



MARKET ECONOMIC & REGULATORY ASSESSMENT REPORT

A CONSULTATION REPORT PREPARED FOR THE CAYMAN
ISLANDS FUEL SECTOR – FUEL MARKET DEFINITION AND
ECONOMIC & REGULATORY ASSESSMENT STUDY

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TABLE OF CONTENTS

1	INTRODUCTION AND SUMMARY	5
1.1	Background	5
1.2	The Market Study	5
1.3	Glossary of Terms	6
2	SUMMARY OF FINDINGS	8
3	MARKETS DEFINED IN THE MARKET DEFINITION REPORT	10
4	MARKET STRUCTURE AND PERFORMANCE	12
4.1	Market Structure and Market Performance	12
4.2	Price determination in fuels markets	12
4.2.1	The price of the crude raw material, such as crude oil	12
4.2.2	Refining costs and profits	13
4.2.3	Distribution and marketing costs and profits	14
4.2.4	Government taxes	14
4.2.5	The structure of fuel prices in the Cayman Islands	14
4.3	Factors in assessing the degree of competition in a market	16
4.3.1	The number of participants in the market	16
4.3.2	Concentration of those markets	16
4.3.3	Barriers to entry and contestability of markets	18
4.3.4	Regulatory constraints on firms' behavior	19
4.3.5	Dynamism of market growth and innovation	19
4.3.6	The impact of vertical relationships	19
4.3.7	Effective or "workable" competition	20
4.4	Factors in assessing if a supplier has a significant degree of market power	21
4.4.1	Significant market power	21
4.4.2	Significant market power under the URC Act	21
4.4.3	Previous findings of significant market power in the fuel sector	22
4.5	The market for gasoline	23
4.5.1	The structure of the market	23
4.5.2	Assessment of the degree of competition in the market	24
4.5.3	Assessment of significant market power in the market	26
4.6	The market for diesel	26
4.6.1	The structure of the market	26
4.6.2	Assessment of the degree of competition in the market	28
4.6.3	Assessment of significant market power in the market	29
4.7	The market for jet fuel and kerosene	29
4.7.1	The structure of the market	29
4.7.2	Assessment of the degree of competition in the market	30

4.7.3	Assessment of significant market power in the market	31
4.8	The market for aviation gas	31
4.8.1	The structure of the market	31
4.8.2	Assessment of the degree of competition in the market	31
4.8.3	Assessment of significant market power in the market	32
4.9	The market for propane (LPG)	32
4.9.1	The structure of the market	32
4.9.2	Assessment of the degree of competition in the market	33
4.9.3	Assessment of significant market power in the market	34
4.10	The market for acetylene	34
4.10.1	The structure of the market	34
4.10.2	Assessment of the degree of competition in the market	34
4.10.3	Assessment of significant market power in the market	34
4.11	The potential markets for ethanol/blends, biodiesel/blends, natural gas, butane, hydrogen, and methanol	35
4.12	Assessment of the state of competition in the fuel sector in the Cayman Islands	35
5	REGULATION IN FUELS MARKETS IN THE CAYMAN ISLANDS	37
5.1	The URC Act and other relevant laws	37
5.2	The role of the URC Act in addressing impediments to competition	37
5.2.1	The Office may determine that a sectoral provider has significant market power	37
5.2.2	The Office may impose conditions on sectoral providers with significant market power	38
5.2.3	The Office is empowered to exercise merger control over regulated sectors	39
5.2.4	The Office is empowered to prevent other anti-competitive practices in regulated sectors	39
5.3	The Office's information gathering powers under the URC Act	40
5.4	Regulatory regimes in other comparable jurisdictions	40
5.4.1	The Bahamas	40
5.4.2	St Lucia	41
5.4.3	Barbados	41
5.4.4	Turks and Caicos Islands	42
5.4.5	Jurisdictional comparison and conclusions	42
6	REGULATORY OPTIONS FOR THE OFFICE	45
6.1	The overall regulatory context	45
6.2	Measures directed at industry concentration and competition	45
6.2.1	The Office's current mechanisms	45
6.2.2	The purposes of guidelines and other secondary documents	45
6.2.3	The Office's options for the enhanced enforcement of competition laws	47
6.3	Measures to improve price transparency and competition	49
6.3.1	The Office's current mechanisms	49
6.3.2	The role of price transparency and competition	49
6.3.3	Price transparency to enhance competition – additional options	51
6.4	Other measures to improve competition – mandated access to key infrastructure	52

6.4.1	The Office's current mechanisms	52
6.4.2	Mandated access requirements to key infrastructure	52
6.4.3	Access regime options for the Office	54
6.5	Measures directed at price setting	59
6.5.1	The Office's current mechanisms	59
6.5.2	Price controls and market outcomes	59
6.5.3	Price control options for the Office	61
6.6	Other measures to improve competition – reduction of barriers to entry	63
6.6.1	The Office's current mechanisms	63
6.6.2	The relevance of barriers to entry to the degree of competition	63
6.6.3	Regulatory options for the Office to reduce barriers to entry and expansion	63
6.7	Gathering of information from stakeholders in the fuel sector	64
6.7.1	The Office's current mechanisms	64
6.7.2	The purposes of regulatory accounts and reports	65
6.7.3	The Office's options for requirements regarding information gathering	66
7	APPENDIX 1: TABLE SUMMARY OF STATE OF COMPETITION IN THE FUEL SECTOR	68
8	APPENDIX 2: THE MARKET DEFINITION REPORT	69

1 INTRODUCTION AND SUMMARY

1.1 Background

The Utility Regulation and Competition Office (“**OfReg**” or the “**Office**”) is the independent multi sector regulator with responsibility for the key utility providers including the fuel sector in the Cayman Islands (the “**fuel sector**”). The Utility Regulation and Competition Act (2021 Revision) (the “**URC Act**”) is the principal legislation governing the Office’s mandate in this respect in the Cayman Islands. Alongside the URC Act, the sector-specific legislation governing the fuel sector are the Dangerous Substances Act (2017 Revision) (the “**DS Act**”) and its supporting Regulations (“**DS Regulations**”), and the Fuel Market Regulation Act (2017) (the “**FMR Act**”).

1.2 The Market Study

The Office is in the process of establishing a comprehensive regime to effectively monitor and regulate the fuel sector, in order to achieve the Office’s mandate of assuring competition, transparency, efficiency and innovation in the markets, along with its continuing function of safety and compliance across the sector. As a part of the establishment of the Office’s regulatory role in the fuel sector, the Office is undertaking a comprehensive assessment of the fuel sector entitled the *Cayman Islands Fuel Sector – Fuel Market Definition and Economic & Regulatory Assessment Study* (the “**Market Study**”). The objective of the Market Study is to define the relevant markets within the fuel sector, and to assess the extent and effectiveness of competition within these markets, in order to provide guidance and a foundation for the regulatory mechanisms that will be required, for the Office to achieve its mandate under the various laws. The Market Study intends to reflect all the types and grades of fuels currently offered in the Cayman Islands, and consideration is given to fuels which are under review, and may be introduced to the Island’s fuel mix in the near future.

Economics Partners Limited (“**Economics Partners**” or the “**Firm**”) is a firm of economic consultants specializing in competition and regulatory economics and market assessments. The Firm was appointed in September 2019 pursuant to an open tender to conduct the Market Study on behalf of and in cooperation with the Office. The Market Study consists of two principal elements:

1. An assessment of and report on the market definitions for competition assessment purposes for the various fuels markets in the fuel sector which are to be assessed during the course of the Market Study (the “**Market Definition Report**”); and
2. An assessment of the effectiveness of competition of all fuels markets defined in the Market Definition Report, and any recommendations regarding potential regulatory models, intervention strategies, recommended market rules, and regulatory determinations to be considered and implemented in the relevant markets in the fuel sector (the “**Market Assessment Report**”).

After its appointment, the Firm has undertaken a comprehensive process of information gathering pertaining to the different potential markets in the fuel sector in

the Cayman Islands, and has analysed this information using commonly accepted techniques and approaches of market definition for competition assessment.

The present report is the Market Assessment Report and it is the product of the Firm's analysis. The Market Definition Report is attached as an appendix to this report.

1.3 Glossary of Terms

This section describes certain terms used in this report.

Acquisition costs in this report refers to the costs of acquiring the products in each market at the supply and trade level, which includes the costs of crude oil, refinery costs and margins and the supply and trader costs and margins.

Barriers to entry are factors which prevent or deter the entry of new firms into an industry even when incumbent firms are earning high profits.¹

Economies of scale occur where the average costs per unit of output decrease with the increase in the scale or magnitude of the output being produced by a firm. Comparably, diseconomies of scale occur where the average unit costs of production increase beyond a certain level of output. At the point where the average costs are at a minimum, the minimum efficient scale (MES) of output of a provider is reached.²

Market concentration measures the extent to which provision of goods or services in a market as a whole is concentrated between a small number of providers.³

A provider's **market share** is a measure of the relative size of that individual provider in an industry or market as measured by the proportion of total output or sales or capacity that the provider accounts for in the relevant market.⁴

Onshore Cayman Islands government charges in this report refer to the Cayman Islands government charges incurred by commercial operators in providing fuel in the Cayman Island and include charges by OfReg, the Department of Commerce and Investment, and the General Registry, but do not include costs of importing and onshoring fuel such as customs duties and port and customs charges.

Regulatory constraints in this report refers to constraints through regulatory or other legal means on the commercial behavior of providers, such as pricing or other constraints, which may (among other things) mitigate the providers' exercise of market power.

Retail costs and margins in this report refer to the costs (including capital and operating costs) incurred in providing fuels at the retail level of the relevant fuel markets, and the margins earned at that level in providing the relevant fuels.

A **sectoral provider** is a provider of goods or services in a utility market or sector for which the Office has specific responsibility under any sectoral legislation specified in

¹ Organisation for Economic Cooperation and Development, Glossary of Industrial Organisation Economics and Competition Law, OECD, 1993 ("OECD Glossary").

² OECD Glossary, *op cit.*

³ OECD Glossary, *op cit.*

⁴ OECD Glossary, *op cit.*

Section 2 of the URC Act and which includes the FMR Act.⁵ The FMR Act covers those engaged in business in the fuel sector⁶, meaning that the URC Act applies to those engaged in business in the fuel sector.

A provider of goods or services has **significant market power** if, either individually or jointly with others, it enjoys a position of economic strength affording it the power to behave to an appreciable extent independently of competitors, customers and consumers⁷, meaning that it can act to a significant extent free from appreciable competitive constraint, including by charging prices significantly above competitive levels (or to restrict output, product quality, or product innovation below competitive levels) for a sustained period of time.

Wholesale costs and margins in this report refer to the costs (including capital and operating costs) incurred in providing fuels at the wholesale/bulk level of the relevant fuel markets, and the margins earned at that level in providing the relevant fuels.

⁵ URC Act, section 2(1) and Schedule 2.

⁶ FMR Act, section 2(1).

⁷ URC Act, section 2(3).

2 SUMMARY OF FINDINGS

The Market Definition Report defined the relevant markets in the fuel sector for regulatory purposes; these market definitions are captured in Section 3 of this report.

This Market Assessment Report in Section 4 analyses the effectiveness of competition in those markets, concluding as follows:

- The wholesale/bulk markets for gasoline and diesel (including blends up to the “blend wall”) are assessed as being highly concentrated and not strongly competitive. Rubis Cayman Islands Limited, Rubis Eastern Caribbean SRL, and other entities controlled within the Rubis corporate group (together, “**Rubis**”), and Sol Petroleum (Cayman) Limited, Antilles Trading Company SEZC, and other entities controlled within the SOL corporate group (together, “**SOL**”), each have significant market power in these markets;
- The retail markets for gasoline and diesel (including blends up to the “blend wall”) on Grand Cayman are assessed being as moderately concentrated and moderately competitive. Individual retail stations on Grand Cayman do not have significant market power in these markets;
- The retail markets for gasoline and diesel (including blends up to the “blend wall”) on Cayman Brac and Little Cayman are assessed as being highly concentrated and not strongly competitive. Retail stations on Cayman Brac and Little Cayman have significant market power in these markets;
- The markets for jet fuel/kerosene and avgas are assessed as being highly concentrated and not strongly competitive. Rubis and SOL have significant market power in the market for jet fuel/kerosene, and Rubis has significant market power in the market for avgas;
- The market for propane (LPG) is assessed as being highly concentrated, and modestly but not highly competitive. Home Gas Limited (“**Home Gas**”) has significant market power in this market, but Clean Gas Limited (“**Clean Gas**”) does not have significant market power; and
- The market for acetylene is assessed as being highly concentrated and not strongly competitive. PM Industrial Gas Limited (“**PMIG**”) has significant market power in this market.

These findings are also summarized in the table attached to this report as Appendix 1.

There is currently not sufficient commercial activity in the following product markets to make an assessment on the degree of competition in these markets:

- Ethanol and gasoline-ethanol blends above the “blend wall”;
- Biodiesel and diesel-biodiesel blends above the “blend wall”;
- Natural gas (LNG and CNG);
- Butane;
- Hydrogen; and
- Methanol.

The fuel sector is generally highly concentrated and is not highly competitive. However, the number of viable competitors is limited by economies of scale and the small market

size, and in this context competition is at least partly “workable” and can potentially work to a satisfactory degree. Nevertheless, competition in the fuel sector is only partly effective and can be improved further by targeted policy interventions detailed in Section 6 of this report.

The Market Assessment Report in Section 5 then considers the current regulatory regime in the fuel sector, and in Section 6 considers a number of options regarding potential regulatory models, intervention strategies, potential market rules, and regulatory determinations to be considered and implemented in the relevant markets in the fuel sector. These options and recommendations are:

- Adopting guidelines and policy procedures in relation to different areas of anti-competitive conduct, including mergers control and abuse of dominance, as a means of increasing stakeholder awareness and fostering increased enforcement of the competition laws (the Office is currently preparing some guidelines and policy documents);
- Retaining the current guidelines on market definition and significant market power in their entirety, subject to the specific amendment so that where a sectoral supplier has a market share of 40% or higher, this would be sufficient for the Office to conclude that this supplier has significant market power in all circumstances, rebuttable only by circumstances where there are no appreciable barriers to entry to that sector;
- Enhancements to the Office’s price monitoring activities, and the rules applying to retailers;
- Consideration of a mandated open access regime for certain critical, “bottleneck” infrastructure, particularly infrastructure required to import bulk fuels;
- Carefully consider available policy options that can make competition work effectively, before resorting to the introduction of direct price controls;
- Consideration of enhanced mechanisms to reduce barriers to entry and to take into increased account barriers to entry and competition considerations in exercising the Office’s wider regulatory functions; and
- Mechanisms to improve the cooperation of stakeholders and outcomes in the Office’s information gathering functions.

3 MARKETS DEFINED IN THE MARKET DEFINITION REPORT

The Market Definition Report, attached as an appendix to this report, analyzes the market definitions applying to different fuels on sale and potentially on sale in the Cayman Islands. Markets were defined as follows:

On a functional Level, the markets for all relevant fuels are segmented into separate markets according to the relevant level of the supply chain, consisting of:

1. The importation of the relevant fuel;
2. The wholesale and bulk sale and marketing of the relevant fuel; and
3. The retail sale and marketing of the relevant fuel.

On a product dimension, the markets are delineated as follows:

1. Gasoline, and all gasoline-ethanol blends with 10% or less of ethanol.
2. Gasoline-ethanol blends with more than 10% of ethanol, including pure ethanol.
3. Petroleum-derived diesel, and all diesel-biodiesel with 20% or less of biodiesel.
4. Diesel-biodiesel blends with more than 20% biodiesel, including pure biodiesel.
5. Jet fuel and kerosene.
6. Propane (LPG).
7. Natural gas (including LNG and CNG).
8. Aviation gas.
9. Butanes.
10. Acetylene.
11. Hydrogen (potential future market).
12. Methanol (potential future market).

On a geographic dimension, the markets are delineated as follows:

1. World-wide for the market for imported fuels.
2. Cayman Islands-wide for the markets for the aviation fuels (jet fuel and kerosene, and aviation gas).
3. Grand Cayman for all other fuels at the wholesale and retails supply chain levels.
4. Cayman Brac for all other fuels at the wholesale and retails supply chain levels.
5. Little Cayman for all other fuels at the wholesale and retails supply chain levels.

Each of these market definitions is based on current information, including available information on technological factors, consumer behaviour, regulatory standards, pricing information including pricing correlations, and other information – the full details are provided in the Market Definition Report.

The Market Definition Report also clarifies that, should relevant factors change in a material way in the future, such as changes in technological factors or regulatory standards affecting fuel blends, then the relevant market definitions may need to be adjusted to reflect those changes. In particular, the Office may in the future change the relevant market definitions to take into account changes in the relevant “blend wall” in relation to gasoline-ethanol and diesel-biodiesel blends. Such a change may be appropriate where:

- The state of engine technology changes so that a majority of the motor vehicles in use in the fuel sector can readily use higher-level ethanol blends interchangeably, and in particular without material modification or risk of engine damage; and
- Other relevant regulatory standards change in a way that is aligned with the changes in engine technology.

The Market Definition Report further notes that not all the defined relevant markets, including the markets for hydrogen and methanol, are currently being actively supplied, but are instead defined as potential future markets.

