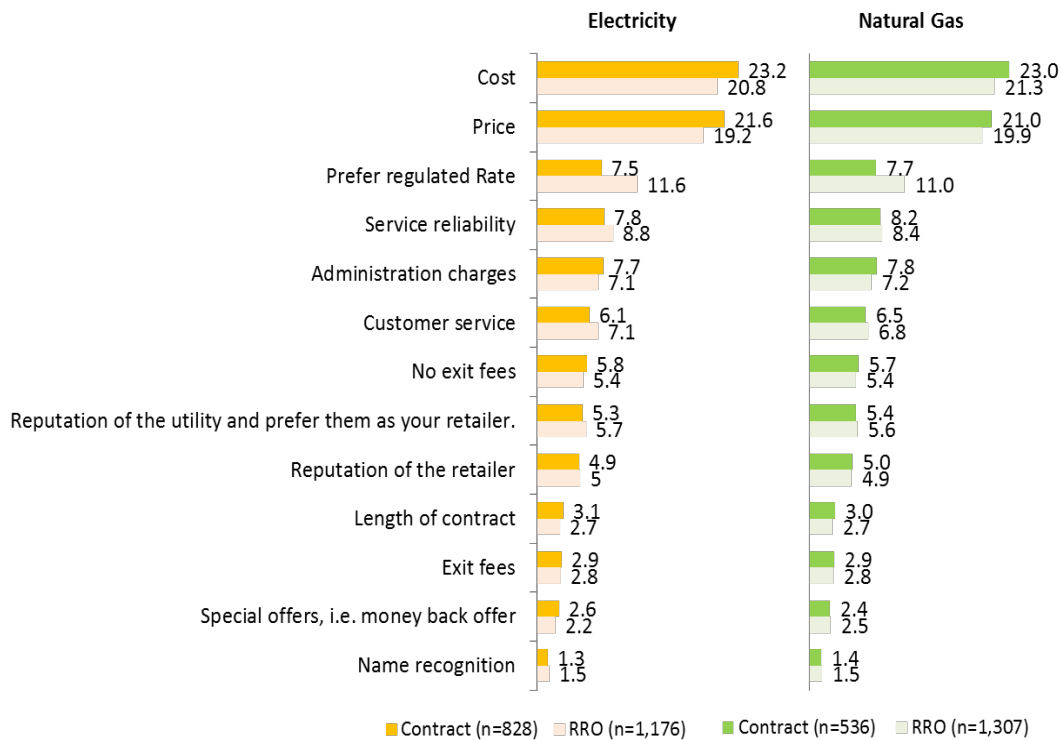


Figure 2.7: Consumer attitudes toward providers

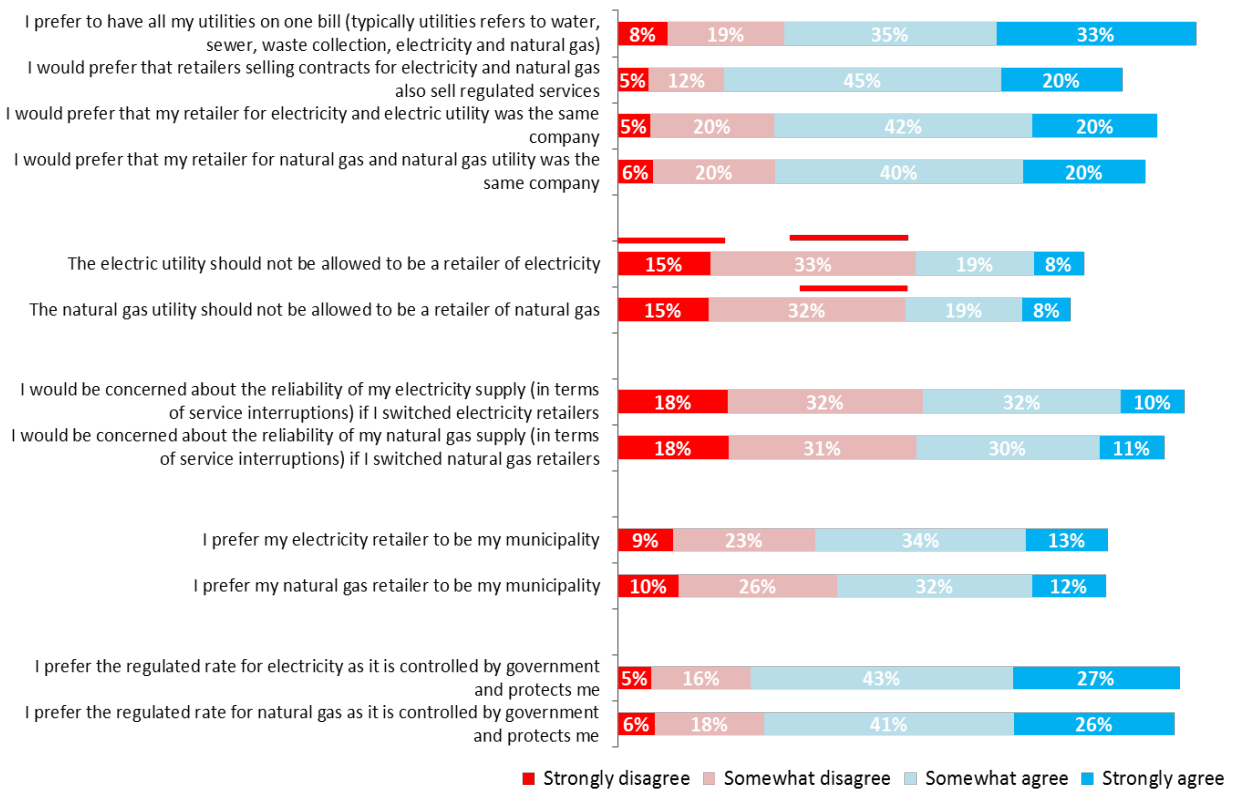


Figure 2.8: Consumer preferences regarding default-rate and competitive contracts differ primarily in attitudes toward default-rates

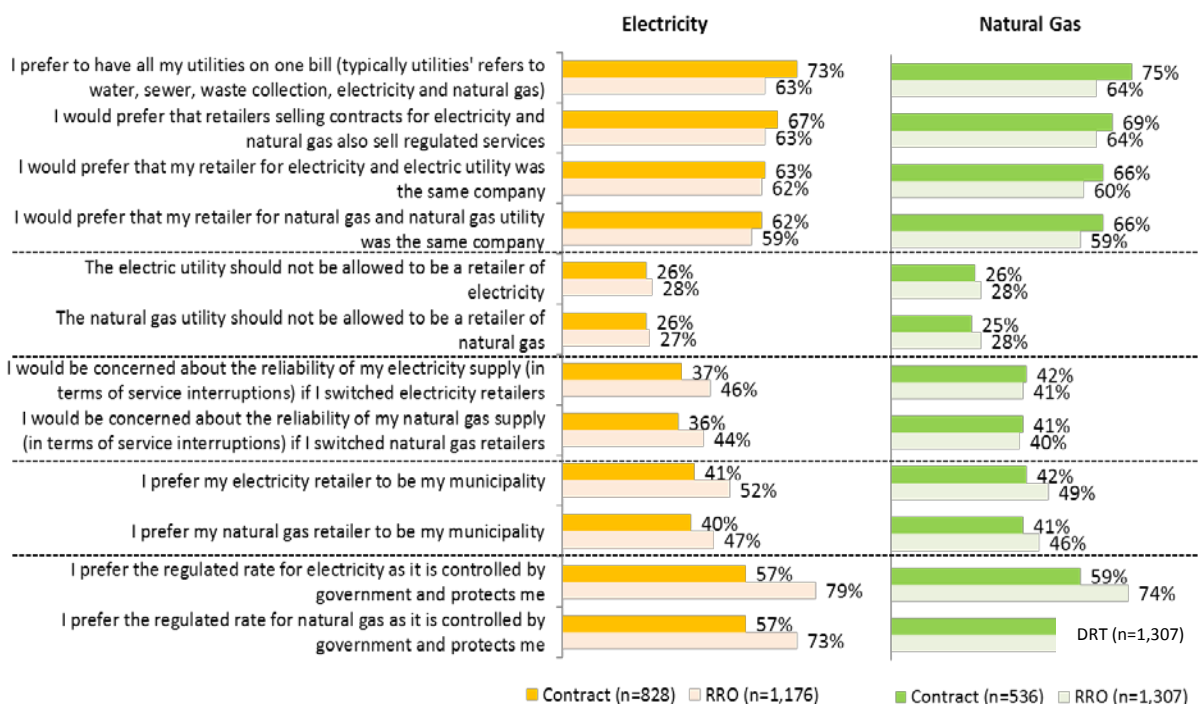


Figure 2.8 parses the data into contract and regulated consumers. The notable difference is of attitudes toward default-rate. Those on default-rates showed a greater preference for default-rates and municipality controlled retailers and also expressed greater concern about the reliability of supply from competitive retailers. Nevertheless, those on competitive contracts identify a preference for default-rates. The strength of preference for the default-rate among consumers on contracts was higher than anticipated, particularly given that the survey also showed the same set of people had relatively high satisfaction rates with their decision to switch to a competitive retailer. This indicates that consumers' stated preferences do not directly correlate with their behaviour.