4 MARKET STRUCTURE AND PERFORMANCE

4.1 Market Structure and Market Performance

Market structure is a central factor in understanding the performance of markets. The structure of a market comprises a number of important elements, including:

- The number of participants in that market;
- The concentration of those markets;
- Barriers to entry and expansion;
- Regulatory constraints on firms' behavior;
- Dynamism of market growth and innovation in that market.

These and other factors influencing market performance and outcomes are similarly central factors in determining the extent to which any market player may have significant market power in that market.

This section considers the markets defined in the Market Definition Report and draws conclusions regarding the market outcomes and degrees of competition in those markets.

4.2 Price determination in fuels markets

The retail price of fuels such as gasoline broadly consists of four main components:

- The price of the crude raw material for the fuel, such as crude oil in the case of gasoline;
- Refining costs and profits;
- Distribution and marketing costs and profits; and
- Taxes.

4.2.1 The price of the crude raw material, such as crude oil

The price of crude oil is generally the largest component of the retail price of gasoline and other refined products; the price of the comparable crude raw material is similarly the largest component of the retail price of other fuels such as propane. The price of crude oil and other raw materials is essentially determined by the forces of supply and demand in an international market, and it varies over time as factors influencing demand and supply of crude oil. Particular grades and varieties of crude oil are essentially fungible (interchangeable and substitutable) within those grades and varieties, and broadly (even if not perfectly) substitutable with other grades and varieties. This means that factors influencing supply and demand in crude oil (and other raw materials) markets influence the supply-demand balance in those markets, and therefore the market price of those materials changes over time in line with changes in world demand and supply of those raw materials.

International crude oil markets are generally characterized by the presence of a large number of buyers and large number of sellers. As a consequence, international crude

oil markets can be broadly characterized as competitive. Certain suppliers, such as Saudi Aramco, are large enough as suppliers that they possess appreciable power to affect world market prices, by increasing or reducing the volume of their output that they supply into the market. However, these large suppliers aside, most participants in world crude oil markets are not large enough to have appreciable market power to affect world market prices; rather, world market prices are broadly formed by the joint interaction of a large number of buyers and sellers, with none (except a small number of very large national producers) having appreciable power to affect world market prices.

The price of crude oil is generally the *largest* component of the price of gasoline, and it is also generally the most *variable* component of the price of gasoline. As a result, changes in the price of gasoline are generally attributable to and caused to a significant extent by variations in the price of crude oil.

A small market such as the Cayman Islands is too small in terms of demand volumes to be able to influence world market prices of crude oil.

4.2.2 Refining costs and profits

Essentially all fuels consumed in the Cayman Islands are imported in a refined state, and the vast majority of imported refined fuels are sourced from refineries in the United States. Refining costs and profits vary seasonally and by region, including by different regions in the United States. Regional variations occur for a number of reasons, including that different regions (around the world and within the United States) use slight variations in grades and qualities of crude oil and other raw materials. Systematic seasonal variations also occur for different reasons, including that different precise fuel formulations are sometimes used in different seasons to influence the amount of air pollution caused by the fuels. Less systematic seasonal variations can take place due to slight variations over time in the precise chemical composition of the crude oil being produced and brought to market at that time. Additional factors influencing refining costs include the characteristics of the gasoline produced, which in turn depends on the type of crude oil being used, and the type of processing technology available at the refinery where it is produced. Furthermore, gasoline prices are also affected by the cost of other ingredients that may be blended into the gasoline, including ethanol fuel. Finally, there are regular seasonal variations in demand for fuels including gasoline – gasoline demand in the United States generally increases in the summer, which generally results in higher ex-refinery prices in the United States, which almost invariably results in higher ex-refinery prices for product being shipped to the Cayman Islands.

A small market such as the Cayman Islands is too small in terms of demand volumes to be able to influence world market prices of refined products. The result of this is that the Cayman Islands are essentially a pure “price taker” in the market for refined fuel products; no actions that the Cayman Islands could take, whether market actions or regulatory actions, would be able to affect market outcomes in these broader international markets.

4.2.3 Distribution and marketing costs and profits

Once the refined fuel has been purchased at the refinery gate, it must then be transported to its location of consumption, distributed to retailers, marketed and sold by retailers. The resulting shipping, wholesale or bulk handling, distribution, and retail marketing and handling costs and profits are a further component of the price of fuels. In fuels sold in the Cayman Islands, the fuels are generally shipped to the Cayman Islands in bulk tankers and then moved onshore into bulk storage containers by way of the pipelines at Jackson Point in Grand Cayman and Creek in Cayman Brac, or shipped in smaller containers (most commonly in ISO Containers) and then moved onshore at a container port (most commonly at the Grand Cayman port). The fuels are then delivered to the individual retailing locations, such as by tanker truck to individual retail stations, or sold in bulk quantities to large consumers.

Retail stations in the Cayman Islands are generally operated by independent businesses that purchase gasoline from the wholesale marketers and resell the fuels to the retail public. Some of the retail stations are owned by the independent businesses, while others are owned by the wholesale marketers but leased to the independent operators. Retail station operators' costs vary between different retailers and generally include wages and salaries, benefits, equipment, lease or rent payments, insurance, overhead, and government taxes. It may be noted that even retail stations that are close to each in location can have different traffic patterns, rents, and sources of supply that affect their relative prices; at the same time, one can observe some trends that some retail prices for regular gasoline may be the same for full-service and self-serve alike, irrespective of the retail station location.

4.2.4 Government taxes

The final main component of fuels prices is government taxes. The primary taxes on fuels in the Cayman Islands are import tariffs under the Customs Tariff Act, levied at the moment that the respective fuels are imported into the Cayman Islands. Under this law, gasoline currently attracts an import duty of Cayman Islands Dollars ("**KYD**") 75 cents per Imperial Gallon ("**IG**"), diesel fuel is subject to an import duty of KYD 85 cents per IG (except that the duty is KYD 25 cents per IG where it is supplied to an electricity generator and supplier), aviation gasoline ("**avgas**") and jet fuel (kerosene) are chargeable at KYD 28 cents per IG if the fuels are consumed locally but not if they are used for international transportation, while all other fuel oils, basic petroleum products, propane, butane, and other gases attract an ad valorem import duty of 22% of their value. Certain waivers in effect for the Sister Islands mean that customs duties for fuels consumed on the Sister Islands are KYD 12.5 cents per IG for gasoline and KYD 60 cent per IG for diesel.

4.2.5 The structure of fuel prices in the Cayman Islands

This section describes a representative price build-up of fuel prices in the Cayman Islands by reference to the price of regular gasoline sold on Grand Cayman, based on average prices and costs across the relevant activities in the period of March 2020, that is, immediately prior to the commencement of the COVID-19 pandemic. The purpose of

selecting this product and this time period is to analyze a more “typical” and therefore representative situation in the fuel sector, rather than the extraordinary situation created by the pandemic.

This representative price build is presented in the form of approximate ranges, rather than as precise figures, in order to protect the commercially confidential information of the market participants, and to safeguard against the possibility of such confidential information being extracted or inferred from more precise figures. The Office is in possession of the precise figures.

The final pump price was comprised of the following elements:

Acquisition costs. Acquisition costs of the refined gasoline from abroad averaged in the range from KYD 1.74 to 1.92 per IG (or in the range from 38% to 42% of the pump price). These acquisition costs in turn were comprised of:

- The cost of crude oil, which averaged in the range from KYD 1.19 to 1.23 per IG (or in the range from 26% to 27% of the pump price);
- Refinery costs and margins, which averaged in the range from KYD 0.46 to 0.55 per IG (or in the range from 10% to 12% of the pump price); and
- Supply and trader costs and margins, which averaged in the range from KYD 0.09 to 0.14 per IG (or in the range from 2% to 3% of the pump price).

Transportation and onshoring costs. Transportation and onshoring costs of the refined gasoline from the point of acquisition abroad averaged in the range from KYD 0.82 to 0.96 per IG (or in the range from 18% to 21% of the pump price). These transportation and onshoring costs in turn were comprised of:

- Freight, insurance, and pipeline costs, which combined averaged in the range from KYD 0.09 to 0.14 per IG (or in the range from 2% to 3% of the pump price);
- Cayman Islands customs duties, which averaged in the range less than KYD 0.05 per IG (or less than 1% of the pump price); and
- Port and customs charges, which averaged in the range less than KYD 0.05 per IG (or less than 1% of the pump price).

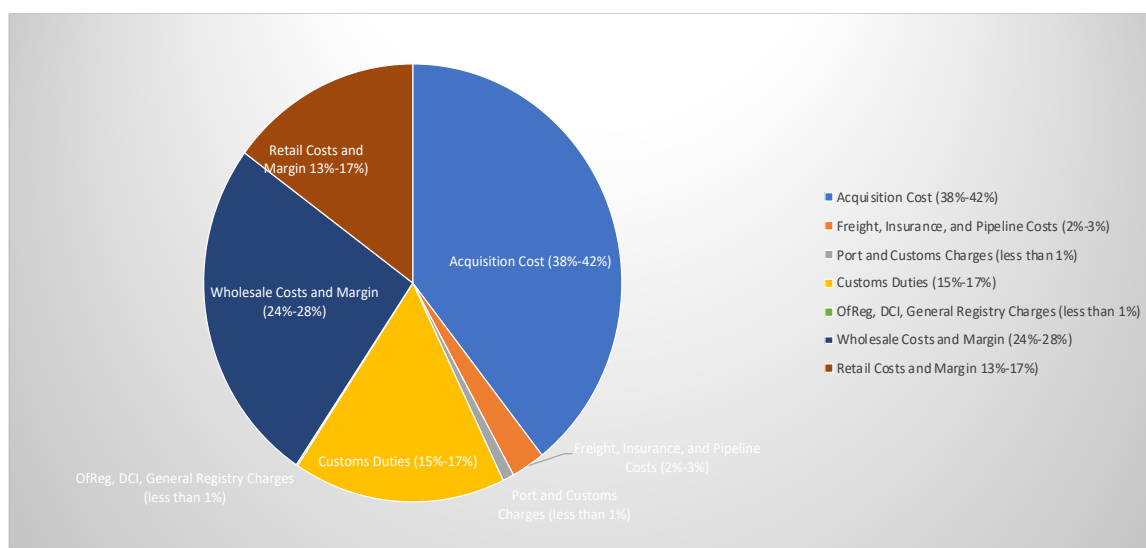
Onshore Cayman Islands government charges. Onshore Cayman Islands government charges of KYD 0.005 per IG (or 0.1% of the pump price), including OfReg, Department of Commerce and Investment, and General Registry charges.

Wholesale costs and margins. Wholesale level costs and margins from the point of onshoring averaged in the range from KYD 1.10 to 1.28 per IG (or in the range from 24% to 28% of the pump price).

Retail costs and margins. Retail level costs and margins averaged in the range from KYD 0.59 to 0.78 per IG (or in the range from 13% to 17% of the pump price).

This price build up can be represented graphically as follows:

Chart 4-1: Representative price build-up of prices in the Cayman Islands fuel sector



4.3 Factors in assessing the degree of competition in a market

4.3.1 *The number of participants in the market*

The number of participants in a market provides a first indication of the structure of the market and the level of competition in a market. The most competitive markets tend to be those with a large number of sellers, none of which has appreciable market power, because customers have a large number of alternative suppliers if one company raises its prices above the competitive level. At the other end of the spectrum, monopoly markets are those characterized by being supplied by only one seller, which typically therefore has a much higher degree of market and pricing power, because customers do not have alternative suppliers if the only supplier raises its prices above the competitive level. Oligopoly markets are markets with a smaller number of sellers with some degree of market and pricing power. Outcomes in oligopoly markets depend critically on other factors in addition to the number of sellers in the market, however it can be said that, as a general trend, outcomes in oligopoly markets are more competitive than in monopoly markets but not as competitive as in perfectly competitive markets.

4.3.2 *Concentration of those markets*

The overall concentration level in a market may also provide useful information about the competitive situation.

The larger a seller's market share, the more likely it is to have market power. Similarly, the more concentrated a market, the more likely is that the market will be characterized by the exercise of market power by sellers in that market.

Three common types of concentration measure are commonly employed in competition analysis:

- **Market shares** measure the market share of individual firms in that market. Market shares are measured by the most appropriate measure of firms' output in the relevant market, which can be the relevant firm's sales volumes, sales revenues, productive capacity, or other measure of productive output as appropriate in the relevant market. The market share is particularly used to assess a single firm's market share, for instance as part of the assessment of whether or not that firm has a significant market power;
- **CRx ratios** measure the combined market shares of the x largest suppliers in that market. For example, the CR2 ratio would measure the total market share of the two (2) largest suppliers in that market. Concentration ratios are particularly used to assess if a market is oligopolistic; and
- The **Herfindahl-Hirschman Index ("HHI")** is a measure of concentration in the whole market. It is calculated by summing the squares of the individual market shares of all the firms in the market. The HHI thereby measures the concentration in the whole relevant market and taking into account all suppliers in that market, while gives proportionately greater weight to the market shares of the larger firms. The HHI index is therefore particularly used to assess the level of concentration of a market as a whole, and the degree of change in the level of concentration of the market as a whole, for instance after a merger.

It is common practice to evaluate HHI measures of market concentration according to whether or not they reach certain thresholds. For instance, in using HHI measures in the context of merger analysis, the European Commission classifies markets according to their HHI levels (after the merger) as follows:

- HHI below 1,000 = unconcentrated market;
- HHI between 1,000 and 2,000 = moderately concentrated market; and
- HHI above 2,000 = highly concentrated market.

By way of example, a monopoly market where one firm alone supplies 100% of the market would have an HHI of 10,000. In another example, a duopoly market where the two suppliers each supply 50% of the market would have an HHI of 5,000. In each case, the market would be classified as highly concentrated, with a high degree of likelihood of market power being exercised in that market, and relatively uncompetitive outcomes resulting. By contrast, a much less concentrated market with 20 suppliers each supplying 5% of the market would have an HHI of only 500 and would therefore be classified as an unconcentrated market, with a low degree of likelihood of market power being exercised in that market, and relatively competitive outcomes resulting.

4.3.3 Barriers to entry and contestability of markets

Barriers to market entry by new competitors (or barriers to market expansion by existing competitors) are generally accepted as being important factors in determining the extent and effectiveness of market competition.

The entry of new competitors into a market can provide an important source of competitive constraint on incumbents. If new entrants are able to offer customers an appropriate alternative source of supply at the right time, any attempt by existing market players to exercise market power (by raising prices, or reducing quality, or other exercises of market power) will tend to be unsuccessful as customers will be able to switch to the new entrants. New entry, or credible threats of new entry, are therefore potentially important competitive constraints on the exercise of market power.

Barriers to such competitive entry can therefore dampen the competitive constraints in a market. Everything else being equal, a market with low barriers to entry will tend to have more competitive outcomes than the comparable market which has high barriers to entry. In contrast, in markets where there are barriers to entry that either prevent firms from entering the market altogether or delay and impede entry to such a degree that the existing market is sheltered from competitive constraint for a significant period, the market outcome tends to be less competitive.

It is important to note that actual entry is not necessarily required for the competitive threat of potential entry to constrain competition. It can be sufficient for competitive entry to be a realistic prospect, a realistic threat from potential entrants, for suppliers in the market to be competitively constrained in their behavior by the threat of potential entry. A supplier that would face immediate and substantial competitive entry if it raised its price materially above the competitive level would be constrained from raising its price by the threat of entry; by contrast, a supplier that is protected from competitive entry because of high barriers to entry will be in a stronger position to raise its price above the competitive level.

In this way, barriers to entry are critical in determining market outcomes, even if there is no actual entry. This in turn can mean that a market with low barriers to entry can see competitive outcomes even if there are not a large number of suppliers in that market. By contrast, the presence of high barriers to entry can be an important factor in creating and entrenching significant market power for market incumbents, by protecting them from the threat of competitive entry.

A barrier to entry is any factor that prevents or hinders a new competitors from entering a market, where that new entry would otherwise be capable of defeating a price increase caused by an exercise of market power (such as an increase in prices). New entry must generally be timely, likely, and sufficient in scope and nature to be an effective competitive constraint.

Barriers to entry can take different forms, including the following:

- Legal or regulatory barriers, including licensing conditions, import tariffs, explicit restrictions on the number of market participants, some intellectual property rights, certain environmental regulations, and other government regulations;

- Structural barriers to entry, including the existence of sunk costs (costs that cannot be recovered by re-selling or otherwise re-using the relevant entry investment in case of exit) that increase the risks and costs of entry, high customer switching costs such as search costs or transaction costs, significant economies of scale that require achieving large volumes before entry can be profitable, and difficulties of access to key inputs or customers;
- Strategic barriers to entry, including threats of retaliation against new entrants (e.g. by way of price wars), brand proliferation by incumbents as a strategic device to deter entry, and other strategic behavior by incumbents used to deter entry.

Section 6.6.2 of this report extends this analysis of barriers to entry in the context of recommendations to the Office regarding points of action that may reduce barriers to entry in the fuel sector and thereby enhance competitive outcomes in the relevant markets.

4.3.4 Regulatory constraints on firms' behavior

Regulatory constraints on firms' behavior may mitigate market power, in particular constraints on the exercise of market power by way of pricing or similar constraints.

4.3.5 Dynamism of market growth and innovation

In general, markets characterized by high degrees of growth, innovation, or other manifestations of dynamic markets, may be less likely to give rise to enduring market power by sellers in those markets. In a static market, competitive entry is more difficult because entrants have to compete market share and customers away from their existing suppliers, rather than being able to compete for new customers in a growing market.

4.3.6 The impact of vertical relationships

Competition in markets can be affected by vertical relationships between operators in a market and other, vertically-related markets. Vertical relationships can take a number of different forms, including vertical agreements (such as between a wholesaler and a retailer) and vertical integration (where suppliers in different levels of the supply chain are under common ownership). While vertical relationships are common throughout essentially all industries and in many cases are competitively benign or even efficient, in some cases they can also cause competition concerns. One avenue of concern may be if a supplier has significant market power in one market, and vertical relationships permit that supplier to extend (or "leverage") that market power into another, vertically-related market. As an illustrative example, if an upstream supplier has control of an input that is important for downstream production (for instance, control over critical import infrastructure), then that upstream supplier may be able to reduce or even eliminate competition in the downstream market by limiting access by downstream competitors to that input. Comparably, if a supplier has control over the distribution points for a product, that supplier may be able to limit access to those distribution points to companies supplying that product, and thereby reduce

competition in the market for that product. The analysis of vertical relationships, and the prospects for “leveraging” behavior, particularly through the control of critical inputs and distribution channels, is therefore an important part of a competitive analysis.

4.3.7 Effective or “workable” competition

High degrees of competition are most regularly found in markets where a large number of suppliers compete for consumers’ custom, and no supplier has any significant market power. However, not all markets are capable of efficiently sustaining a large number of suppliers – this includes the case where economies of scale (and the cost efficiencies of exploiting economies of scale) and restricted market demand (including where the market population is small, such as in the Cayman Islands) favor a smaller number of larger suppliers.

In recognition of such competing considerations, it is common to consider “effective competition” or “workable” competition as a suitable benchmark to assess the effectiveness of competition in a market⁸, rather than the textbook benchmark of “perfect competition” in which there are by definition a large number of small suppliers. The concept assesses whether there are adequate levels of competitive performance in markets, even if those market may not be ideally structured.

While there is no single, unified definition of when competition is sufficient to be “effective” or “workable”, a common benchmark is that an industry can be judged to be “effectively” or “workably” competitive if, taking into account the structural and dynamic characteristics of the market, one cannot identify public policy measures that would materially improve the performance of the market (resulting in greater social gains than social losses).⁹ In terms of industry structure, rather than assessing that an industry should have as many suppliers as possible, the appropriate benchmark under this concept is that the number of suppliers should be at least large *as economies of scale permit*, or more specifically, where there are at least as many suppliers as can reach the minimum efficient scale¹⁰ in that market, taking into account the total demand volume in that market.

This report adopts appropriate benchmarks of “effective” competition in assessing the degree of competition in the fuel sector in the Cayman Islands, including in the conclusions contained in Section 4.12 regarding the competitive performance of the fuel sector as a whole. This is consistent with the Office’s mandate under the URC Act, under which the Office is required “to promote appropriate effective and fair competition”.¹¹

⁸ OECD Glossary, *op cit*.

⁹ Markham, Jesse W. (1950), “An Alternative Approach to the Concept of Workable Competition”, *The American Economic Review*, p. 361.

¹⁰ Minimum efficient scale in an industry is the lowest production volume at which economies of scale are fully exploited and long-run average total costs are minimized. The minimum efficient scale will therefore vary from market to market and location to location, according to production technology and other relevant factors.

¹¹ URC Act, section 6(1)(b).

4.4 Factors in assessing if a supplier has a significant degree of market power

4.4.1 *Significant market power*

Suppliers do not operate in isolation. There is generally an ongoing process of rivalry between suppliers in terms of the prices, service, innovation, and quality they offer to potential customers for their products to be attractive to customers. This ongoing process of rivalry means that suppliers are generally constrained to some degree in their commercial decisions (such as their pricing decisions) by the commercial decisions of other suppliers.

Market power, by contrast, is the ability to make commercial decisions (such as to increase prices) with some degree of freedom from tight competitive constraints from competitors. Where a supplier cannot raise its prices above competitive levels or its competitors price levels without losing all its customers to competitors, it has no market power; by contrast, where a supplier can raise its prices relative to its competitors' prices yet still retain some of its customers, it has some degree of market power. A supplier has *significant* market power where it is free to a significant degree from competitive constraint. Significant market power enables a supplier to charge prices above competitive levels (or to restrict output, product quality, or product innovation below competitive levels) for a sustained period of time. Such a supplier with significant market power enjoys a position of economic strength affording it the power to behave to an appreciable extent independently of its competitors, customers, and ultimately consumers.

4.4.2 *Significant market power under the URC Act*

The URC Act provides that the Office may determine that a sectoral provider has significant market power in a relevant market, against criteria that the Office is to publish relating to the definition of relevant markets in the respective sectors and the assessment of market power, where such a determination enables the Office to impose conditions on said sectoral provider (this is outlined in more detail in Sections 5.2.1 and 5.2.2 of this report). Moreover, the URC Act specifies that the criteria the Office must publish relating to the assessment of market power for the purposes of determinations that a sectoral provider has significant market power must include references to the sectoral provider's market share, the sectoral provider's ability to influence market conditions, the sectoral provider's access to financial resources, the sectoral provider's experience in providing products to the market, and any other criteria considered relevant by the Office.¹²

The Office has already published guidelines on the definition of relevant markets and the assessment of significant market power.¹³ These guidelines are well considered and in line with competition law practice in jurisdictions with broadly comparable competition law regimes, including the competition laws of the United Kingdom and

¹² URC Act, Section 44(3).

¹³ OfReg, Publication OF 2017 – G2 – Guidelines, Guidelines on the Criteria for the Definition of Relevant Markets and the Assessment of Significant Market Power, published 20 September 2017 ("**OfReg Market Definition and Significant Market Power Guidelines**").

the European Union. Specifically, the guidelines are in line with common modern practice in other jurisdiction in respect of the following important aspects:

- “Significant market power” and “dominance” are taken to be essentially equivalent concepts. This is aligned with current European Commission guidelines on equivalent matters;
- Significant market power should be assessed on a case by case basis, taking into account the specific circumstances of each sectoral provider, on the basis of the range of factors (specified and listed in the guidelines) that may determine whether a provider has significant market power;
- The market share of the provider is an important factor in determining whether the provider has significant market power, but it is not the only factor. A high market share alone may not support a finding of significant market power if the provider is otherwise closely competitively constrained, while a provider may have significant market power even with a lower market share if other factors result in that provider being relatively free of competitive constraint;
- Nevertheless, market shares of 40% or higher tend to be indicative of significant market power, and very high market shares of 50% or higher are generally strong evidence of significant market power other than in unusual circumstances where barriers to entry are very low or the provider is otherwise closely competitively constrained; and
- An important additional relevant factor, in addition to market shares, is whether there are barriers to entry to that market (and the closely related factor of barriers to expansion), as providers in markets without barriers to entry are generally significantly more tightly competitively constrained by potential competition and the threat of entry than providers in markets with significant barriers to entry. The importance of barriers to entry in determining the degree of competition (and a provider’s market power) is also explained in Section 6.6.2 of this report.

As is outlined in more detail in the recommendations in Section 6.2.2, the guidelines are generally well drafted and appropriate, but they may be amended so that a market share of 40% or above may give rise to a rebuttable presumption of significant market power, rebuttable by circumstances where barriers to entry to that sector are not appreciable.

4.4.3 Previous findings of significant market power in the fuel sector

Currently, the following sectoral providers are deemed to have significant market power by inclusion in a Schedule to the FMR Act:

- Rubis Cayman Islands Limited in the automotive fuel market;
- SOL Petroleum Cayman Limited in the automotive fuel market;
- Antilles Trading Company SEZC¹⁴ in the supplies & trading markets for petroleum products; and
- Home Gas Limited in the liquid petroleum gas market.

¹⁴ Formerly SOL Energy Resources Inc. The entity’s former name is reflected in the relevant Schedule to the FMR Act.

4.5 The market for gasoline

The market for gasoline has been defined as including all different octane grades of gasoline, and gasoline-ethanol blends up to 10% ethanol (that is, within the current “blend wall”). As is noted in the Market Definition Report and in Section 3 of this report, should the relevant technological, regulatory, and market factors underpinning this “blend wall” for the purposes of this market definition change in the future, then the Office may adjust the relevant market definitions accordingly.

4.5.1 *The structure of the market*¹⁵

The gasoline market at the wholesale/bulk level is essentially supplied by two suppliers: Rubis and SOL. “Rubis” in this context includes the different relevant entities controlled within the Rubis corporate group including Rubis Cayman Islands Limited and Rubis Eastern Caribbean SRL, and “SOL” in this context includes the different relevant entities controlled within the SOL corporate group including Sol Petroleum (Cayman) Limited and Antilles Trading Company SEZC.

Both Rubis and SOL import gasoline in bulk for on-sale to retail stations.

At the wholesale/bulk level, Rubis and SOL each supplies roughly equal proportions of the market. As a result, the wholesale/bulk gasoline market is highly concentrated on all measures of market concentration outlined in Section 4.3.2 of this report and applied in the analysis of markets throughout the this report:

- Each wholesale/bulk seller of gasoline has a high market share;
- The CR2 concentration ratio of the wholesale/bulk gasoline market is very high, and consistent with a highly concentrated market; and
- The HHI of the wholesale/bulk gasoline market is in the range 4,000-6,000, which results in a classification of the market as “highly concentrated”.

These measures are all very high and are strongly indicative that the gasoline market at the wholesale/bulk level is not highly competitive.

The third meaningful participant in the gasoline market that imports and handles bulk quantities of gasoline is Refuel. Refuel imports gasoline by way of ISO Containers. However, Refuel is vertically integrated and imports gasoline only for sale at its own retail station, and does not participate as a seller in the wholesale/bulk market. Moreover, there are capacity limitations on the size of vessels that are able to dock at the Grand Cayman port and on the volumes of fuels that can be imported through ISO Containers. These capacity limitations may potentially create capacity constraints in the future on the ability of Refuel (or any other supplier reliant on fuel shipments by way of ISO Containers) to participate as a supplier in the fuel sector.

At the retail level, the gasoline market is less concentrated in the Grand Cayman geographic market. There are 25 retail stations operating on Grand Cayman, including marinas selling to the public. There are also 3 mobile refuelers, selling to commercial and industrial consumers.

¹⁵ More precise market shares are known to the Office but are redacted and replaced by broad ranges here for the purposes of protecting market participants’ commercial confidentiality.

Without taking into account ownership of multiple retail stations, the relevant concentration measures would indicate that the retail level is quite unconcentrated:

- All retail stations (taken individually) have market shares under 10% of the Grand Cayman retail market for gasoline;
- The CR2 concentration ratio is in the range 0%-20%, commensurate with an unconcentrated market; and
- The HHI of the retail gasoline market is under 500, which would be consistent with a classification of the market as “moderately concentrated”.

However, certain owners and operators of retail stations control more than one retail station. When one takes into account such control of multiple retail stations, the relevant concentration levels indicate that the retail level is in fact moderately concentrated:

- One retail station operator supplies in the range of 30%-40% of the market, and several other retail station operators supply over 10% of the market.
- The CR2 concentration ratio is in the range of 45%-55%, commensurate with a moderately concentrated market; and
- The HHI of the retail gasoline market is in the range 1,500-2,000, which results in a classification of the market as “unconcentrated”.

As a result, when one takes into account that groups of multiple retail stations may be controlled jointly, the concentration measures are modestly high and indicative that the retail gasoline market is moderately concentrated market.

Moreover, in the Cayman Brac and Little Cayman retail markets for gasoline, concentration levels are substantially higher than in the Grand Cayman retail markets for gasoline. There are two retail stations on Cayman Brac, each run by different operators, and one retail station on Little Cayman. Market shares and concentration levels on Cayman Brac and Little Cayman are therefore very high: the CR2 concentration ratio is 100% on both islands, and the HHI is in the range 4,000-6,000 on Cayman Brac and the maximum of 10,000 on Little Cayman. These measures are all very high and are strongly indicative that the gasoline market at the retail level on the Sister Islands is not highly competitive.

4.5.2 Assessment of the degree of competition in the market

The wholesale/bulk markets for gasoline are assessed as being highly concentrated and not strongly competitive:

- The market is effectively a duopoly, with only two suppliers participating at the wholesale/bulk level of the gasoline market.
- As outlined above, the market shares and market concentration levels in the wholesale/bulk gasoline market demonstrate that this market is highly concentrated, which in turn indicates that this duopoly market is not highly competitive.
- Consideration of barriers to entry further supports the conclusion of a market that is not highly competitive. Barriers to entry in the wholesale/bulk gasoline market are relatively high. First, licensing requirements, while serving valuable

functions from other policy perspectives, make entry into the wholesale/bulk gasoline market relatively difficult and subject to a relatively onerous process. Second, entry requires investing in substantial infrastructure requirements including complex bulk storage facilities, which requires expenditures of substantial upfront entry capital costs, the bulk of which are likely to be sunk (meaning that the capital costs cannot be (fully) recovered by on-sale of the capital equipment in case of exit). This raises the costs of entry, and thereby the barriers to entry, substantially. Moreover, the entry costs appear to be compounded by a lack of available and suitable locations for the construction of bulk storage. Third, cost-effective entry into the wholesale/bulk market likely requires that the new entrant be able to import fuels in bulk from a tanker rather than by way of ISO Containers, which in turn requires construction of a new pipeline or the ability to use the existing pipeline at Jackson Point and Creek berths. Together, these barriers to entry are highly likely to entrench the current market power of the incumbents in this market by preventing effective competitive entry.

- This market power is not currently restrained by regulatory constraints on the firm's pricing behavior.
- Finally, the market is characterized by relatively stable and moderate demand growth over time rather than rapid growth, and in terms of the relatively low level of innovation characterizing this industry. This long-term market stability further enhances the incumbents' market power and reduces the degree of competition in this market.

The retail market for gasoline on Grand Cayman is assessed as being moderately concentrated and not strongly competitive:

- The gasoline retail market on Grand Cayman is characterised by a relatively large number of competing suppliers. However, once operation and control of multiple retail stations is taken into account, the market may be better characterised by several large multi-station retailers and a number of smaller single-station retailers.
- Market shares and market concentration levels indicate that the market is moderately concentrated and indicate that this market is likely to be moderately competitive but not highly competitive.
- Barriers to entry appear to be moderately high, but not as high as in the wholesale/bulk market levels. Licensing requirements, in addition to serving valuable functions from other policy perspectives, are appreciable and thereby operate as a barrier to entry, but they are also appreciably lower than for bulk facilities and thereby less of a barrier to entry than in relation to bulk facilities. Entry also requires investing in substantial infrastructure requirements including in the retail site, with substantial upfront sunk capital costs. However, retail entry does not face the same issue of requiring access to an import pipeline. Barriers to entry, while appreciable, are therefore not as high as in the wholesale/bulk markets.
- The retailers' modest market power is not currently restrained by regulatory constraints on the firm's pricing behavior.

- Finally, the market is characterized by relatively stable and moderate demand growth over time rather than rapid growth, and in terms of the relatively low level of innovation characterizing this industry.

In addition, because of the high levels of concentration, the retail markets for gasoline on Cayman Brac and Little Cayman are assessed as being not strongly competitive.

These factors taken together suggest strongly the retail market for gasoline is modestly but not highly competitive.

4.5.3 Assessment of significant market power in the market

Based on the concentration measures and the other indications outlined in Section 4.5.2 above, the Firm concludes that both Rubis and SOL have significant market power in the wholesale/bulk market for gasoline. The Firm also concludes that each of the retail stations on the Sister Islands has significant market power in their respective retail markets for gasoline. However, the Firm concludes that none of the retail stations on Grand Cayman have significant market power in the retail market for gasoline.

As is noted in Section 4.4.3 of this report, certain sectoral providers have previously been deemed to have significant market power in certain markets by operation of legislation. These include: Rubis Cayman Islands Limited in the automotive fuel market; SOL Petroleum Cayman Limited in the automotive fuel market; and SOL Energy Resources Inc. in the supplies & trading markets for petroleum products. “Automotive fuels” and “petroleum products” both encompass and include gasoline. These prior findings of significant market power in the fuel sector are consistent with the Firm’s conclusions that the relevant entities controlled within the Rubis and SOL corporate groups, respective, have significant market power in the wholesale/bulk market for gasoline.

4.6 The market for diesel¹⁶

The market for diesel has been defined as the market for petroleum-derived diesel and diesel-biodiesel blends up to 20% biodiesel (that is, within the current “blend wall”). As is noted in the Market Definition Report and in Section 3 of this report, should the relevant technological, regulatory, and market factors underpinning this “blend wall” for the purposes of this market definition change in the future, then the Office may adjust the relevant market definitions accordingly.