2.6 Consumer complaints and requests for information

Consumers are able to complain about the conduct of retailers to the UCA and Service Alberta. This is a critical conduit by which consumers' feedback reaches the market. As in any market, there will be consumers who are dissatisfied with the conduct of retailers on issues ranging from billing to sales tactics. As described below, however, most consumer interaction with the UCA is to seek information about energy options and there are relatively few serious allegations made against retailers.

The UCA was established in 2003 with a mandate to promote the interests of small consumers of electricity and natural gas. It operates a call centre that in 2012 and 2013 received approximately 71,000 calls. The calls are classified into the categories reported in Figure 2.12; by far the most important category of calls is from consumers seeking information about electricity and natural gas services. Some consumers contact the UCA to complain about some aspect of their electricity or natural gas service. The sources of these calls tend to be related to disconnection issues, billing, and contracts. The UCA can act as a mediator between parties to resolve differences informally; approximately 10% (nearly 8,000 in 2012 and 2013 combined) of consumer contacts with the UCA result in some form of mediation.

The UCA refers serious allegations of retailer misconduct to Service Alberta for further investigation. Types of allegations include forgery, misleading consumers, undue pressure tactics, contract renewal issues, and violation of the mandatory 10-day cooling-off period following the signing of a contract.

Figure 2.12: During 2012 and 2013, most calls to the UCA are consumers seeking information

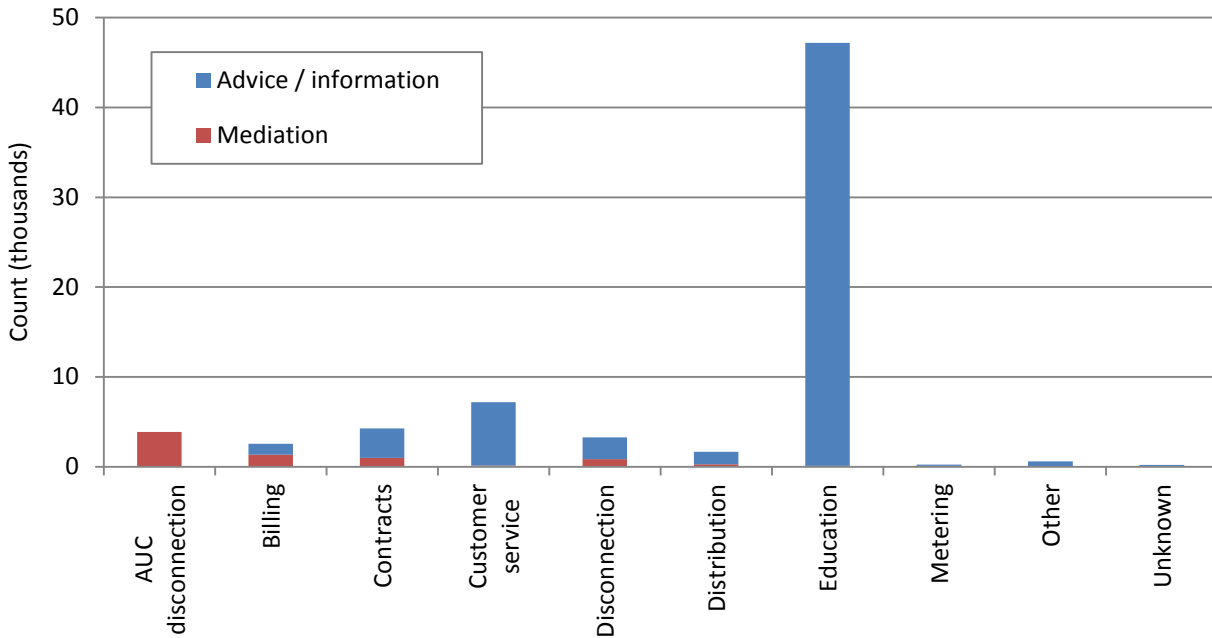


Figure 2.13 reports the number of investigations by type and distinguishes between those for which Service Alberta determined there to be sufficient evidence to establish the allegation's truth or otherwise; over the three-year period from 2011 to 2013, there were a total of 121 such referrals. Where there was deemed to be sufficient evidence, sanctions range from fines and court proceedings, to warning letters and direct consultations with the retailer. Figure 2.14 reports the same complaint information per 100,000 consumers on competitive energy contracts that the retailer serves. As such, the resulting complaint rate can be compared across firms.²⁵

As Figures 2.13 and 2.14 make clear, there are relatively few complaints about how retailers conduct themselves, suggesting that consumers are not significantly harmed by such conduct. Notably, retailers that engage in door-to-door sales—the primary source of allegations of forgery, misleading statements, and undue pressure—are much more likely to have complaints lodged against them.²⁶

²⁵ The number of consumers on competitive energy contracts served by a particular retailer is calculated as the number of residential retail electricity sites reported in Table 1.1 multiplied by the retailer's competitive market share reported in Table 1.3 plus the number of residential retail natural gas sites reported in Table 1.1 multiplied by the retailer's competitive market share reported in Table 1.4. To be clear, the number of customers being served by an affiliated default-rate provider is excluded (this information is also included in Tables 1.3 and 1.4). As such, these customer counts are for March 2014.

²⁶ To the extent that conduct of this type goes unreported, the data will understate the issue and related harm.

Figure 2.13: During 2012 and 2013, the number of complaints warranting sanctions is quite small in absolute terms

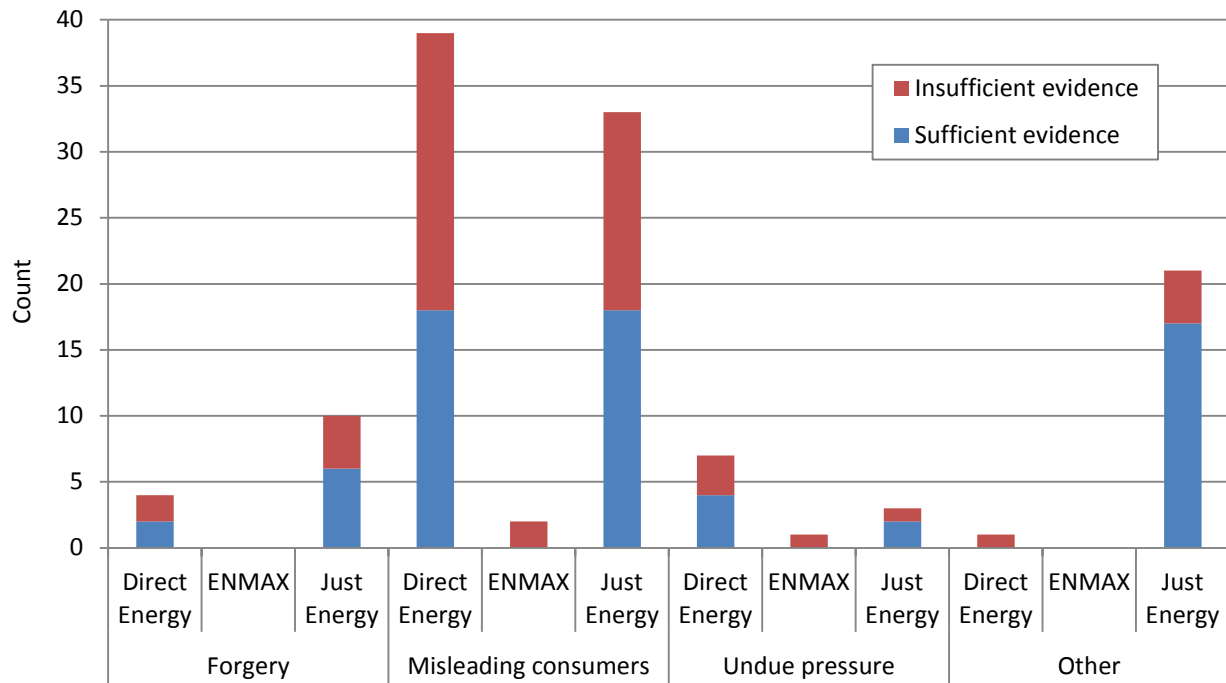
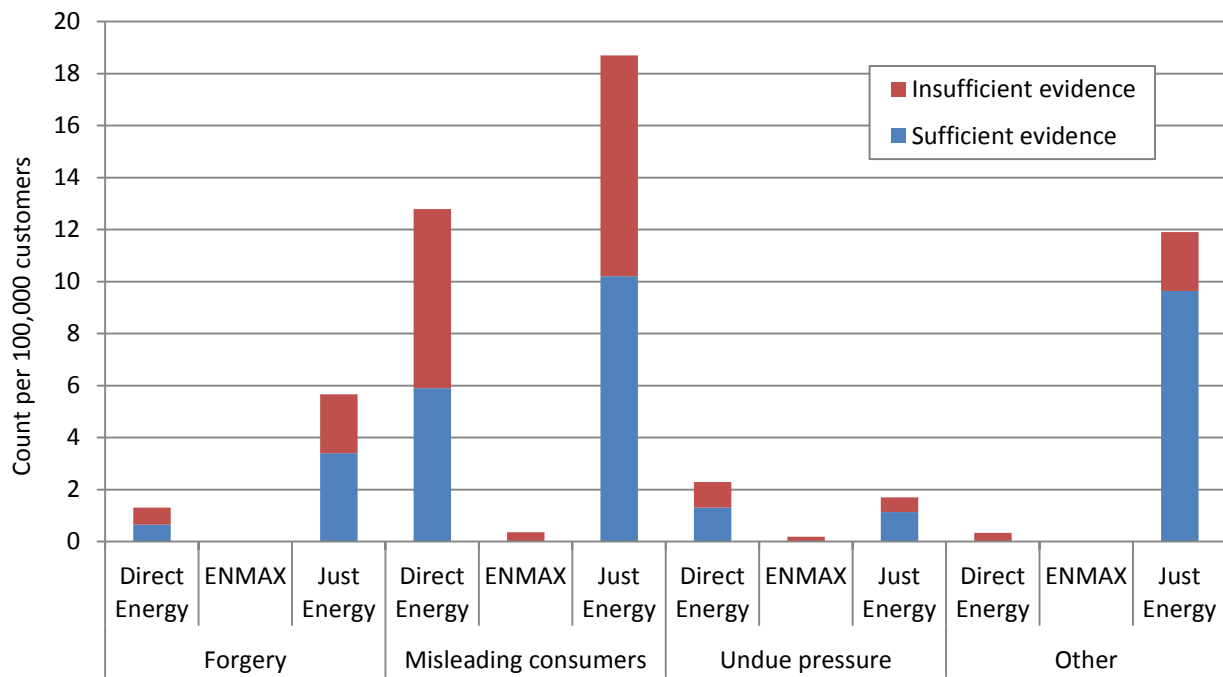


Figure 2.14: The number of complaints per 100,000 consumers during 2013 and 2014



3. Performance

This section is concerned with issues related to the outcomes of consumer-retailer interactions. A number of questions are considered:

- Does retail competition put downward pressure on cost?
- Does retail competition provide choice for customers?
- Does retail competition promote efficiency in the wholesale market?

A number of conclusions present themselves:

- Retail competition creates strong incentives for firms to operate efficiently and to take market share from high-cost firms.
- Competition has provided for significant choice in terms of characteristics that are of value to consumers.
- There is some evidence that retail competition has positive effects on wholesale energy markets, but these are limited by the scale of the residential retail market, especially regarding natural gas, and metering technology regarding electricity.

3.1 Competitive pressure on cost

Competition, including the threat of competition associated with entry, places downward pressure on prices and encourages firms to find and adopt low-cost business strategies. A competitive retailer's margin is the difference between the amount of revenue it receives from serving a consumer and the costs it bears to do so. Among other ways, these can be calculated at the aggregate level of the firm, on an average consumer account basis, or dollars per unit of energy. There are different types of margins that vary, typically, in relation of the nature and completeness of the costs considered. As described above, retailers receive revenue associated with a variety of contract structures and fees, and incur costs similarly. Moreover, most retailers serve, at any one time, consumers on a wide variety of terms (including many who agreed to offers that are no longer available to new consumers).

Margin calculations require assumptions be made about the nature of revenue (contract terms) and cost (especially the energy procurement strategy). This requires detailed data and will not provide a single result. Unfortunately, historical data on certain aspects of retailer offers, specifically administration fees, have not been collected systematically. This limits our ability to conduct a proper margin analysis.

As a general matter, however, margin analysis is fraught with difficulties. No matter what margins are calculated to be, the theoretically relevant issue related to that type of analysis is whether rates-of-return are in line with market rates (as these are related to economic profit) and there are numerous issues associated with cost measurement. Moreover, without additional consideration it is not obvious what the appropriate benchmark should be, particularly the point at which concern becomes material and concerning. For all of these reasons this report does not include estimates of price-cost margins.

Nevertheless, competitive retailers have clear incentives to seek lower costs for energy procurement, billing, and other customer services as their operating expenses would fall and profit would increase.

One example of this is the highly automated / electronic business model utilised by the retailers affiliated with Utility Network & Partners. Among the characteristics are:

- The initial customer enquiry is made on-line;

- Review and signing of the contract occurs on-line;
- Electronic invoicing / paperless billing; and,
- Exclusive use of pre-authorized banking payments.

These features facilitate the operation of a low-cost retailer. The lack of advertising is a strategic choice of a firm, but it also means that initially its customers tend to approach the firm rather than be pursued. This is a lower cost customer acquisition strategy than is pursued by other retailers, and results in fewer customer complaints than received by others. Paper bills are available for a fee, meaning that only those consumers who want this service have to pay for it. This incentivises consumers to choose less costly billing options and reduces the retailer's overall cost compared to a situation where consumers can request a paper bill at no cost to them, which would raise prices for all consumers. Finally, exclusive use of pre-authorized banking payments reduces the probability and magnitude of bills going unpaid, which is a loss to the retailer that would otherwise be likely to be borne by other consumers in the form of higher prices.

Another example of competition putting pressure on costs is that at various times some retailers have offered to match or beat the local RRO provider's rate. This suggests that they may be able to procure wholesale electricity at a price at least as low as that achieved by the local RRO provider indicating the possibility that competitive retailers may be able to procure wholesale electricity in a manner superior to their regulated competitors.

3.2 Preferences and product availability

Here we consider a few characteristics consumers tend to value—total bill amounts and their variability—and whether retailers' products give consumers the option to select retail plans that reflect these preferences.