4.6.1 The structure of the market

Diesel markets in the Cayman Islands have a very similar structure to gasoline markets. The diesel market at the wholesale/bulk level is essentially supplied by two suppliers, namely Rubis and SOL. Both Rubis and SOL import diesel in bulk for on-sale to retail stations. The most significant difference between the diesel and gasoline markets is that Rubis and SOL also sell significant quantities of bulk diesel to the Cayman Islands

¹⁶ More precise market shares are known to the Office but are redacted and replaced by broad ranges here for the purposes of protecting market participants’ commercial confidentiality.

electricity generators, with Caribbean Utilities Company (“CUC”) on Grand Cayman sourcing bulk diesel from both Rubis and SOL under long-term supply arrangements, and the Cayman Brac Power and Light Company (“CBPL”) in the Sister Islands sourcing diesel from Rubis under a long-term supply arrangement. At the wholesale/bulk market for diesel, similar to the wholesale/bulk gasoline market, Rubis and SOL each supplies roughly equal proportions of the market, with resulting concentration measures being as follows:

- Each wholesale/bulk seller of diesel has a high market share;
- The CR2 concentration ratio of the wholesale/bulk diesel market is very high, and consistent with a highly concentrated market; and
- The HHI of the wholesale/bulk diesel market is in the range 4,000-6,000, which results in a classification of the market as “highly concentrated”.

These measures are all very high and are strongly indicative that the diesel market at the wholesale/bulk level is not highly competitive.

As with gasoline, the third meaningful participant in the diesel market that imports and handles wholesale/bulk quantities of diesel is Refuel, importing diesel by way of ISO Containers. However, as with its activities in the gasoline market, Refuel is vertically integrated and imports diesel only for sale at its own retail station, and at the time of writing of this report did not participate as a seller in the wholesale/bulk market (the Firm notes that Refuel has indicated that it is entering the wholesale/bulk market). Moreover, as is outlined in Section 4.5.1 in relation to gasoline, there are capacity limitations at the Grand Cayman port in relation to the volumes of diesel that can be imported through ISO Containers, which may potentially create capacity constraints on the ability of Refuel (or any other supplier reliant on fuel shipments by way of ISO Containers) to participate as a supplier in markets for diesel.

Certain other market participants import bulk quantities of diesel in ISO Containers for their own use. For instance, the Thompson Shipping Group imports diesel for use within the group but without participating in any market as a seller.

At the retail level, the diesel market is similarly less concentrated in the Grand Cayman geographic market, but with some degree of concentration when one takes into account that some of the retail stations are jointly controlled as groups of retail stations. The same 25 retail stations and 3 mobile refuelers on Grand Cayman that sell gasoline also sell diesel at the retail level. When one takes into account that certain owners and operators of retail stations control more than one retail station, the relevant concentration levels indicate that the retail level is moderately concentrated:

- One retail station operator supplies in the range of 30%-40% of the market, and several other retail station operators supply over 10% of the market.
- The CR concentration ratio is in the range of 45%-55%, commensurate with a moderately concentrated market; and
- The HHI of the retail diesel market is in the range 1,500-2,000, which results in a classification of the market as “unconcentrated”.

As a result, when one takes into account that groups of multiple retail stations may be controlled jointly, the concentration measures are modestly high and indicative that the retail diesel market is moderately concentrated market.

These measures are therefore all low and are strongly indicative of an absence of competition problems in the retail diesel market.

However, the diesel retail markets in Cayman Brac and Little Cayman are similarly much more highly concentrated. There is only one retail station currently selling diesel on each of Cayman Brac and Little Cayman (although the second retail station on Cayman Brac has previously sold diesel and could recommence diesel sales). Market shares and concentration levels in the diesel market at the retail level on Cayman Brac and Little Cayman are therefore both at the highest level, with the CR2 concentration ratio being 100% on both Sister Islands, and the HHI being the maximum of 10,000 on both Sister Islands. These measures are all very high and are strongly indicative that the diesel market at the retail level on the Sister Islands is not competitive.

4.6.2 Assessment of the degree of competition in the market

The wholesale/bulk markets for diesel are assessed as not being strongly competitive:

- Similar to the wholesale/bulk market for gasoline, the comparable market for diesel is effectively a duopoly, with only two suppliers participating at the wholesale/bulk level of the diesel market.
- As outlined above, the market shares and market concentration levels in the wholesale/bulk diesel market demonstrate that this market is highly concentrated, which in turn indicates that this duopoly market is not highly competitive.
- The barriers to entry to the wholesale/bulk diesel market are essential identical to those in the wholesale/bulk gasoline market as described above. These barriers to entry taken together are highly likely to entrench the current market power of the incumbents in this market by preventing effective competitive entry.
- This market power is not currently restrained by regulatory constraints on the firm's pricing behavior.
- Finally, the diesel market is quite static in terms of market demand, which is quite stable over time, and in terms of the relatively low level of innovation characterizing this industry. This long-term market stability further enhances the incumbents' market power and reduces the degree of competition in this market.

The retail market for diesel on Grand Cayman is assessed as being moderately concentrated and not strongly competitive:

- The diesel retail market on Grand Cayman is characterised by a relatively large number of competing suppliers. However, once operation and control of multiple retail stations is taken into account, the market may be better characterised by several large multi-station retailers and a number of smaller single-station retailers.
- Market shares and market concentration levels indicate that the market is moderately concentrated and that this market is likely to be moderately competitive but not highly competitive.

- The barriers to entry to the retail diesel market are essential identical to those in the retail gasoline market as described above. These barriers to entry taken together, while appreciable, are therefore not as high as in the wholesale/bulk markets.
- The retailers' modest market power is not currently restrained by regulatory constraints on the firm's pricing behavior.
- Finally, the market is characterized by relatively stable and moderate demand growth over time rather than rapid growth, and in terms of the relatively low level of innovation characterizing this industry.

These factors taken together suggest strongly the retail market for diesel is modestly but not highly competitive.

4.6.3 Assessment of significant market power in the market

Based on the concentration measures and the other indications outlined in Section 4.6.2 above, the Firm concludes that both Rubis and SOL have significant market power in the wholesale/bulk market for diesel. The Firm also concludes that each of the retail stations on the Sister Islands has significant market power in their respective retail markets for diesel. However, the Firm concludes that none of the retail stations on Grand Cayman have significant market power in the retail market for diesel.

As is noted in Section 4.4.3 of this report, certain sectoral providers have previously been deemed to have significant market power in certain markets by operation of legislation. These include: Rubis Cayman Islands Limited in the automotive fuel market; SOL Petroleum Cayman Limited in the automotive fuel market; and SOL Energy Resources Inc. in the supplies & trading markets for petroleum products. "Automotive fuels" and "petroleum products" both encompass and include diesel. These prior findings of significant market power in the fuel sector are consistent with the Firm's conclusions that the relevant entities controlled within the Rubis and SOL corporate groups, respective, have significant market power in the wholesale/bulk market for diesel.

4.7 The market for jet fuel and kerosene

This market has been defined as the market for jet fuel and kerosene.

4.7.1 The structure of the market

There are two principal suppliers of jet fuel and kerosene in the market: Rubis, which supplies aviation operators at Owen Roberts International Airport (ORIA) and Charles Kirkconnell International Airport (CKIA), and SOL, which supplies aviation operators at ORIA. The market for jet fuel and kerosene in the Cayman Islands can therefore be

characterized as a duopoly. Rubis and SOL each supplies roughly equal proportions of the market, resulting in the following market concentration measures:¹⁷

- Each seller of jet fuel and kerosene has a high market share;
- The CR2 concentration ratio of the jet fuel and kerosene market is 100%, which is indicative of a highly concentrated market; and
- The HHI of the jet fuel and kerosene market is in the range 4,000-6,000, which means that market is classified as “highly concentrated”.

These measures are all very high and are strongly indicative that the jet fuel and kerosene market is not highly competitive.

4.7.2 Assessment of the degree of competition in the market

The market for jet fuel and kerosene is assessed as not being strongly competitive:

- The market for jet fuel and kerosene is effectively a duopoly, with only two suppliers.
- As outlined above, the market shares and market concentration levels demonstrate that this market is a highly concentrated duopoly market, which in turn indicates that the market is not highly competitive.
- The barriers to entry to the market are assessed as being moderately high. This is due to the significant upfront capital costs relative to the market size. An additional potential barrier to entry is the practical requirement to obtain the permission of the Cayman Islands Aviation Authority to serve aviation customers. These barriers to entry taken together are likely to entrench the current market power of the incumbents in this market by deterring effective competitive entry.
- This market power is not currently restrained by regulatory constraints on the firm’s pricing behavior.
- Market participants also face certain competitive constraints from providers outside of the Cayman Islands – while an aviation customer may not commonly travel to another destination solely to refuel, in the case of a flight traveling to or from another location outside the Cayman Islands in any event, that customer may have some choices (albeit limited by fuel tank capacities and similar technical constraints) about refuelling in the Cayman Islands or at that other location. This choice modestly increases the competitive pressure on the providers in the Cayman Islands.
- Finally, the jet fuel and kerosene market is quite static in terms of market demand, which is quite stable over time, and in terms of the relatively low level of innovation characterizing this industry. This long-term market stability further enhances the incumbents’ market power and reduces the degree of competition in this market.

¹⁷ More precise market shares are known to the Office but are redacted and replaced by broad ranges here for the purposes of protecting market participants’ commercial confidentiality.

4.7.3 Assessment of significant market power in the market

Based on the concentration measures and the other indications outlined in Section 4.7.2 above, the Firm concludes that both Rubis and SOL have significant market power in the market for jet fuel and kerosene.

As is noted in Section 4.4.3 of this report, certain sectoral providers have previously been deemed to have significant market power in certain markets by operation of legislation. These include SOL Energy Resources Inc. in the supplies & trading markets for petroleum products. “Petroleum products” encompasses and includes jet fuel and kerosene. These prior findings of significant market power in the fuel sector are consistent with the Firm’s conclusions that the relevant entities controlled within the SOL corporate group have significant market power in the market for jet fuel and kerosene. The Firm additionally finds that the relevant entities controlled within the Rubis corporate group have significant market power in the market for jet fuel and kerosene.

4.8 The market for aviation gas

This market has been defined as the market for aviation gas (“**avgas**”).

4.8.1 The structure of the market

Rubis is the only importer or supplier of avgas in the Cayman Islands; Rubis supplies aviation operator customers at ORIA. As a result, concentration levels in the acetylene market are at the highest levels possible, with the only supplier having a 100% market share, and the market having an HHI of 10,000 which results in a classification of a “highly concentrated market”. The monopoly structure of this market is strongly indicative that the avgas market is not competitive.

4.8.2 Assessment of the degree of competition in the market

The market for avgas is assessed as not being competitive:

- The very high degree of concentration of the avgas market in a monopoly market is commensurate with a low level of competition.
- The barriers to entry to the market are assessed as being moderately high. This is due to the significant upfront capital costs relative to the market size. An additional potential barrier to entry is the practical requirement that operators must obtain the permission of the CIAA to serve aviation customers. These barriers to entry taken together are likely to entrench the current market power of the incumbents in this market by deterring effective competitive entry.
- This market power is not currently restrained by regulatory constraints on the firm’s pricing behavior.
- Finally, the avgas market is quite static in terms of market demand, which is quite stable over time, and in terms of the relatively low level of innovation characterizing this industry. This long-term market stability further enhances the

incumbents' market power and reduces the degree of competition in this market.

4.8.3 Assessment of significant market power in the market

Based on the concentration measures and the other indications outlined in Section 4.8.2 above, the Firm concludes that Rubis has significant market power in the market for avgas.

As is noted in Section 4.4.3 of this report, certain sectoral providers have previously been deemed to have significant market power in certain market by operation of legislation. The Firm's conclusions relating to significant market power in relation to avgas therefore support a determination of significant market power in a market.

As is noted in Section 4.4.3 of this report, certain sectoral providers have previously been deemed to have significant market power in certain markets by operation of legislation. The Firm's understanding is that avgas is considered to be a "petroleum product" but not considered to be an "automotive fuel" under this deeming provision. Rubis, the only supplier of avgas in the market, has therefore not been previously deemed to have significant market power in the market for avgas. The Firm concludes that the relevant entities controlled within the Rubis corporate group have significant market power in the market for jet fuel and kerosene in addition to the previously operative deeming of significant market power.

4.9 The market for propane (LPG)

The market for propane (in its liquid form known as liquified petroleum gas or "LPG") has been defined as the market for propane gas and propane gas blends able to be used on propane-based equipment.

4.9.1 The structure of the market

Home Gas has supplied the Cayman Islands market for propane for over 60 years, as the sole supplier until around 2018. During 2018, Clean Gas entered the market as the second provider of propane, constructed storage facilities in Industrial Park and received a permit to sell propane from the Office in March 2018. This means that the market since Clean Gas's entry has been effectively a duopoly in the supply of propane (LPG). Other participants including Go Gas Ltd supply Grand Cayman with propane-fuelled equipment, but do not supply the fuel itself.

The market can be characterized as a duopoly. Home Gas supplies substantially higher shares of the market (supplying within a range of 60%-90% of the market) than Clean Gas (supplying within a range of 10%-40% of the market)¹⁸. This results in the following market concentration measures:

¹⁸ More precise market shares are known to the Office but are redacted and replaced by broad ranges here for the purposes of protecting market participants' commercial confidentiality.

- The larger supplier has a high market share, and the smaller supplier supplies the remainder of the market.
- The CR2 concentration ratio of the market is 100%, as there are only two suppliers, which is indicative of a highly concentrated market; and
- The HHI of the propane (LPG) market is within a range of 6,000-8,000, which means that market is classified as “highly concentrated”.

These measures are all very high and are strongly indicative that the market for propane is not highly competitive.

4.9.2 Assessment of the degree of competition in the market

The market for propane is assessed as being modestly but not highly competitive:

- The market for propane (LPG) is effectively a duopoly, with only two suppliers.
- The market shares and market concentration levels demonstrate that this market is a highly concentrated duopoly market, which in turn indicates that the market is not highly competitive.
- The barriers to entry to the market are assessed as depending on the scale of the entry. For smaller scale entry, barriers to entry are moderate, due to moderate entry costs in terms of capital costs of acquiring the required bulk storage and customer tanks. However, for larger scale entry, barriers to entry are substantially higher, because of the very high level of difficulty to the new entrant of constructing facilities that permit larger-scale bulk imports of the fuel. It is noted that this market has been characterized by recent entry in 2018, which demonstrates that competitive entry is possible at smaller scales. However, the greater difficulty of entry on larger scales places a cap on the degree to which competitive entry can place a competitive constraints on an incumbent sectoral provider.
- There are market indications that this competition caused a material decrease in prices towards more competitive levels. However, this has taken place in the context of upper limits on the scale of feasible entry, and therefore upper limits on the degree to which a potential entrant is able to competitively constrain a market incumbent.
- This market power is not currently restrained by regulatory constraints on the firm’s pricing behavior.
- The propane market in recent years has been quite stable in terms of market demand, in the sense that market demand growth has been quite moderate. Moreover, the industry is characterized by relatively low levels of innovation, with innovation taking place by incremental process improvements at most. This relative long-term market stability enhances the incumbents’ market power and reduces the degree of competition in this market. However, the Firm notes that there are some increases in the construction in commercial and residential properties that may result in a future increase in the consumption of propane and therefore increased growth in demand for propane.

4.9.3 Assessment of significant market power in the market

Based on the concentration measures and the other indications outlined in Section 4.9.2 above, the Firm concludes that Home Gas has significant market power in the market for propane (LPG). However, also concludes that Clean Gas does not have significant market power in this market, as its market share is below the levels that would be consistent with a determination of significant market power.

As is noted in Section 4.4.3 of this report, certain sectoral providers have previously been deemed to have significant market power in certain markets by operation of legislation. These include Home Gas Limited in the liquid petroleum gas market. The Firm's conclusions, namely that Home Gas has significant market power in this market but Clean Gas does not, are consistent with these prior findings of significant market power in this market.

4.10 The market for acetylene

This market has been defined as the market for acetylene.

4.10.1 The structure of the market

PMIG is the only seller of acetylene in the Cayman Islands. PMIG imports acetylene into the Cayman Islands in ISO Containers and stores the fuel in PMIG's storage facilities on Grand Cayman. As a result, concentration levels in the acetylene market are at the highest levels possible, with the only supplier having a 100% market share, and the market having an HHI of 10,000 which results in a classification of a "highly concentrated market".

4.10.2 Assessment of the degree of competition in the market

The market for acetylene is assessed as not being competitive:

- The very high degree of concentration of the acetylene market is commensurate with a low level of competition.
- As a potential partial mitigating factor, it does not appear that barriers to entry into acetylene supply are excessively high. Storage facilities are likely to be the most significant barrier to entry; however, market information indicates that the relevant storage tanks can be rented rather than needing to be constructed afresh, which their reduces the impact as a barrier to entry.
- The retailers' modest market power is not currently restrained by regulatory constraints on the firm's pricing behavior.
- Moreover, the market appears to be quite stable both in terms of market demand and in terms of the level of innovation in the market.

4.10.3 Assessment of significant market power in the market

Based on the concentration measures and the other current indications outlined in Section 4.10.2 above, the Firm concludes that PMIG has significant market power in

the market for acetylene. However, as noted, should there be material competitive entry into the market for acetylene that captures substantial market shares and otherwise places significant competitive constraints on PMIG, this competitive entry may result in a future alteration of this conclusion.