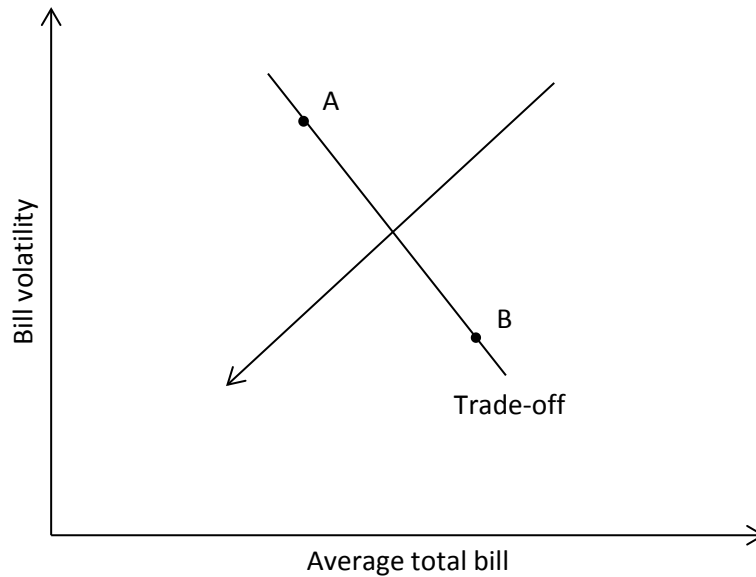
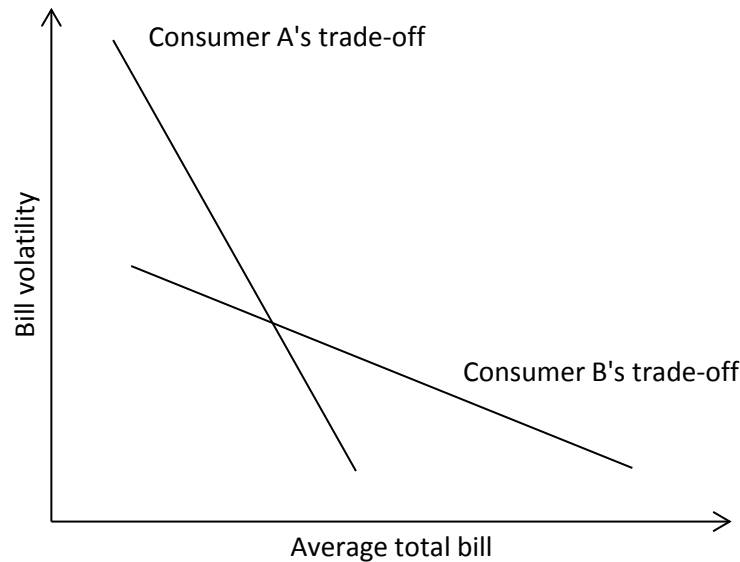
3.2.1 Principles of comparison

Two important characteristics that matter to consumers are the average bill total (the amount paid monthly and measured in dollars) and its volatility, with consumers valuing both low bill totals and low bill volatility. As such, this analysis considers that consumers are principally concerned with their total bill rather than the particular rate they pay. While a consumer would prefer both characteristics to be lower, they typically have to pay for less of one with more of the other.

One such consumer's preferences are illustrated in Figure 3.1. A consumer could receive a stream of monthly bills that vary considerably due to, say, changing seasonal consumption and varying flow-through prices (point A). Alternatively, they could select a retail option with less variable prices such as a fixed-price, fixed-duration contract with less bill volatility. Given the trade-off described above, they might expect (before the fact) to have to pay for this in the form of higher average bill totals (point B).²⁷ The arrow indicates the direction of movement in which consumers are made better off.

Not all consumers are the same: some consumers may place significant value in low bill volatility and be willing to pay for this with a higher average bill total; other consumers may principally value having the lowest average bill total and be willing to pay for this with higher bill volatility. In other words, they trade off these characteristics differently. Figure 3.2 illustrates two consumers with different preferences. As a result, different consumers may select different retail options.

²⁷ The 'trade-off' line in Figure 3.1 is conceptual in nature and is meant to indicate a particular consumer trading-off one characteristic for another. Its continuous, linear shape nature is arbitrary.

Figure 3.1: Trade-off of average bill and bill volatility**Figure 3.2: Trade-off between characteristics can differ across consumers**

To be clear, these Figures do not suggest that retailer offers, when illustrated, are expected to be scattered along a downward-sloping path. What is illustrated is consumer preferences, not products. The issue is whether retailers offer a variety of products so that different consumers can make different trade-offs between the variables, i.e., buy products with characteristics they value most.

3.2.2 Analysis

Given the potential for consumer preferences to vary as described above, the question is then whether retailers provide products that vary in the characteristics discussed. The MSA calculated monthly bills

for a typical residential retail consumer in both Calgary and Edmonton of electricity only, natural gas only, and both electricity and natural gas over the period July 2012 to June 2014 using a large set of contract offers. For each combination of energy services, the average monthly bill and standard deviation for each contract option was calculated. There are four primary types of contract structures: default-rates which are approved by the Alberta Utilities Commission, variable rates which fluctuate monthly according to wholesale market conditions, fixed rates which keep the retail price of electricity constant across time, or fixed dollar totals for the energy portion of the bill (up to a given consumption threshold). When considering electricity and natural gas together, dual-fuel contracts (and their corresponding benefits) are considered in conjunction with various combinations of energy services supplied by different retailers.

Figures 3.3 through 3.8 illustrate the results of this analysis. Results vary by region due to the different average consumption levels, varying transmission and distribution fees, and location-specific rate riders. The general ordering of offers is consistent across the zones. It is clear that retailers offer a variety of options in terms of bill totals and volatility. Fixed energy *offers* are contract offers with fixed-price, fixed-duration terms; variable energy offers are wholesale flow-through options; fixed energy *charges* charge a certain number of dollars per month for energy as long as consumption does not rise above a given threshold; and default-rate options.

The fixed total energy charge has the lowest volatility and, at least for electricity, is the most expensive on average. While this is not so for natural gas, this reflects the fact that the average consumer consumes less energy than the threshold, i.e., their bill on such a plan would rise slowly if consumption increased because they would remain below the threshold, and should therefore be interpreted with caution.

The Figures illustrate that retailers provide consumers a variety of options that vary according to preferences they value. One point that is missing from this analysis is that consumers have the ability to request equal-billing from their retailer irrespective of the contract offer they have selected. It appears, however, that few consumers are either aware of this option or have selected it.²⁸

²⁸ Strictly speaking retailers are only required to offer this option to income-constrained consumers. However, they are not permitted to explicitly verify the incomes of their customers, though they are permitted to use customer's credit scores, effectively rendering this option widely-available.

Figure 3.3: Electricity offerings in ENMAX zone

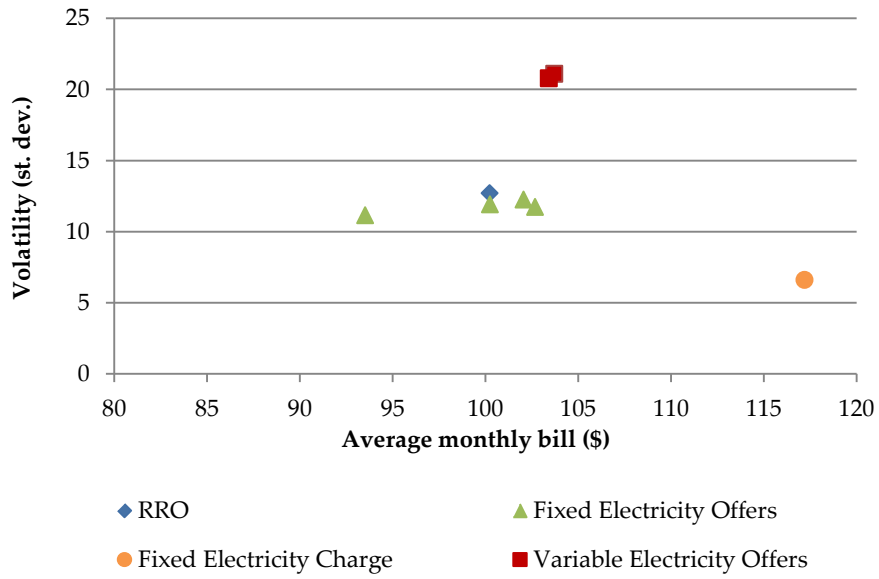


Figure 3.4: Electricity offerings in EPCOR zone

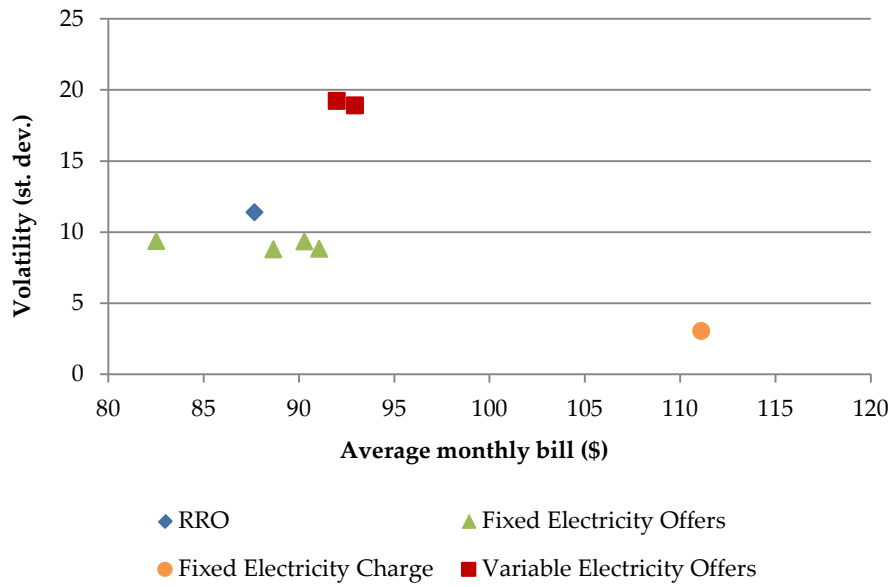


Figure 3.5: Natural gas offerings in ATCO-S zone

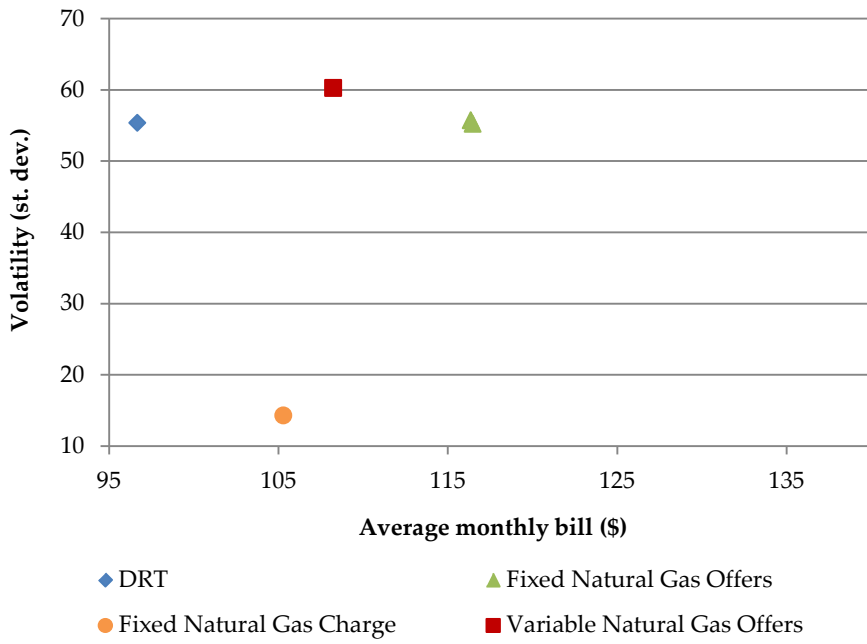


Figure 3.6: Natural gas offerings in ATCO-N zone

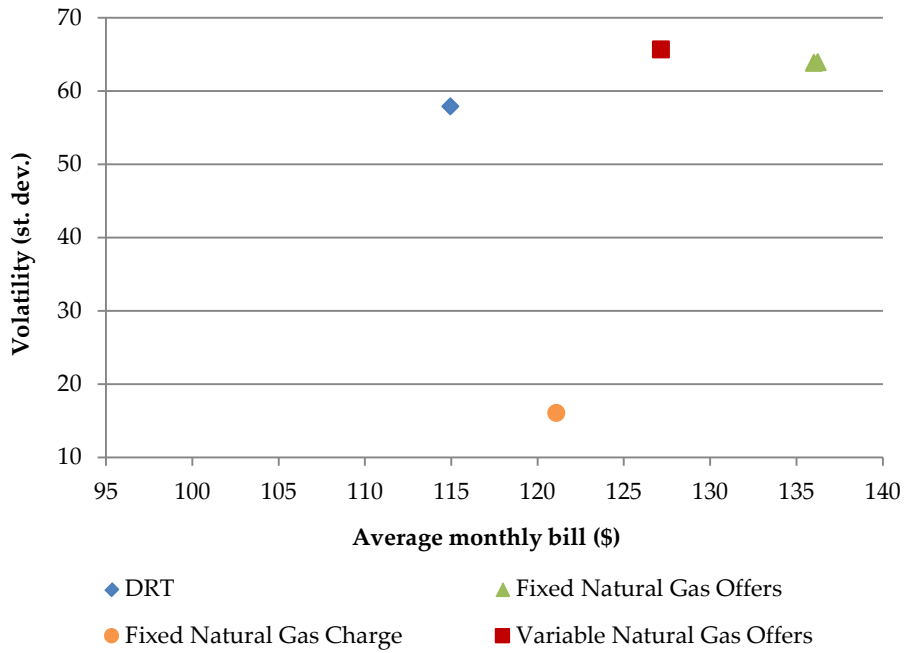


Figure 3.7: Total energy bill offerings in Calgary

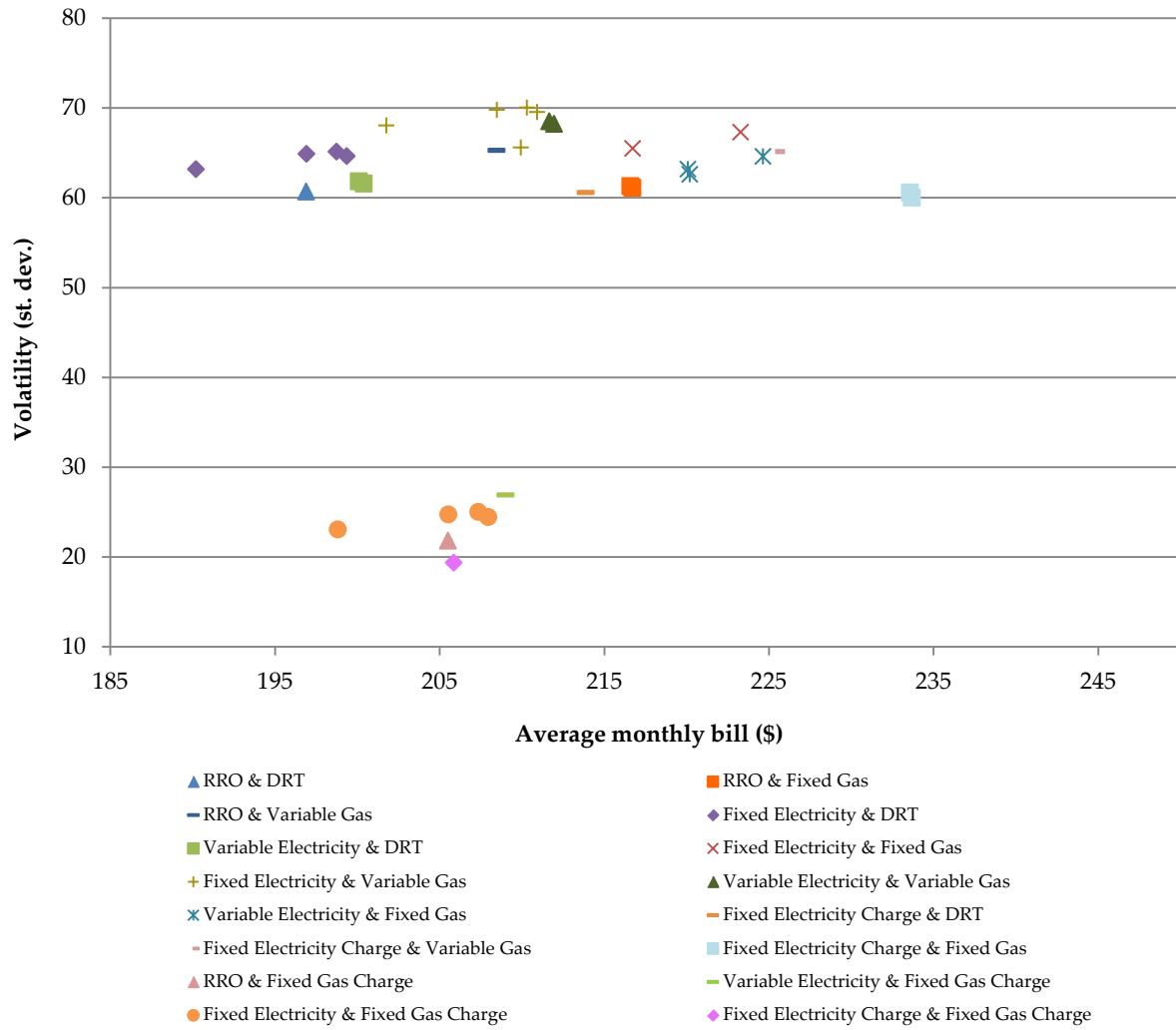
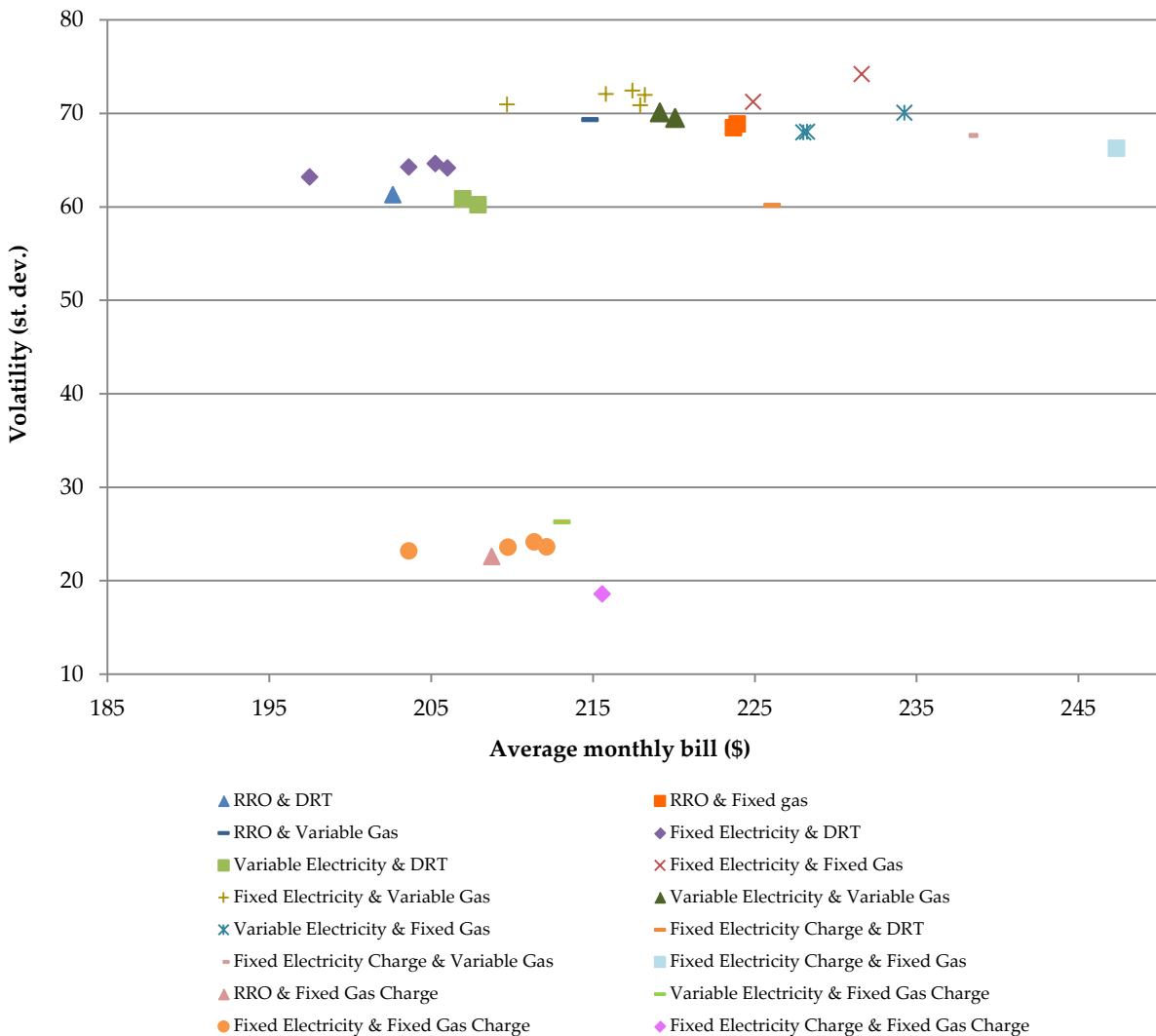


Figure 3.8: Total energy bill offerings in Edmonton



3.3 Does retail competition promote efficiency in the wholesale market?

In addition to price pressure and greater choice for consumers, we can also look to the interactions between the retail markets and the wholesale markets for evidence of feedback effects. These are very important in other industries. In energy markets they could come in the form of increased forward market efficiency due to enhanced forward market buying strategies and vertical integration strategies.

With respect to natural gas, the feedback effect is likely to be small to non-existent due to both the relative smallness of the residential natural gas market in Alberta and the wholesale market's continental scale.

With respect to electricity, there are several positive feedbacks:

- One major retailer has built substantial new generation capacity.

- Forward contracts contribute to economic efficiency by shifting the price risk to the party that is best able to absorb it and manage it. Different customers have varying tolerance for risk—diversity of contracts offers an efficient option to different customers.
- Retailers may negotiate better terms for the supply of power.
- Large, non-integrated retailers constrain the exercise of market power in the spot market by entering into long term bilateral contracts with generators. Retailers could also induce new entry into the market to discipline wholesale market power, or vertically integrate.

The limitations on positive feedback include:

- Lack of smart meters or time of use rates that might shift consumption and thereby change the shape of load and amount / types of generation needed. Retailers may be willing but are unable to pay for smart meters if they could interrupt demand so as to control their exposure to wholesale prices.
- The inability for a residential customers' supply to be interrupted in exchange for a reduced price may also increase the need for peaking plants.
- The RRO is constrained to buy in the forward market during a 45- or 120-day window, limiting demand for financial products of different durations.