As is noted in Section 4.4.3 of this report, certain sectoral providers have previously been deemed to have significant market power in certain markets by operation of legislation. The Firm's understanding is that acetylene is not considered to be either a "petroleum product" or an "automotive fuel" under this deeming provision. PMIG, the only supplier of acetylene in the market, has therefore not been previously deemed to have significant market power in the market for acetylene. The Firm concludes that PMIG has significant market power in the market for acetylene in addition to the previously operative deeming of significant market power.

4.11 The potential markets for ethanol/blends, biodiesel/blends, natural gas, butane, hydrogen, and methanol

The potential future markets have been defined as:

- The market for ethanol and gasoline-ethanol blends with more than 10% ethanol (beyond the current "blend wall");
- The market for biodiesel and diesel-biodiesel blends with more than 20% biodiesel (beyond the current "blend wall");
- The market for natural gas (in different states also known as liquified natural gas, "**LNG**", or compressed natural gas, "**CNG**");
- The market for butane gas and predominantly butane gas blends;
- The market for hydrogen; and
- The market for methanol.

All of these markets are potential future markets in the Caymans Islands. There is, as yet, no commercial activity relating to any of these fuels in the Cayman Islands. As these markets are potential future markets without current market participants or market activity, it is not possible to assess the degree of competition in this market or to attribute significant market power to any participant.

In relation to natural gas, it is noted that there are ongoing discussions regarding the introduction of natural gas as a significant fuel in the Cayman Islands. These discussion focus particularly around a movement towards the use of natural gas as a substitute fuel for diesel in electricity generation, and the construction of an LNG terminal on Grand Cayman to enable this substitution of fuels. However, at present, to the Firm's knowledge and at the time of writing, no firm plans or steps have been taken yet in this direction.

4.12 Assessment of the state of competition in the fuel sector in the Cayman Islands

This report adopts the benchmark of "effective" competition (outlined in Section 4.3.7) in assessing the degree of competition in the fuel sector in the Cayman Islands.

The Cayman Islands are a price taker in world markets for refined fuel products. Within the Cayman Islands, the fuel sector is not highly competitive. Most markets are highly concentrated, and consumers have few or no competitive alternatives, resulting in sectoral providers in many markets having significant market power. However, a significant driver of this outcome is the interaction between the small market size and economies of scale on the supply side. In many markets, exploitation of efficient and cost-effective economies of scale on the supply side would not be consistent with a large number of suppliers. This is particularly the case at the wholesale/bulk levels of the gasoline and diesel markets, where capital costs of the commensurate facilities such as large storage tanks, exacerbated by a relative scarcity of appropriate locations on the Islands for such facilities, points towards the market being supplied by a relatively small number of suppliers. The retail level for gasoline and diesel, where economies of scale exist but are relatively less significant, is more consistent with a larger number of suppliers located in different geographic locations, in line with observed market outcomes. This means that markets in the fuel sector, while being concentrated, can be assessed as being partly consistent with the “workable competition” benchmark that the number of suppliers should be at least as large as economies of scale permit.

The Firm was tasked with assessing the degree of competition in the market, including the question of whether competition has failed. It can be observed that a number of the markets assessed have more than one supplier, who compete with each other to at least a modest degree, and several markets have evidenced that competitive entry is possible and has taken place. Accordingly, the Firm assesses that competition in the fuel sector is at least partly effective or workable and cannot be said to have failed.

However, a high-level criterion as to whether competition is fully effective is whether there are no policy measures available that would further improve the degree of competition in the market and improve consumer outcomes (see Section 4.3.7). Based on this criterion, the Firm judges that competition is only partly effective and can be improved further by targeted policy interventions. Competition in the fuel sector can work to a satisfactory degree, but there are currently certain bottlenecks to competition that can be improved. Section 6 contains the Firm’s recommendations regarding these policy measures.

5 REGULATION IN FUELS MARKETS IN THE CAYMAN ISLANDS

This section outlines the legal regulatory framework applying to the regulation of the fuel sector in the Cayman Islands.

5.1 The URC Act and other relevant laws

The URC Act is the principal legislation governing the Office's mandate as an independent, multi-sector regulator with responsibility for the key utility providers including the fuel sector in the Cayman Islands. Alongside the URC Act, the sector-specific legislation governing the fuel sector are the DS Act along with the associated DS Regulations, and the FMR Act.

5.2 The role of the URC Act in addressing impediments to competition

The URC Act is a comprehensive competition and regulatory regime for sectoral providers in a regulated sector. A modern competition law generally features the following three core substantive rules against anti-competitive conduct:

1. A rule against anti-competitive agreements between enterprises;
2. A rule against an abuse of a dominant position or position of significant market power by an enterprise; and
3. A rule against anti-competitive mergers or acquisitions by or between enterprises.

The URC Act features these three core substantive rules.

In addition to the competition law provisions, the URC Act also contains the key features of a comprehensive economic regulation regime applicable to providers in defined utilities sectors. It permits the Office to adopt broad regulatory rules applicable to such sectoral providers, in particular those that have significant market power.

It is noted that the URC Act only applies to "sectoral providers" providing goods or services in the defined sectors, and that Cayman Islands law does not have a cross-sector competition law applying to companies not operating in the defined sectors.

5.2.1 The Office may determine that a sectoral provider has significant market power

The URC Act empowers the Office to determine that a sectoral provider has significant market power in a relevant market.¹⁹ Under the URC Act, a sectoral provider will be considered under the URC Act to have significant market power where, either individually or jointly with another, it enjoys a position of economic strength affording it the power to behave to an appreciable extent independently of competitors, customers and consumers.²⁰ A sectoral provider is a person who provides goods or services in a sectoral utility, where a sectoral utility is a utility market or sector for which

¹⁹ URC Act, Part 7.

²⁰ URC Act, section 2(3).

the Office has specific responsibility under sectoral legislation.²¹ The fuel sector is such a sector.

The Office may make a determination regarding significant market power where it has established and published criteria relating to the definition of relevant markets in the respective sectors, and against which market power may be assessed for the purposes of making a determination that there is market power.²² The URC Act specifies that such criteria for the determination of market power are to include references to the sectoral provider's market share, its ability to influence market conditions, its access to financial resources, its experience in providing products to the market, and any other criteria considered relevant by the Office.²³ Moreover, under the URC Act, sectoral providers are deemed under the URC Act to have significant market power in the termination of utility services on their own networks unless the Office determines otherwise.

5.2.2 The Office may impose conditions on sectoral providers with significant market power

The consequences of a determination that a sectoral provider has significant market power are that the Office may impose certain conditions on those sectoral providers. The conditions that may be imposed under the URC Act and that are potentially relevant to the fuel sector are wide-ranging and may include:²⁴

- Imposing price controls and requiring a cost-recovery orientation of prices;
- Requiring the use of cost accounting systems of a type that facilitates price controls and cost-recovery orientation of prices;
- Imposing conditions on retail prices in general;
- Requiring the publication of reference offers ensuring equivalence of access to any services or facilities in which the sectoral provider has significant market power, at tariffs or prices reflecting the sectoral provider's costs;
- Requiring the submission of regulatory accounts or financial statements separating out the key business activities of the sectoral provider;
- Requiring the offer of services to businesses comprising the sectoral providers (and their parent companies) on a non-discriminatory, commercial basis;
- Requiring the provision of standard terms of business, which should be published and accessible to customers;
- Requiring the provision of service level guarantees with associated compensation payments to retail customers; and
- Any other obligations that the Office considers necessary in pursuance of the relevant sector policy.

²¹ URC Act, section 2(1).

²² URC Act, section 44.

²³ URC Act, section 44(3).

²⁴ URC Act, section 45.

In addition to the Office's powers to determine that a sectoral provider has significant market power, the Legislative Assembly of the Cayman Islands may deem a sectoral provider to have significant market power by operation of legislation.²⁵

5.2.3 The Office is empowered to exercise merger control over regulated sectors

The Office is empowered to exercise merger control in respect of any person or entity to whom a licence is granted under any sectoral legislation (a “**licensee**”).²⁶

The overall rule in the URC Act is that there may not be a change in control of a licensee without the consent of the Office. Upon being notified of an intended change of control of a licensee, the Office is required to form a view as to whether the change of control would have, or be likely to have, the effect of substantially lessening competition in the Islands (an additional public interest test in the law is not relevant to the fuel sector). Moreover, a licensee is not permitted to issue, transfer, dispose of or otherwise deal in more than ten per cent of voting shares in a licensee, without the consent of the Office. The Office may refuse to give its consent where the resulting transaction may result in a lessening of competition in the provision of the services (as relevant to the fuel sector).²⁷

This essentially means that any mergers or acquisitions (or similar transactions) in the fuel sector are subject to the Office's merger control decision. The test the Office is to exercise is a competition test: the Office may block a transaction where a “substantial lessening of competition” will or is likely to result from the transaction. This competition test is broadly aligned with equivalent competition tests in most other jurisdictions, including in the United Kingdom *Competition Act 1998*.

5.2.4 The Office is empowered to prevent other anti-competitive practices in regulated sectors

The Office is also empowered to prevent other anti-competitive practices in regulated sectors.²⁸ It is empowered to prevent agreements (and decisions, concerted practices, and other related practices) involving sectoral providers in regulated sectors that may have as their object or effect to prevent, restrict, or distort competition in a relevant market in the Islands.²⁹ It is also empowered to prevent a sectoral provider that has a dominant position in a market for which the Office has responsibility from abusing that dominant position.³⁰

²⁵ Currently, the following sectoral providers are deemed to have significant market power by inclusion in a Schedule to the FMR Act:

- Rubis Cayman Islands Limited in the automotive fuel market;
- SOL Petroleum Cayman Limited in the automotive fuel market;
- SOL Energy Resources Inc. in the supplies & trading markets for petroleum products; and
- Home Gas Limited in the liquid petroleum gas market.

²⁶ URC Act, Part 8 and section 2.

²⁷ URC Act, section 46.

²⁸ URC Act, Part 12.

²⁹ URC Act, section 66.

³⁰ URC Act, section 70.

5.3 The Office's information gathering powers under the URC Act

The Office currently has a wide range of information gathering powers including by compulsion.³¹ The Office is empowered to require all information that it considers necessary for the purpose of carrying out its functions or exercising its powers under this or any other law. Without limitation, the information the Office may require includes any information that it requires to ascertain whether there is or has been a contravention of the law (including contraventions of Part 12 of the URC Act relating to anti-competitive practices). The Office is furthermore empowered to require information both in a manner that it specifies within a reasonable time period specified by the Office. A compulsory information request must be in writing and be accompanied by a reason for the request. The Office is also empowered to seek penalties against persons or entities that are subject to a compulsory information request if they fail to comply with such a request.

5.4 Regulatory regimes in other comparable jurisdictions

This section provides a high-level overview of current regulatory regimes in fuel markets in comparable jurisdictions.

In determining comparable jurisdictions, the focus was on jurisdictions within the same geographic region as the Cayman Islands. The following criteria were considered:

- Comparable population sizes;
- Comparable jurisdictional geographies; and
- Comparable fuel market characteristics including the number of major fuel suppliers and importers, aggregate fuel consumption levels, aggregate storage capacity, and other aspects of fuel market infrastructure including import facilities.

Based on these criteria, the following jurisdictions were selected for a comparable regulatory overview: The Bahamas; St Lucia; Barbados; and the Turks and Caicos Islands ("TCI").

5.4.1 *The Bahamas*

The Bahamas has a current population of around 353,000, broadly comparable to the Cayman Islands population of around 68,000. The country is an archipelago comprised of a number of relatively small islands, with Nassau and Freeport being the main population centers, meaning that the national geography is also broadly comparable to that of the Cayman Islands.

The fuel sector in the Bahamas is supplied by three importers: Rubis, SOL, and Sun Oil. two large importers (Rubis and SOL) who import fuels in bulk, and one smaller importer (Sun Oil) who imports fuels by way of ISO containers. Rubis and SOL import fuels in bulk by way of a berth that is owned by Parkland, with the throughput fee being negotiated between the parties, and Sun Oil imports fuels by way of ISO containers.

³¹ URC Act, section 9.

The relevant markets are regulated by the national Consumer Protection Commission (formerly the Prices Commission), which is empowered by the Price Control Act. Regulation is at both the wholesale and the retail levels. The Price Control Act does not specifically reference petroleum products as a category or individual fuels specifically; rather, it gives very broad powers to the relevant Minister to institute regulations relating to goods and services “essential to the well being of the community” for purposes of achieving “their equitable distribution and their availability at fair prices” and to “ensure generally that the resources available to the community are used in a manner calculated to serve the interest of the community”. Fuel prices in the Bahamas are regulated under these broad statutory powers.

5.4.2 St Lucia

St Lucia has a current population of around 166,000. The country is a single, relatively small island. Both the relatively small population and the relatively small island geography of the country makes St Lucia broadly comparably to the Cayman Islands.

Similarly to the Cayman Islands, the fuel sector in St Lucia is supplied by two large importers (Rubis and SOL) who import fuels in bulk; the Firm understands that there are no material smaller importers of fuels into St Lucia. Bulk imports are brought in by way of a berth and storage facility owned by a third party, with a storage fee being paid to the facility owner by importers.

The relevant markets are regulated by price regulation at the retail level by the national Ministry of Commerce. The price-regulated fuel products are diesel, gasoline, kerosene, and LPG. The regulatory mechanism is that the Ministry of Commerce sets, and periodically (generally monthly) updates and publishes, the fixed allowable retail prices of these petroleum products. Prices are set broadly by reference to a cost pass-through mechanism.

5.4.3 Barbados

Barbados has a current population of around 302,000. The country is a single, relatively small island. Both the relatively small population and the relatively small island geography of the country makes Barbados broadly comparably to the Cayman Islands.

Similarly to the Cayman Islands, the fuel sector in Barbados is supplied by three large importers who import fuels in bulk. These importers are two private sectoral provider, Rubis and SOL, and one state-owned sectoral provider, the Barbados National Oil Company Limited (“BNOCL”). The Firm understands that there are no material smaller importers of fuels into Barbados. The Firm understands that bulk imports of gasoline and diesel are brought in by way of a berth and storage facility owned by the Government of Barbados through a state-owned entity the Barbados National Terminal Company Limited (“BNTC”). Once imported, the fuels are sold to BNOCL, and then distributed by BNOC or repurchased by wholesalers under Petroleum Product Supply Agreements for distribution to retailers.

The relevant markets are regulated at both the wholesale and the retail levels by the national Ministry of Energy, Small Business and Entrepreneurship (“MESBE”). Price

regulation is carried out under the Price Control Regulations issued under the Miscellaneous Controls Act. The price-regulated petroleum products are diesel fuel, gasoline, kerosene, and LPG. The regulatory mechanism is that the MESBE sets, and periodically updates and publishes, the maximum allowable wholesale and retail prices of these petroleum products.

5.4.4 Turks and Caicos Islands

The TCI has a current population of around 57,000, closely comparable to the Cayman Islands population of around 68,000. The country is an archipelago comprised of a number of relatively small islands, with Providenciales and Grand Turk being the main population centers, meaning that the national geography is also quite closely comparable to that of the Cayman Islands.

Similarly to the Cayman Islands, the fuel sector in the TCI is supplied by two large importers (Rubis and SOL) who import fuels in bulk, and one smaller importer (Sun Oil) who imports fuels by way of ISO containers. Bulk imports are brought in by way of a berth that is owned by the Government of the TCI, with both major bulk importing entities having seabed lease to berth vessels and to discharge fuels.

The relevant markets in the TCI are fully liberalized from a price setting perspective and there are no price controls or comparable restrictions.

5.4.5 Jurisdictional comparison and conclusions

In all of the jurisdictions considered, governments undertake some form of price monitoring, including within a price regulation framework. In all cases, a central purpose of the monitoring is to monitor how domestic fuels prices are developing compared with international price trends. Price transparency is a common policy objective across these jurisdictions. The Office's price monitoring activities are in line with activities in these comparable jurisdictions.

Price controls operate in three of the four jurisdictions (the Bahamas, St Lucia, and Barbados) but not in the TCI. While none of the jurisdictions makes the precise price setting formula publicly available through the orthodox means of public communications, the Firm's understanding is that in each of these jurisdictions, regulated prices are set and periodically updated by cost-plus style price setting formulae that take into account factors including world price benchmarks of crude oil and/or refined products. This partial regional trend towards direct price regulation stands in some contrast to trends in jurisdictions outside of the immediate region, where price controls in fuels sectors are not as common, and where fuels pricing is more commonly determined according to market competition protected by the enforcement of competition laws.

In the jurisdictions where prices are directly regulated, they are not regulated by express reference to principles of competition and market efficiency. Rather, price regulation of fuels in those jurisdictions is done by reference to consumer advocacy and

protection, and to ensuring the sustainability of the relevant industries.³² This is an important contrast to the role of the Office in the Cayman Islands, where the governing law (the URC Act) expressly states that it is a regulation and competition law, and under which the Office has a primary mandate “to promote appropriate effective and fair competition”³³ in addition to other mandates including protecting consumer interests, and promoting innovation and facilitating economic and national development. In this way, the regulatory background to the Office’s role appears to be substantially different to the position in the comparable neighboring jurisdictions. It is also noted that the regional comparable jurisdictions have not (according to the Firm’s information) undertaken market definition and competition assessment processes similar to this report and the accompanying Market Definition Report – this difference appears to reflect the position that, unlike the comparable jurisdictions, the Office has an explicit primary mandate to promote market regulation and structures which promote competition. The analysis and recommendations that follow in Section 6 take into account the Office’s competition mandate in this respect.

The control of critical fuels importing infrastructure is a significant aspect of fuels sector performance (see Section 6.4 of this report for more detail) and is dealt with by active (even if different) policy measures in each of the comparable jurisdictions. In Barbados, the importing berth and storage facilities are government owned through the state-owned entity BNTC, and are essentially available for use by importers (albeit through the sale and repurchase mechanism). In St Lucia, a third party owns the berth and storage facility and makes it available to importers on commercial terms and upon demand; the third party therefore does not have the incentive to exclude specific fuel importers from use of this facility. In the TCI, the berth is owned by the Government, and is in principle available for use by different fuels importers. Only in the Bahamas is the main import berth owned and operated by one of the sectoral providers, in a model similar to that in the Cayman Islands.

None of these jurisdictions has an open access legal regime for critical infrastructure in a way that exists in some other non-regional jurisdictions (see Section 6); however, each jurisdiction except for the Bahamas has adopted some other model to ensure that critical bottleneck import infrastructure is available to different competitors, rather than being controlled exclusively by one competitor.

Each of the jurisdictions considered has substantial information gathering powers, through a combination of specific legislation (such as the sweeping information gathering powers in the Bahamas Price Control Act) and information gathering powers under the jurisdictions’ tax regimes that require importers to supply specific information to respective branches of government. The broad reach of these jurisdictions’ information gathering powers is therefore aligned with the Office’s information gathering powers. However, the Office’s powers under the URC Act are more comprehensive and more precisely detailed than the powers in the comparable

³² The Fair Trading Commission of Barbados regulates, which regulates other utilities industries including electricity supply, specifies the level of competition as one factor in setting regulated prices for those utilities, but competition is not a factor in setting regulated fuels prices.

³³ URC Act, section 6(1)(b).

jurisdictions, and are more closely aligned with the Office's mandates of regulatory oversight and to protect effective competition in the regulated markets.

6 REGULATORY OPTIONS FOR THE OFFICE

This section outlines some options that the Office has to enhance its functions of promoting competition and other related functions under the URC Act.

6.1 The overall regulatory context

As is also outlined in Section 5.2 of this Report, the Office administers a comprehensive competition and regulatory regime for sectoral providers in a regulated sector. The URC Act contains the three core substantive rules against anti-competitive conduct of a modern competition law regime. The URC Act also contains the key high-level features of a comprehensive economic regulation regime applicable to sectoral providers in defined utilities sectors. As such, the high-level legal regime available to the Office features the most important elements the Office requires to protect the competition and competitive consumer outcomes in markets in the fuel sector.

The analysis and recommendations in the section are intended to reflect the overall regulatory context.

The recommendations in this section may be implemented along with defined sunset provisions to provide for regular assessment of changing circumstances and the effectiveness of the recommendations.

6.2 Measures directed at industry concentration and competition

6.2.1 The Office's current mechanisms

The Office currently already has at its disposal a law that contains the most important substantive rules against anti-competitive conduct by enterprises in the relevant sectors. The URC Act contains a rule against anti-competitive agreements between enterprises, a rule against an abuse of a dominant position by way of anti-competitive conduct by such an enterprise, and a rule against anti-competitive mergers or acquisitions in the relevant sectors. In addition, where the Office determines that an enterprise in the relevant sectors has significant market power, the Office has at its disposal the powers to make a broad range of additional regulatory determinations regarding that enterprise's conduct, including determinations having the effect of economic regulation of enterprises within those sectors.

These core substantive competition provisions of the URC Act are broadly aligned with comparable provisions in the competition laws found in other comparable developed jurisdictions.

6.2.2 The purposes of guidelines and other secondary documents

The Firm has assessed the core substantive provisions of the URC Act and has concluded that they are currently well drafted and are suitable for their purpose of protecting competition in the relevant markets. However, in line with comparable provisions in

other jurisdictions, the core statutory provisions are quite brief, and it is not always readily possible to understand the more precise contours and application of the core provisions without further guidance.

It is for this reason that in many modern competition regimes, there are commonly other documents published by the regulators outlining in more detail how the regulator (and the courts, where applicable) will interpret and apply the statutory competition provisions. These additional documents commonly are in the form of guidelines, enforcement guidance notes, and other supplementary documents outlining more detail regarding:

- The substantive law and its proper interpretation;
- How the substantive law may apply in particular cases and scenarios;
- The regulator's procedures; and
- The regulator's policies.

The purposes of those documents are to assist all stakeholders better to understand the contours of their legal obligations under the law, and better to understand how the Office will proceed in different situations. As an example, guidelines may explain in substantial detail what categories of conduct may constitute an "abuse" of dominance and what tests the regulator or the courts will apply. As another example, guidelines may explain in detail how the regulator assesses whether a merger has the potential to harm competition in contravention of the mergers provisions and therefore may be blocked by the regulator.

For these reasons, there are a number of advantages both the Office and to stakeholders in stakeholders having such enhanced understanding, including the following:

- Stakeholders are better able to understand their obligations under the law, including what types of conduct may be in contravention of the law;
- Stakeholders are better able to avoid unintentional breaches of the law, and they and their legal advisors are able to self-assess compliance more accurately and to establish compliance programs more effectively;
- By fostering stakeholder understanding and compliance, the Office can concentrate its resources and operate more effectively;
- Where contraventions of the law occur, stakeholders are better able to determine corrective measures that cease the conduct in question, such as by making leniency applications in the case of cartel conduct;
- Courts may also benefit from an enhanced understanding of the Office's position regarding the law and its application; and
- The process of developing these documents may foster an increased focus by the Office on competition enforcement activities, which in turn would be likely to encourage increased compliance by stakeholders.

It is for these reasons that the majority of modern competition jurisdictions, if sufficiently resourced, adopt comprehensive guidelines covering the most important issues in understanding the exact shape and reach of the competition laws.

6.2.3 *The Office's options for the enhanced enforcement of competition laws*

The Firm has observed that the Office has not yet published a wide range of such guidelines and other secondary policy documents, and has assessed that the Office and the broader Cayman Islands business community would likely benefit substantially from such documents.

The Office has already published good guidelines (discussed in Section 4.4.2 of this report) on the definition of relevant markets and the assessment of significant market power.³⁴ These guidelines are well drafted, reflective of good competition law practice in comparable competition law jurisdictions, and are appropriate for their intended purposes under the URC Act. We therefore recommend that they be retained, subject to periodic review, and subject to the following potential amendments and expansions:

- The guidelines on the assessment of significant market power currently state that high market shares alone should not normally form a basis for a determination of significant market power. However, we observe that it is widely accepted that high market shares in the presence of appreciable barriers to entry is generally strong evidence of significant market power. Moreover, as the guidelines themselves note by way of citation to European Union case law, market shares above 40% are strong indications of significant market power, and market shares above 50% indicate significant market power in all but exceptional circumstances. We would add that such “exceptional circumstances” would generally be markets in which there are no appreciable barriers to entry, but that markets without appreciable barriers to entry are not often observed in practice. This means that, in practice, market shares of 40% or higher are usually very strongly indicative of significant market power, and market shares of 50% or higher are essentially conclusive of significant market power in all but the rarest cases. Moreover, clarity of market share thresholds may assist with greater legal certainty and administrative tractability, in particular in a small jurisdiction such as the Cayman Islands with tight resource constraints on both the regulator and market participants.

Accordingly, the Firm therefore recommends that the guidelines on the assessment of significant market power be retained entirely, but with one specific amendment as follows:

- State that where a sectoral supplier has a market share of 40% or higher, this would be sufficient for the Office to conclude that this supplier has significant market power in all circumstances, rebuttable only by circumstances where there are no appreciable barriers to entry to that sector.

In addition to the guidelines already in existence, the Firm understands that the Office is currently developing guidelines in certain areas including abuse of dominance, has approved rules on penalties applying to anti-competitive practices³⁵, and intends to prepare other such documents in due course. The Office's approach in publishing such

³⁴ OfReg Market Definition and Significant Market Power Guidelines.

³⁵ We understand that the Office approved the proposed rules pursuant to public consultation at <https://www.ofreg.ky/of-2019-2-consultation-on-the-proposed-anti-competitive-practices-penalties-rules> and that the Government is currently considering the proposed rules.

documents is good practice, and the Office may consider the following areas for developing and adopting guidelines and policy documents going forward:

- Guidelines relating to anti-competitive agreements, including price-setting cartels between competitors, and other agreements such as vertical exclusivity agreements;
- Guidelines relating to abuses of dominance (currently being prepared);
- Guidelines relating to merger control, including explanations of the substantive competition test, and the obligations and procedures for notification to the Office of transactions coming under the mergers and acquisitions provisions of the URC Act;
- The recommended specific amendment to the existing guidance on how the Office will determine if a sectoral provider has significant market power, and the procedures for such a determination;
- A policy for an enterprise that has been involved in a price-setting cartel to make a leniency application to the Office, and how the Office will deal with leniency applications, including any incentives (such as reduced penalties) the Office will provide for enterprises to come forward to admit their conduct and apply for leniency;
- Guidance on the Office's powers and procedures of compulsory information gathering; and
- Any other guidelines from other areas of policy, including any policy enhancements arising from recommendations in this report.

In anticipation of developing such additional documents specifically for the Cayman Islands, it may be helpful for existing comparable documents from other jurisdictions to be made applicable in the Cayman Islands. The Firm notes that, in many important respects, the URC Act aligns closely with competition laws in other jurisdictions, including in particular with those in the United Kingdom. This means that certain legal concepts, which have been developed in those other jurisdictions through precedent and practice, may also be interpreted in comparable ways in the Cayman Islands through the adoption of the relevant precedent and practice.

To provide an example, under the URC Act, agreements between sectoral providers are contraventions of the law if those agreements “have as their object or effect the prevention, restriction or distortion of competition in the markets and sectors”³⁶ covered by the URC Act. The concept of what constitutes an “object or effect” of harming competition has been extensively treated in many court decisions and instances of regulatory practice in both the European Union and the United Kingdom in the period since the concept of the “object or effect” of harming competition was first used in the Treaty of Rome in 1957 and was subsequently incorporated in United Kingdom competition laws.

The Firm recommends that such concepts be explained in detail in guidance to be published by the Office. It further recommends that the Office may refer to and

³⁶ URC Act, section 66.

incorporate (formally or otherwise) the relevant concepts from guidance published in the United Kingdom and any other relevant jurisdictions in the interim period.³⁷

6.3 Measures to improve price transparency and competition

The Firm has considered measures that may be adopted in the Cayman Islands to improve price transparency and competition at the retail levels of the fuel sector.

6.3.1 *The Office's current mechanisms*

The Office has already adopted such measures and they appear to work well. The Office publishes prices charged at individual retail stations (gas stations and marinas) for premium gasoline, regular gasoline, and diesel. These prices are collected by the Office by way of telephone calls, emails, and retail surveys. They are updated weekly³⁸, and members of the public are encouraged to contact the Office if they observe that prices actually charged by individual retail stations differ from those published by the Office.

The Firm has assessed whether these measures are effective in the next section.

6.3.2 *The role of price transparency and competition*

Price transparency can be described in terms of a consumer's costs in time and money for market participants to determine market prices, for transactions that will occur or have occurred. The lower these costs are, the greater is the price transparency in the market. In general, increased price transparency has benefits for consumers unless it significantly increases the risks of anti-competitive practices among sellers.

Generally, price transparency enhances competition when it favors buyers, or at the least does not favor sellers over buyers.³⁹ At a fundamental level a certain minimum amount of price transparency is needed for competition to exist. There would be little likelihood of sellers engaging in price competition if consumers could not reasonably compare prices. As well as potentially increasing competition, enhanced price transparency can directly benefit consumers by reducing search costs.

On the other hand, under certain conditions, particularly where price transparency favors sellers in a way that allows sellers to react more quickly to price movements than buyers can, price transparency can harm competition. Essentially, this occurs where price transparency allows sellers to exchange competitively sensitive information (in this case, prices) in a way that could increase the likelihood of conscious parallelism and

³⁷ This recommendation is subject to legal analysis regarding the extent to which guidelines from other jurisdictions (such as the United Kingdom) may be adopted under Cayman Islands law by partial or full incorporation.

³⁸ Except for a brief period during 2020 when reports were collected on a fortnightly basis as a temporary measure due to resource constraints. The Firm understands that the Office will revert to weekly reporting during 2021.

³⁹ Dennis W Carlton, and Jeffrey M Perloff, *Modern Industrial Organization*, second edition (New York: Harper Collins College Publishers), 1994. Chapter 14, 'Information' reviews a 1974 Canadian experiment and US experience of government collection and dissemination of grocery price data leading to falling grocery prices.

anti-competitive coordination.⁴⁰ Conscious parallelism, while not illegal, can harm consumers, especially if it leads to tacit coordination of outcomes among sellers. This can happen as follows. A seller raising its price will watch to see if other sellers follow. When sellers are speedily and precisely aware of price changes in the market the leader is taking a much smaller risk. The leader will quickly know if others have followed its lead or not. If other sellers do follow the lead they are able to do so quickly, and so the leader is 'out of the market' for more price sensitive buyers for a shorter period of time. If other sellers do not follow the lead then the leader can reverse its price rise more quickly when price transparency is higher. This reduced risk of leading price rises is exacerbated where sellers are better and more accurately informed than buyers. Such coordinated behavior is made potentially easier by increased price transparency. This is because it makes it easier for firms to detect and eventually punish firms that deviate. In turn this makes it easier for anti-competitive coordination to survive for longer.

This means that the nature of price transparency, and the potential impact on competition, needs to be carefully considered in the context of the market in which it operates. An important element in this assessment is to consider when both buyers and sellers learn about prices and the capacity of both buyers and sellers to react to price changes. As a general principle, increased price transparency is unlikely to significantly increase the risk of anti-competitive coordination unless the affected markets are already particularly susceptible to such coordination. For example, markets with low levels of concentration, large numbers of sellers and low barriers to entry are likely to be at less risk. Moreover, enhanced price transparency is more likely to benefit consumers when it is aimed at improving buyer information and options relative to seller information and options.

In the case of the Cayman Islands, the Office's initiatives relating to the publication of fuel prices appear to be working well and are likely to enhance the state of competition. The purpose and apparent effect of the initiatives are to enhance the degree of buyer information and the speed with which buyers are able to access the information about prices at different retail stations, relative to the speed with which competing retail stations are able to find out prices at competing retail stations. Ordinary retail buyers are more diffuse than retail sellers, and the relative search costs for ordinary retail buyers (relative to the values of the purchases they make) to find out about prices at different retail stations are higher compared to the relative search costs of retail sellers to find out about their competitors' prices (relative to the values of the sales they make). The Office's initiatives are designed to reduce buyers' search costs by making the search for them and presenting the results in a single, easily-accessible format on the Office's website. The Office's initiatives therefore enhance the information available to buyers relative to the information available to sellers.

The Firm therefore assesses that the Office's initiatives are likely to enhance the state of competition in the market.

⁴⁰ For example cases, see Organisation for Economic Co-operation and Development, Price transparency. Best Practice Roundtables in Competition Policy No. 35, 11 September 2001, and Svend Albæk; Peter Møllgaard; Per B Overgaard, 'Government-assisted oligopoly coordination? A concrete case', *Journal of Industrial Economics*, Vol. 45, No. 4, 1997, pp. 429–43.

6.3.3 Price transparency to enhance competition – additional options

A mechanism that enhances that transparency and relative speed with which buyers receive information (relative to sellers) would generally be likely to further enhance competition.

One option that the Office may consider to ensure that its initiatives assist buyers, and thereby enhance competition, is to require a period of “price lock in” by retailers after the retailers have posted their prices and informed the Office. A broadly similar scheme, called “FuelWatch”, has operated in the Australian state of Western Australia since 2001. Under the FuelWatch scheme, operators are required to undertake the following two core steps:

1. Inform the local regulator on a daily basis of its gasoline and diesel prices for the following day, which the regulator then posts on its website⁴¹; and
2. Not alter prices from those notified to the regulator for a 24 hour period from 6am of the applicable day (that is, the day after the price was provided to the regulator).

The stated purpose of this mechanism is to give fuel buyers certainty and price transparency. In addition, the mechanism is likely to have positive competition effects. As outlined in the previous section, price transparency is likely to enhance competition where it improves the relative ability of buyers to react rapidly to price changes.⁴² The FuelWatch scheme, by requiring a seller lock-in of prices for a certain period, clearly improves the relative ability of buyers to reach rapidly to price changes by slowing the ability of retailers to react to their competitors’ price changes. Moreover, there is empirical evidence from the Australian Competition and Consumer Commission that, on average, the FuelWatch scheme led to a decrease in pricing.⁴³

The Office may wish to consider a comparable scheme, subject to consideration of the Office’s powers to do so under the URC Act. In view of the fact that the Office collects and publishes retail stations’ prices on a weekly basis⁴⁴, the Office has a number of options.