Appendix A: Market shares

Figure A.1: Residential electricity market share by sites, Q1 2011 to Q1 2014

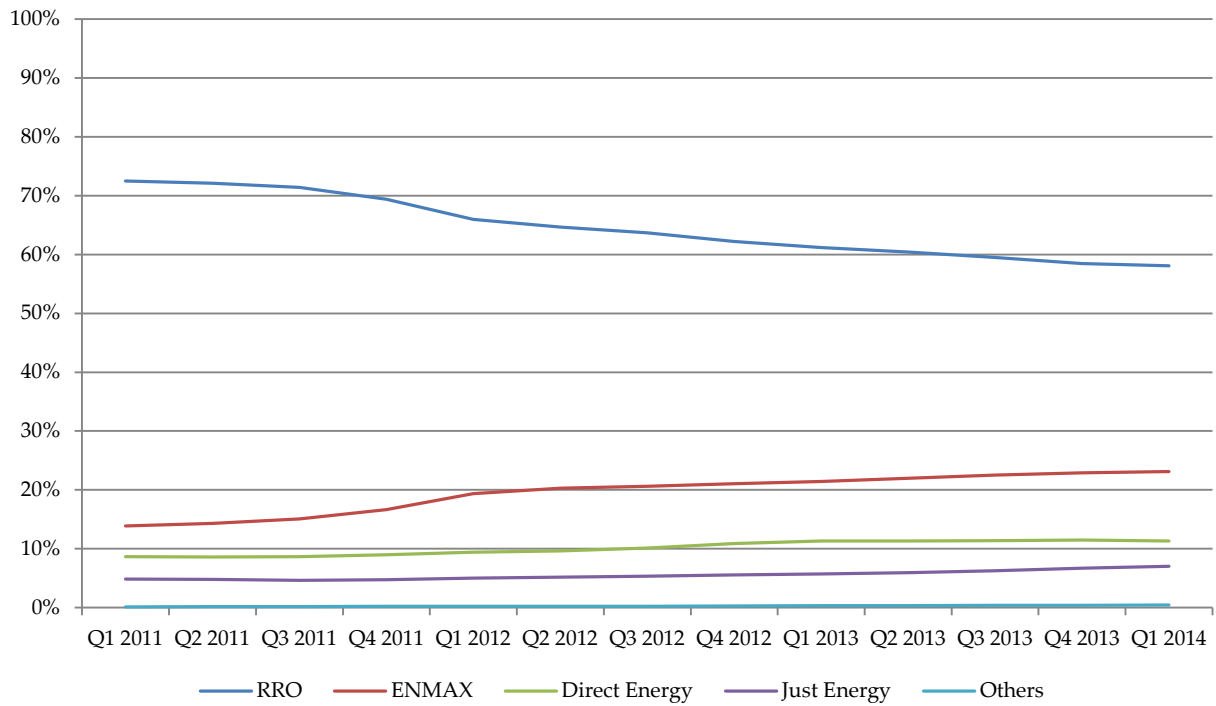


Figure A.2: Residential electricity market share by consumption, Q1 2011 to Q1 2014

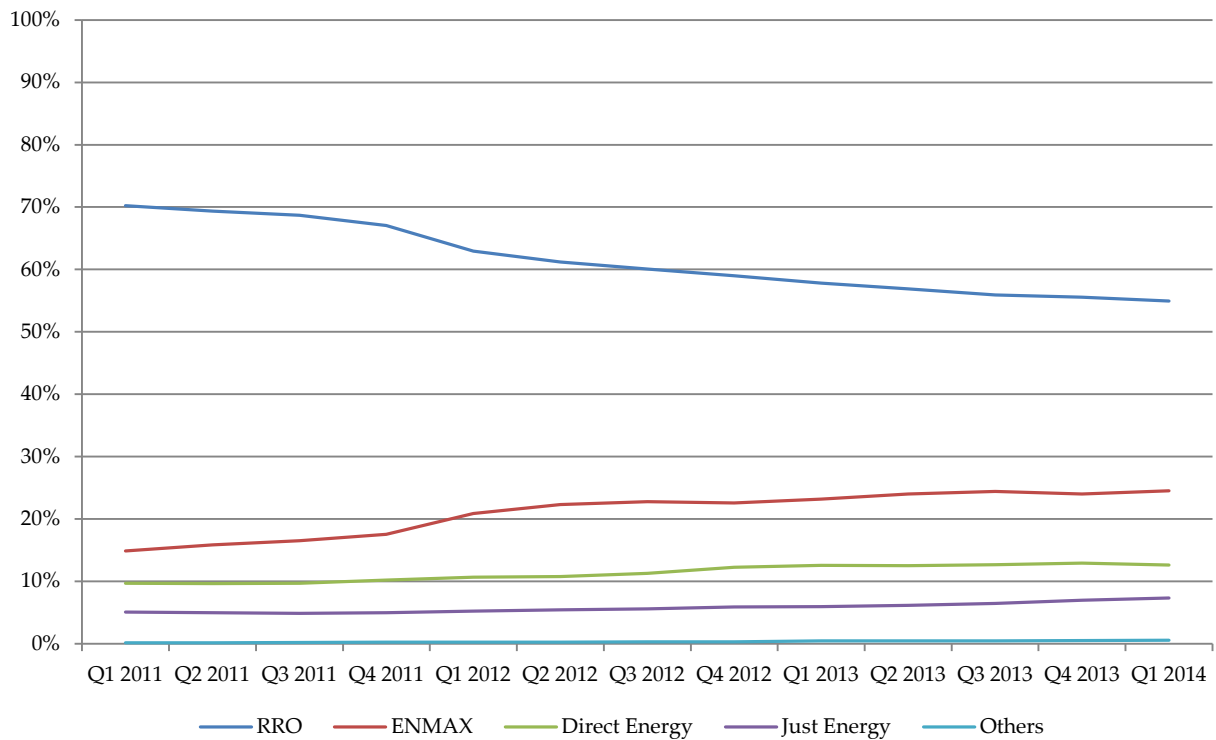


Figure A.3: Residential natural gas market share by sites, Q1 2011 to Q1 2014

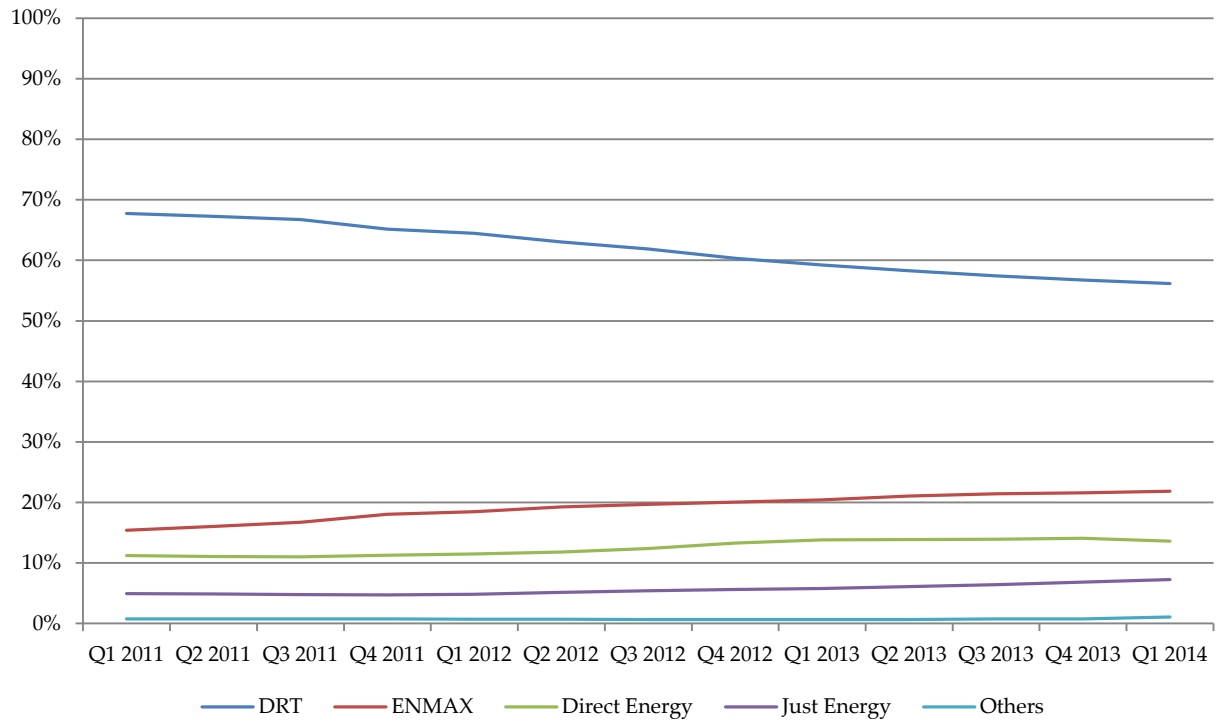
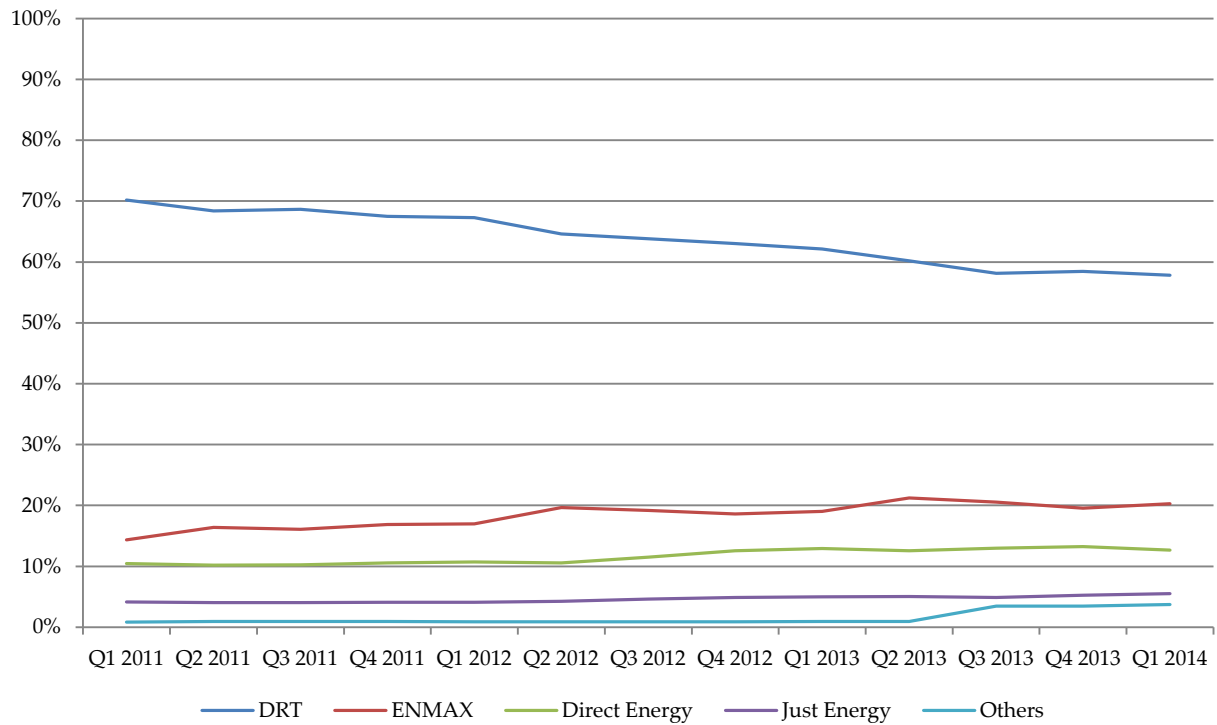


Figure A.4: Residential natural gas market share by consumption, Q1 2011 to Q1 2014



Appendix B: Licenced energy retailers in Alberta

As of September 31, 2014 there were 13 and 14 retailers licenced by Service Alberta to provide, respectively, natural gas and electricity retail services to residential consumers. Some of these are affiliated with each other; some offer retail services under a variety of different brands. They are listed in sequential order of licence issue date (provided in brackets). These data are from Service Alberta.

B.1 Natural gas retailers

- Shell Energy North America (Canada) Inc. (August 19, 1998)
- Enmax Energy Corporation (August 18, 2000)
- CP Energy Marketing Inc. (General Partner) (December 1, 2001)
- Direct Energy Marketing Limited, as Managing Partner of Direct Energy Partnership (June 4, 2003)
- ENMAX Commercial Energy Marketing Inc. (October 17, 2005)
- Just Energy Corp. (General Partner) (April 3, 2009)
- Alberta Municipal Services Corporation (November 1, 2010)
- AltaGas Ltd. (January 1, 2011)
- Capital Power GP Holdings Inc. (March 23, 2011)
- Hudson Energy Canada Corp. (August 12, 2011)
- Utility Network & Partners Inc. (June 29, 2012)
- Vector Energy Ltd. (November 15, 2013)
- 1772387 Alberta Limited Partnership, operating as ENCOR (May 7, 2014)

B.2 Electricity retailers

- Enmax Energy Corporation (August 18, 2000)
- CP Energy Marketing Inc. (General Partner) (December 1, 2001)
- Direct Energy Marketing Limited, as Managing Partner of Direct Energy Partnership (June 4, 2003)
- ENMAX Commercial Energy Marketing Inc. (March 4, 2005)
- Just Energy Corp. (General Partner) (April 3, 2009)
- Utility Network & Partners Inc. (October 6, 2009)
- Encana Power and Processing ULC (August 24, 2010)
- Alberta Municipal Services Corporation (November 1, 2010)
- AltaGas Ltd. (January 1, 2011)
- Hudson Energy Canada Corp. (August 12, 2011)
- Vector Energy Ltd. (December 16, 2011)

- Link Energy Supply Inc. / Approvisionnement Energie Link Inc. (October 10, 2013)
- 1772387 Alberta Limited Partnership, operating as ENCOR (May 7, 2014)
- Superior Energy Management Electricity LP (July 16, 2014)

References

Market Surveillance Administrator (MSA)

Alberta retail markets for electricity and natural gas: A description of basic structural factors (July 17, 2014).

<http://albertamsa.ca/uploads/pdf/Archive/00-2014/Alberta%20Retail%20Markets%20for%20Electricity%20and%20Natural%20Gas%20071714..pdf>

Annual retail statistics report 2014 (April 16, 2014).

<http://albertamsa.ca/uploads/pdf/Archive/00-2014/Annual%20Retail%20Stats%20Report%20041614.pdf>

Co-branding impact research report, Prepared by Leger for the MSA (February 26, 2014).

<http://albertamsa.ca/uploads/pdf/Archive/00-2014/Leger%20-%20MSA-%20Co%20Branding%20FINAL%20Feb%2026.pdf>

Retail market database (n.d.; updated on an ongoing basis).

<http://albertamsa.ca/>

State of the market 2012 (December 10, 2012).

<http://albertamsa.ca/uploads/pdf/Archive/2012/SOTM%20Final%20Report%2020130104.pdf>

Alberta statutes and regulations

Electric Utilities Act (RSA 2003, cE-5.1)

<http://www.qp.alberta.ca/documents/Acts/E05P1.pdf>

Code of Conduct Regulation (AR 160/2003)

http://www.qp.alberta.ca/documents/Regs/2003_160.pdf

Gas Distribution Act (RSA 2000, cG-3)

<http://www.qp.alberta.ca/documents/Acts/G03.pdf>

Gas Utilities Act (RSA 2000, cG-5)

<http://www.qp.alberta.ca/documents/Acts/G05.pdf>

Code of Conduct Regulation (AR 183/2003)

http://www.qp.alberta.ca/documents/Regs/2003_183.pdf

Alberta Department of Energy (ADOE)

Micro-generation fact sheet (n.d.).

http://www.energy.alberta.ca/Electricity/pdfs/FactSheet_Micro_Generation.pdf

What is micro-generation? (n.d.).

<http://www.energy.alberta.ca/electricity/microgen.asp>

Other

Alberta Electric System Operator, "2013 annual market statistics" (2014).

http://www.aeso.ca/downloads/2013_Annual_Market_Statistics.pdf

Direct Energy, "Retail market review: Request for further information" (2012).

<http://www.rmrc.ca/xData/rmrc/Direct%20Energy%20Follow%20up%20120614%20Direct%20Energy%20MarketingLimited%20Responses%20to%20RMRC%20Request%20for%20Further%20Information.pdf>

Queensland Competition Authority, “Comparator” (n.d.).

<http://comparator.qca.org.au/>

Queensland Competition Authority, “Regulated retail electricity prices 2014-15” (May 2014).

<http://www.qca.org.au/getattachment/25696fbc-b4ed-42c4-8d16-fd3efddb563e/Final-Determination.aspx>

Retail Market Review Committee Report, “Power for the People” (September 2012).

<http://www.rmrc.ca/RMRCreport.pdf>

Utilities Consumer Advocate, “Rates database” (n.d.; updated on an ongoing basis).

<http://www.ucahelps.alberta.ca/regulated-rates.aspx>



The Market Surveillance Administrator is an independent enforcement agency that protects and promotes the fair, efficient and openly competitive operation of Alberta's wholesale electricity markets and its retail electricity and natural gas markets. The MSA also works to ensure that market participants comply with the Alberta Reliability Standards and the Independent System Operator's rules.