1. One option may be to require a price lock-in for the full 7 or 14 days (or a period otherwise determined by the Office) after prices are posted on its website. However, this would represent a long period for prices to be unchanged and unable to respond to changing market dynamics. Moreover, such a long and pre-determined period of prices being fixed may be inconsistent with the frequency and schedule of product arrivals in the Cayman Islands.
2. A second option may be for the Office to increase the frequency with which it collects and publishes prices, perhaps to a daily frequency in line with the FuelWatch scheme. However, this would likely have significant resourcing implications for the Office.

⁴¹ <https://www.fuelwatch.wa.gov.au/fuelwatch/pages/home.jsp> , Accessed on 12 November 2020.

⁴² As discussed earlier, by contrast, price transparency may harm competition where, under certain conditions of market concentration, it works in favor of sellers reacting more rapidly than buyers.

⁴³ <https://www.accc.gov.au/media-release/accc-issues-details-of-further-fuelwatch-econometric-analysis> , Accessed on 12 November 2020.

⁴⁴ Except for a recent period of fortnightly collection due to temporary resource constraints.

3. A third option may be for the Office to continue to collect and publish price information on a weekly basis, and then to require lock-in of published prices for the first 24 hours after publication. This option may have the advantage of shifting the price-setting dynamic in the market in favor of buyers, while avoiding either an excessively long lock-in period of prices or the significant resourcing implications for the Office of daily price dissemination.
4. A fourth option may be for the Office to collect and publish price information on a weekly basis, and then to published prices to be at the published level *or lower* for the first 24 hours after publication. This would be a variation of the third option, with the variation that prices could not exceed the published level but could be lower. This option may enhance the prospect of a price-setting dynamic that favors buyers, by moderately increasing the incentives for sellers to engage in pricing competition, while similarly avoiding an excessively long lock-in period of prices or the significant resourcing implications of daily price dissemination.

In view of the advantages and disadvantages of the different options, the fourth option (or similar approach tailored by the Office to its resources and objectives) may be the option that best meets the Office’s objectives of enhancing competitive outcomes in the fuel sector.

6.4 Other measures to improve competition – mandated access to key infrastructure

The Firm has considered the extent to which measures directed at providing mandated open access to critical pieces of infrastructure may improve competition in markets downstream from that infrastructure.

6.4.1 The Office’s current mechanisms

The Office currently does not have in place any mechanisms for mandated access to key infrastructure in the fuel sector. However, in the Firm’s views, and subject to legal advice on this issue, the Office may be empowered to mandate access to key infrastructure under the URC Act, including but not limited to section 45 of the URC Act.

6.4.2 Mandated access requirements to key infrastructure

In some markets, the ability for different competitors to be able to compete in that market depends on those different competitors being able to use a critical piece of infrastructure or other input controlled by another party in order to produce the goods or services that they supply to customers. Such critical infrastructure may therefore act as a “bottleneck” on the ability of competition to work effectively in those related markets. Common examples include the following:

- Where different natural gas suppliers and marketers are all reliant on being able to use a single gas pipeline to bring their gas to their customers;
- Where different electricity generators are all reliant on being able to use a single high-voltage electricity transmission grid to bring the electricity they generate to market; and

- Where farmers in a region producing for export are all reliant on being able to use a particular port to bring their products to their export markets.

These examples are all instances of a competitive market being reliant on a “bottleneck” facility for that market to remain competitive. By denying access to the services of the facility, the owner of the “bottleneck” facility could reduce or eliminate competition in the related, potentially competitive market. For this reason, such facilities are also known as “essential facilities”. They are typically (but not only) considered to be “natural monopoly” facilities.

The competition and related laws of a number of jurisdictions feature mandated access provisions to such facilities under certain circumstances.

In the **United States**, there are legislative mandated access provisions in sector-specific laws and regulations including in the telecommunications industry (in relation to the copper “last mile” for unbundled services) and in the electricity sectors of some States and municipalities. Moreover, there is likely to be a judicially determined “essential facilities doctrine” applying to any industry under which the owner of a piece of infrastructure may be required to permit others to use the infrastructure on a non-discriminatory basis under the conditions that (1) the facility is owned by a monopolist, (2) a competitor would be unable practically or reasonably to duplicate the facility, (3) without mandated access, the owner would deny the use of the facility to a competitor, and (4) it is feasible to provide use of the facility.⁴⁵

In **Europe**, there are similarly a range of sector-specific mandated access mechanisms in a number of European Union member states, and in the United Kingdom. There is also a judicially determined broad equivalent of the essential facilities doctrine, under which the owner of a facility may be required to permit others to use the facility if (1) the facility is “indispensable” in being able to function in a related (e.g. upstream or downstream) market, and (2) where the refusal of access to that facility would lead to the monopolization of the related market.⁴⁶

Australia has codified the concept of an essential facilities by enshrining it in legislation. Part IIIA of the Competition and Consumer Act 2010 establishes a legal regime to facilitate third party access to certain services provided by means of significant infrastructure facilities, and is known as the National Access Regime. Stated legislative objectives of this Part IIIA access scheme include (1) to promote the economically efficient operation of, use of, and investment in critical infrastructure by which services are provided, and (2) by open access to such infrastructure, to promote effective competition in upstream and downstream markets. This access scheme is not limited to any particular industries. Facilities to which access have been granted under it include railway tracks, airports, port terminals, and sewage pipes. Access to other facilities such as gas pipelines have also been granted under sector-specific equivalent rules equivalent in operation to the general application rules in Part IIIA. Access to a facility under Part IIIA may be granted by various specific mechanisms, including agreements

⁴⁵ See *MCI Communications Corp. v. AT&T*, (708 F.2d 1081, 1132 (7th Circuit), *cert. denied*, 464 U.S. 891 (1983), and *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985). But also see *Verizon Communs., Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 124 S. Ct. 872 (2004).

⁴⁶ See *Oscar Bronner GmbH & Co. KG v. Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG*, Case C-7/97, 1998 E.C.R. I-7791, [1999] 4 C.M.L.R. 112.

(“access undertakings”) between the facility owner and the regulator or a private business seeking access, arbitration, and “declaration” of the facility by the Australian competition regulator. Specifically, the competition regulator may “declare” the services provided by a facility are to be open for access (subject to an appropriate and non-discriminatory pricing scheme) under the following conditions:⁴⁷

(a) that access (or increased access) to the service, on reasonable terms and conditions, as a result of a declaration of the service would promote a material increase in competition in at least one market (whether or not in Australia), other than the market for the service;

(b) that the facility that is used (or will be used) to provide the service could meet the total foreseeable demand in the market:

(i) over the period for which the service would be declared; and

(ii) at the least cost compared to any 2 or more facilities (which could include the first-mentioned facility);

(c) that the facility is of national significance, having regard to:

(i) the size of the facility; or

*(ii) the importance of the facility to constitutional trade or commerce;
or*

(iii) the importance of the facility to the national economy; and

(d) that access (or increased access) to the service, on reasonable terms and conditions, as a result of a declaration of the service would promote the public interest.

In summary, the key features of these access criteria are that the regulator may mandate access to the facility under the cumulative conditions that (a) access to the facility would promote competition in a different but related market, (b) the facility has natural monopoly characteristics and it would be uneconomic or otherwise unfeasible to duplicate the facility, (c) the facility is of national significance, and (d) open access to the facility would be in the public interest.

6.4.3 Access regime options for the Office

Certain markets in the fuel sector are critically reliant on key infrastructure facilities. The relevant facilities (together, the “**Import Facilities**”) include:

- The port in Grand Cayman, used to import containers, including fuels in ISO Containers (the “**Grand Cayman Port**”);
- The offshore pipeline, ship berth facility, bulk storage facilities, and other associated facilities at Jackson Point, used to import bulk fuels from tankers (the “**Jackson Point Facilities**”);
- The offshore pipeline, ship berth facility, bulk storage facilities, and other associated facilities at Creek, Cayman Brac, used to import bulk fuels from tankers (the “**Creek Facilities**”); and

⁴⁷ Competition and Consumer Act 2010, section 44CA(1).

- The port facilities on Cayman Brac (the “**Cayman Brac Port**”).

but may also include other facilities.

These Import Facilities are primarily required and used for the importation of the respective fuels into the Cayman Islands. As domestic refinement of fuels is currently essentially non-existent (barring very small niche quantities of certain biofuels without appreciable market impact), this means that, without the ability of domestic suppliers to import fuels through the Import Facilities, those domestic sellers of fuels would be unable to operate without the ability to use the Import Facilities. This in turn means that the ability of the Import Facilities’ owners to deny access to those facilities gives them the power to prevent effective competition in essentially all fuel markets in the fuel sector.

The Import Facilities therefore have a highly significant potential impact on competition, and the ability for competition to exist, in all fuel sector markets downstream from those facilities. In particular, suppliers who are able to import gasoline and diesel fuels in bulk quantities (that is, through an offshore pipeline from tankers) currently have a substantial cost advantage, and therefore competitive advantage over any other market participant.

Some suppliers may import fuels in ISO Containers through the Grand Cayman Port, and market information indicates that access to the this port as determined by the Port Authority of the Cayman Islands is generally open to all importers on an equivalent basis without anti-competitive restrictions. However, reliance on ISO Containers creates an upper bound on the volumes of fuels that those suppliers can realistically import and therefore on the market volumes they can supply, and at the same time creates a cost disadvantage for those suppliers reliant on ISO Containers.

In contrast, access to the Jackson Point Facilities for the importation of larger, bulk quantities of fuels is currently realistically limited to the two largest fuels suppliers, Rubis and SOL. According to market information, both of these suppliers use the facilities (including the pipeline and the berth facilities) under an agreement between them. The limitation of access to the Jackson Point Facilities likely has significant negative competition implications. The inability of other actual or potential competitors to access the Jackson Point Facilities constitutes a significant barrier to entry for any other competitor, as no other competitor (actual or potential) is able to import fuels in bulk quantities or at the low unit costs (relative to the higher unit costs of importation via ISO Containers) of importing fuels in bulk via the off-shore pipeline. This in turn means that the downstream markets for the respective fuels are inherently limited to two large suppliers, without realistic prospect of competitive entry on a comparable scale. This in turn likely leads to a softening of competition in those markets as a result of the “bottleneck” to competition, with higher prices likely resulting for consumers.

Similarly, access to the Creek Facilities is currently realistically limited to Rubis. The limitation of access to the Creek Facilities likely has significant competition implications in the markets in the Sister Islands, as the inability of other actual or potential competitors to access the Creek Facilities constitutes a significant barrier to entry for any other competitor, which in turn likely leads to a softening of competition in those markets as a result of the “bottleneck” to competition, with higher prices likely resulting for consumers.

The Firm's assessment is that unlocking the use of such infrastructure to potential entrants and existing competitors may significantly enhance the degree of competition in downstream markets in the fuel sector. The Firm therefore recommends that the Office may explore the introduction of an access regime to mandate access to critical infrastructure that creates a "bottleneck" in competition in related markets, similarly to the way such regimes operate in other jurisdictions (see Section 6.4.2).

The Office may already have the legal power under section 45 of the URC Act to introduce such a scheme. If this is not the case, the Office may consider a statutory model of a similar nature to the Australian statutory essential facilities regime outlined in Section 6.4.2 of this report.

A general open access regime would likely include the following as cumulative criteria for the provision of open access:

- A. Access to the facility would promote competition in a different but related (e.g. upstream or downstream) market ("**Criterion A**");
- B. The facility could not be duplicated, or would not realistically be duplicated ("**Criterion B**");
- C. It would be technically feasible for the facility to be used by another ("**Criterion C**");
- D. Access to the facility can be granted on reasonable and non-discriminatory terms ("**Criterion D**");
- E. The facility is of national significance ("**Criterion E**"); and
- F. Open access to the facility would be in the public interest ("**Criterion F**").

These proposed criteria are cumulative, meaning that they must all apply for a facility to be opened for mandated access to third parties. If one or more criteria are not satisfied, the facility could not be opened for mandated access to third parties under such a proposed regime. These criteria are strict and would only be satisfied under restricted circumstances, noting in particular that they require that access to the facility would promote competition in a related (e.g. downstream) market, and that the facility could not be duplicated (e.g. if it is a natural monopoly or is otherwise not replicable).

A decision would need to be made whether the regime is to be administered by the courts, by the Office, or by another administrative body. The discussion immediately following is based on an assumption that the Office would administer the regime.

Decisions to grant mandated access under such a regime would take place upon application by a market participant seeking access to use the facility (an "access seeker"). It is important to note that the regime would only come into play if the access seeker requests use of the facilities (e.g. to import fuels) but is denied by the owner of the relevant facilities – if the facilities owner agrees to the request to provide the services on negotiated commercial terms, then the regime would not come into operation. For similar reasons, the regime would not require that the Office declare the facility open for mandated access of its own initiative; the Office would receive applications from access seekers, and would assess the application as against the pre-determined access criteria (such as the proposed Criteria A to F above).

Procedurally, once established under the law, the open access regime may broadly consist of the following steps in relation to specific cases:

1. A company or person wanting to use a particular facility makes an application to the administrator of the regime that the facility be declared for mandated open access.
2. The administrator makes a reasoned decision based on applying the regime's criteria to the facts of the application.
3. If the facility is declared for mandated open access, the facility owner and the access seekers negotiate for the terms and conditions of access to the facility.
4. In case the facility owner and the access seekers cannot agree on the terms and conditions of access, reasonable terms and conditions are determined by an external arbitrator or the administrator of the regime (e.g. the Office).

For illustrative purposes of how such a regime may operate in the Cayman Islands, the Import Facilities are considered here in a preliminary manner. However, it is stressed that a reasoned decision in relation to any facility would have to be made on the basis of the full evidence contained in an access seeker's application, and against the criteria specified in the final event in an operational regime, and that these preliminary indications are therefore for illustrative purposes only.

- The Jackson Point Facilities, or at least certain components of the Jackson Point Facilities, appear to be a strong candidate to meet all of these criteria. Access to the Jackson Point Facilities would likely have the potential to materially enhance competition in fuels retail market by making it viable for new competitor to enter the market (or for an existing competitor to expand into bulk import volumes) – thereby satisfying Criterion A. The Jackson Point Facilities could not likely be duplicated as there is no other geographic location on Grand Cayman that could accommodate a second ship berth, pipeline, and storage tank complex, as there is no other location in which a large tanker can berth offshore and there is also sufficient onshore space on which to construct adequate bulk storage – thereby satisfying Criterion B. The Jackson Point Facilities are already shared by two operators, there are sufficient bulk storage tanks that may be cleaned between users that it may be feasible for the facility to be shared with other operators, and Home Gas already uses the ship berth to onshore its propane gas bulk deliveries – thereby likely satisfying Criterion C. Once access is agreed in principle, the terms of access can generally be agreed, or if necessary, imposed by the Office if an agreement cannot be reached – thereby satisfying Criterion D. The Jackson Point Facilities appear to be of national significance as they are the only means for bulk fuels to be imported into the Cayman Islands – thereby satisfying Criterion E. For the same reasons, and because it would enhance competition and thereby likely reduce consumer prices, open access to the Jackson Point Facilities appears to be in the national interest – thereby satisfying Criterion F. As a result of potentially meeting all these criteria, the Jackson Point Facilities may be a suitable candidate for the granting of open access under an access regime. This would be determined under a case-specific determination (by the Office) if such a regime were established in the Cayman Islands.
- Similarly, the Creek Facilities (or at least certain components of them) appear to be a strong candidate to meet all of these criteria. Access to the Creek Facilities would likely have the potential to materially enhance competition in fuels retail

market by making it viable for new competitor to enter the market in the Sister Islands – thereby satisfying Criterion A. The Creek Facilities could not likely be duplicated as there is no other geographic location in the Sister Islands that could accommodate the required infrastructure – thereby satisfying Criterion B. As the Jackson Point Facilities are already shared by different operators (see previous paragraph), this suggest that it may be feasible for the Creek Facilities to be similary shared with other operators – thereby likely satisfying Criterion C. Once access is agreed in principle, the terms of access can generally be agreed, or if necessary, imposed by the Office if an agreement cannot be reached – thereby satisfying Criterion D. The Creek Facilities appear to be of national significance as they are the only means for certain fuels to be imported into the Sister Islands – thereby satisfying Criterion E. For the same reasons, and because it would enhance competition and thereby likely reduce consumer prices, open access to the Creek Facilities appears to be in the national interest – thereby satisfying Criterion F. As a result of potentially meeting all these criteria, the Creek Facilities may be a suitable candidate for the granting of open access under an access regime. This would be determined under a case-specific determination (by the Office) if such a regime were established in the Cayman Islands.

- The Grand Cayman Port and the Cayman Brac Port are also critically important fuel import infrastructure. The Grand Cayman Port and the Cayman Brac Port would likely meet the majority of the criteria A to F (suggested above). However, the Firm’s information is that both the Grand Cayman Port and the Cayman Brac Port currently (and historically) already permit use of their port facilities to importers without undue restrictions and on reasonable, non-discriminatory terms. This means that granting mandated access to the Grand Cayman Port and the Cayman Brac Port may not give rise to material changes in the competitive landscape, so that Criterion A (requiring that access would promote competition) may not be satisfied. However, should the Grand Cayman Port in the future deny use of its facilities to importers in a way that has anti-competitive consequences, then this assessment would likely change, and a mandated access regime may become relevant to dealing with such (currently hypothetical) difficulties.

The Firm recommends that the Office explore options for the introduction of an open access regime that may cover critical infrastructure such as the Import Facilities and other critical infrastructure that has a material “bottleneck” effect on competition in the relevant markets.

It is important to note that the creation of a statutory or regulatory access regime would not inherently mean that any one particular facility would be necessarily declared to be open for access under that regime. A regime would establish the criteria under which a particular facility might be declared to be open for access, and the procedure that which an access seeker would have to follow to seek a declaration. The decision to declare a specific facility as being open for access would follow a fact-specific determination of the facts of each specific application.

6.5 Measures directed at price setting

The Firm has considered measures that may be adopted in the Cayman Islands in relation to directly setting or otherwise controlling prices in the fuel sector, either at the wholesale or at the retail levels of the fuel sector.

6.5.1 *The Office's current mechanisms*

The Office currently does not have in place any direct price control mechanisms.

6.5.2 *Price controls and market outcomes*

A number of jurisdictions regulate the prices of fuels directly. Such price regulation may take place by: (1) directly regulating the retail selling price of fuels, such as setting a maximum price; (2) setting a maximum margin that retailers are permitted to add to wholesale fuel prices; (3) setting a retail price according to a formula derived from the import parity price for the respective fuel; and (4) other comparable methods.

The jurisdictions in the Caribbean region that directly regulate fuel prices include: Barbados and Belize, which determine retail prices based on the import parity price of fuels. The Barbados regulator periodically publishes permitted retail prices for diesel, gasoline, and kerosene⁴⁸. Panama directly regulates fuel prices by adopting a wholesale price formula based on the import parity price of fuels of international refined prices. Jamaica posts wholesale prices for fuel but does not legally control wholesale or retail prices.

Larger markets have at various times also introduced price controls, including the USA, which set maximum prices for gasoline from 1973 to 1979.

A market mechanism without any form of price control delivers outcomes based on the interaction of supply and demand (that is, the interaction of buyers and sellers in the market). As a general principle, it is widely accepted that when markets function well, this market mechanism delivers the market outcomes that most closely reflects both the desires and preferences of consumers in that market (the demand side) and the costs to suppliers of society's resources (including raw materials, human capital and labour, and physical and financial capital) in supplying the different products at issue. The outcomes from market determination of market prices in most cases deliver the greatest economic welfare to society, because they ensure that society's scarce resources are directed to the best uses of those scarce resources, taking into account consumers' preferences.

By contrast, interference with the market mechanism for determining market prices can often have negative impact on the economic outcomes for society, by resulting in a distortion of economic decision making and direction of society's resources to uses that don't align as well with consumers' preferences for them. One consequence of interference with market mechanisms through price ceilings may be shortages: if consumers can obtain an item, they can obtain it at the regulated maximum price, but

⁴⁸ Ministry of Energy, Small Business and Entrepreneurship of Barbados. See for instance <https://commerce.gov.bb/computing-of-prices-of-items-subject-to-price-control-regulations/>

they may find it more difficult to obtain the item, resulting in shortages. One of the principle reasons why price controls are generally less favored in the current environment (in relation to fuels prices as well as prices in the economy more widely) because of the experience of such shortages (as seen in the “gas lines” in the United States in the 1970s, for example).

However, there are two main circumstances in which the market mechanism may itself result in distorted outcomes, meaning that interference with the market outcome may in some circumstances result in improved social outcomes. The first case is where there are so-called “externalities” in consumption or production, meaning that benefits or costs accrue to parties not directly involved in the relevant market transaction: such externalities include pollution in production and the consumption of education. The second case, which is relevant for this market study, is where there is appreciable market power in a market: market power can distort the market outcomes away from competitive market outcomes and thereby away from the socially optimal outcomes. These situations are well-known as situations where, in theory, and sometimes in practice, appropriate corrective measures through government action may improve overall social outcomes.

However, it is equally well-known that corrective measures may bring additional unintended negative consequences, and that a corrective measure is generally only justifiable from a social policy perspective if its corrective value outweighs the costs of any additional unintended consequences that the corrective measure brings about. For this reason, it is not always the case that a beneficial corrective measure exists, even where there is a market distortion due to market power or other issue, and as a result governments are generally well advised to consider the costs of corrective measures in addition to the benefits of any corrective measures before introducing any such corrective measure.

In the case of fuels markets, there may be distortions to the market by way of the presence of market power at one or more stages of the supply chain. Such market power may result in prices being higher relative to prices in a more competitive market outcome. A potential advantage of price controls in such a situation may be to bring outcomes closer to prices that would prevail in a more competitive market: the Firm understands that this is a core rationale of price controls operating in other jurisdictions in the Caribbean region.

However, and in contrast, price controls bring with them other, significant disadvantages:

- First, the market mechanism, even if it works imperfectly, is essentially completely disabled under price controls. This means that the advantages of a price mechanism, even if they work imperfectly, are lost altogether. These advantages include the well-understood principle that market price setting acts as a “discovery” process that enables suppliers to respond to changing consumer demand, preferences, and behavior, in addition to being able to respond effectively to changing supply and broader market conditions. These advantages can remain significant even in situations where the market mechanism only operates imperfectly.

- Second, price controls are complex to administer. Price controls and regulation in many jurisdictions are limited to large, “natural monopoly” type industries that are characterized by large physical networks, such as sections of the electricity and other comparable infrastructure industries. The price regulation mechanisms in those price control systems are generally highly complex, requiring large amounts of complex cost and price data, and needing to be administered by significant human resources at the level of the regulatory authority.
- Price controls in the fuel sector are potentially particularly complex and may require ongoing monitoring and price setting on a near-continuous basis. This is because the most important input prices, namely the international market prices of crude oil and the market import prices of refined fuels, change regularly and on a similarly near-continuous basis. In this way, price regulation in the fuel sector is potentially quite different to price regulation in regulated utilities such as electricity transmission, water services, and similar. In those regulated utilities, price regulation and setting typically takes place once every few years (commonly, once every five years) by way of a price review process once every regulatory period. In those utilities, such a process is effective because long-term capital costs form a very high proportion of the cost structure, meaning that the bulk of the costs can typically be determined with a high degree of certainty for long periods in advance, and cost-based prices can therefore be set with similar certainty over long periods in advance. By contrast, long-term price setting would not be as effective in a sector such as the fuel sector where the bulk of the costs can change considerably in short periods of time. This would therefore require that price regulation would need to be carried out, and prices adjusted, much more frequently over time, with commensurate complexity and human resources implications.

For these reasons, any decision to introduce price controls needs to be grounded on rigorous foundations and to take into account the disadvantages as well as the advantages of such a policy.

6.5.3 Price control options for the Office

The Office may consider price control mechanisms including the following:

- Directly regulating the retail price of fuels, such as by setting a maximum price;
- Setting a maximum margin that retailers are permitted to add to wholesale fuel prices;
- Setting a retail price according to a formula derived from the import parity price for the respective fuel; or
- Other comparable methods.

However, given the disadvantages of price control mechanisms, the Firm recommends that other regulatory options are generally preferable to price control mechanisms where other effective options are available. The principal reasons why price control mechanisms may not be the preferred option for the Office include:

- Where competition works effectively, or can be made to work effectively through other mechanisms, a competition-based policy solution is generally preferred rather than price controls. Price controls are generally the preferable option only in circumstances where competition cannot be made to work effectively. In the Cayman Islands, competition in the fuel sector can be made to work more effectively through the introduction of other measures, as recommended in other parts of this Market Assessment Report, including Sections 6.2, 6.3, 6.4, and 6.6.
- As outlined above, price controls in the fuel sector would require ongoing monitoring and price setting on a near-continuous basis, with similar complexity to other regulated sectors, but with far more frequent price evaluation and price adjustment required. This is because the most important input prices, namely the international market prices of crude oil and the market import prices of refined fuels, change frequently and near-continuously. Price regulation in the fuel sector would therefore require much more intensive and ongoing work than in other sectors that are commonly subject to a form of price regulation.
- The Office is currently structured to discharge its mandate, however will require adequate resources to effectively deliver on its mandate. The Office should take into consideration that in other similar jurisdictions where price controls are imposed, this requires substantial budgets, human resources, and technological resources for proper implementation. In a small economy and labour market such as the Cayman Islands, this would currently not likely be advisable, and the Firm would generally not recommend such an approach.
- In parallel with the burden on the Office, fuel sector price controls would likely impose a high and ongoing compliance burden on companies subject to the price controls. This compliance burden may be particularly appreciable in view of the relatively small size of many of the suppliers in the fuel sector. The Firm is aware that, while there are several large suppliers in the relevant markets, there are also a large number of small suppliers who may not currently have the resources to meet such an administrative burden. There therefore appears to be an appreciable risk that, even if price controls were effective from other perspectives, the benefits of them may be outweighed by the increased compliance burden on suppliers.
- Moreover, meeting the increased compliance burden would likely impose additional costs on suppliers. As in most markets, such increased costs would ultimately likely flow through to consumers in the form of higher prices.

Should the Office wish to explore price control options, the Office may note that in the gasoline and diesel markets, the potential competition issues are more likely to be occurring at the wholesale/bulk level (where markets are highly concentrated, and where the barriers to entry are higher) than at the retail level (where markets are much less concentrated, and where barriers to entry are also somewhat lower). This suggests that, should price controls be introduced, price controls at the wholesale/bulk levels would likely be more effective in controlling prices for final consumers than price controls at the retail level.

6.6 Other measures to improve competition – reduction of barriers to entry

6.6.1 *The Office's current mechanisms*

The Office does not have an explicit mandate under the URC Act to deal with a reduction of barriers to entry, and nor does it have in place any specific mechanisms for bringing about reductions in barriers to entry. However, the URC Act recognizes the importance of barriers to entry as part of the Office's function in carrying out aspects of its regulatory remit.⁴⁹ More broadly, the Office's principal functions expressly address that the Office is charged with "promoting appropriate effective and fair competition" in the relevant sectors and markets⁵⁰, with protecting "the short and long term interests of consumers" in the covered sectors and markets⁵¹, and with "promot[ing] innovation and facilitate[ing] economic and national development"⁵². All of those objectives are promoted by markets where competition works effectively and where barriers to entry are low, for reasons outlined in the following Section 6.6.2.

Moreover, in the Firm's assessment, the URC Act gives the Office powers in a number of different ways that could be leveraged to achieve effective reductions in barriers to entry.

6.6.2 *The relevance of barriers to entry to the degree of competition*

Barriers to market entry by new competitors (or barriers to market expansion by existing competitors) are generally accepted as being important factors in determining the extent and effectiveness of market competition and competitive outcomes. As is outlined in more detail in Section 4.3.3 of this report, barriers to entry may include legal and regulatory barriers, structural barriers including costs of entry, and strategic behavior by market incumbents that deters potential entry. As is also outlined in Section 4.3.3, low barriers to entry can enhance competitive outcomes in markets even if there is no actual competitive entry; the threat of competitive entry can be sufficient to provide the competitive discipline for market incumbents to adopt competitive outcomes, if higher pricing (or similar) by them would trigger rapid and substantial competitive entry.

6.6.3 *Regulatory options for the Office to reduce barriers to entry and expansion*

The Office has decision-making and other powers over a range of decisions that may influence the height of barriers to entry, and thereby the degree of competition and consumer outcomes, in the relevant sectors.

⁴⁹ For instance, barriers to entry are expressly recognized as relevant to competition assessment in mergers assessment under section 50 of the URC Act. The existence and magnitude of barriers to entry will generally also be important in the Office's determination of whether a sectoral provider has significant market power under section 44 of the URC Act.

⁵⁰ URC Act, section 6(1)(b).

⁵¹ URC Act, section 6(1)(c)

⁵² URC Act, section 6(1)(d)

An important example is the Office's function to "issue, suspend, vary or revoke licences, permits and exemptions" in the relevant sectors.⁵³ Licensing conditions and processes can serve as a barrier to entry to industries, with the result that the processes and conditions under which licences, permits and exemptions are awarded (or refused) can have a material impact on the degree of competition and consumer outcomes in those sectors.

The Firm recognizes that the Office's conditions and procedures for the award of licences, permits and exemptions take into account a range of wider policy considerations, including as an example public safety considerations. We do not suggest in any way that the Office alter its consideration of that wider set of policy and public interest considerations in its decision-making processes regarding licences and other regulatory instruments. The Firm recognizes that the Office is strongly aware of the potential impact of its regulatory decision-making on outcomes in the relevant markets. However, we also recognize that the ability of the Office to take into account its impact on markets as a permissible factor in regulatory decision-making may strengthen the Office's ability to take these factors into account, while at the same time assisting to protect the Office against judicial review when it does take competition factors into account in making its decisions. As a result, it is recommended that the Office consider introducing competition considerations into its decision-making processes regarding licences etc. This may take the form of the addition of the following or similar considerations to that decision-making process: "Will the decision to grant or refuse this licence have an impact on competitive outcomes by raising or lowering barriers to entry in the affected market", or a comparable mechanism with a comparable effect.⁵⁴

6.7 Gathering of information from stakeholders in the fuel sector

The Firm has considered measures and approaches to regulatory accounting and reports, reporting templates, and more generally information gathering that may enhance the productivity with which the Office manages its information requirements from sectoral providers, in particular in the case of fuel price monitoring.

6.7.1 *The Office's current mechanisms*

Where a sectoral provider has been determined to have significant market power, the Office may impose certain conditions on that sectoral provider, including among other conditions: imposing price controls and requiring a cost-recovery orientation of prices; requiring the use of cost accounting systems of a type that facilitates price controls and cost-recovery orientation of prices; and requiring the submission of regulatory accounts

⁵³ URC Act, section 6(2)(n)

⁵⁴ The United Kingdom government adopted similar procedures in relation to town planning decisions. The UK Competition Commission's inquiry into the groceries market in April 2008 recommended (among other recommendations) that a "competition test" be introduced into planning policy, with a particular view to town planning decisions regarding proposed supermarket sites being used as a vehicle to encouraging competition from smaller and new entrant supermarkets. A modified version of this proposal was subsequently adopted in the UK Government's Planning Policy Statement 6 in relation to town planning policy.

or financial statements separating out the key business activities of the sectoral provider.⁵⁵

In addition, the Office collects and publishes prices charged at individual retail stations for gasoline and diesel fuels on a weekly basis, under a mechanism outlined and discussed in Section 6.3 of this report.

More broadly, the Office has a wide set of information gathering powers as described in Section 5.3 of this report. These information gathering powers support the Office's broader mandate, including in relation to enhancing competitive markets, and it is therefore important that these powers operate effectively for the Office.

6.7.2 The purposes of regulatory accounts and reports

The purpose of regulatory accounts and reports is for regulated entities to provide the information to the regulator that it requires to fulfil its mandate. This includes providing relevant financial information on basis of the record-keeping and accounting rules, and in the format, which the regulator requires.

For instance, a regulator may impose price controls on regulated entities, under which it requires the regulated entities to set prices according to a regulated cost-recovery orientation.⁵⁶ Such a cost-based approach to price regulation inherently and necessarily requires the recording of those costs relevant specifically to the regulated prices, in a manner consistent between different operators, across time, and according to consistent regulatory accounting policies. Specifically, the regulator would need to know reliably what the product-specific costs for the price-regulated products were. However, this raises accounting cost allocation issues. A price-regulated entity commonly engages in both regulated activities and unregulated activities; in the fuel sector, this would be the case where a retail station must charge regulated prices in respect of the gasoline and diesel (or other) that it sells, but is free to charge any prices on an unregulated basis for all other products and services (such as convenience store products from the retail station's c-store) that it sells. In selling both regulated and unregulated products, the retail station would incur costs attributable to each category of product, and common costs across all categories of their products. The common costs would have to be attributed (allocated) among the different activities. In an environment where some (but not all) products are price-regulated based on their costs, this may create strong incentives for the sectoral providers to skew their accounting costs allocations so as to allocate all the common costs to the regulated activities: by increasing the recorded costs of the activities, under most costs-based regulatory formulas the regulated entity can increase the regulated price it is permitted to charge. Regulatory record keeping rules therefore generally need to be designed with a high degree of specificity regarding the required underlying accounting policies such as the cost allocation policy.

⁵⁵ URC Act, section 45.

⁵⁶ The Office is empowered under section 45 of the URC Act to impose price controls and cost-recovery orientation of prices on sectoral providers with significant market power.

6.7.3 The Office's options for requirements regarding information gathering

The Office's current compulsory information gathering powers under the URC Act are wide and permit the Office to seek most or all types of information that it requires to discharge its function. Moreover, the Office may enforce these powers by seeking penalties in cases of non-compliance. These powers are therefore well suited to the Office's mandate.

There are understandable practical difficulties with a compulsory information gathering process. The Firm made several requests for information to suppliers in the fuel sector and found that responses were sometimes sparse in detail, and that suppliers sometimes sought long extensions for reasons of their capacity constraints. From the supplier perspective, this may be understandable, particularly in the case of small suppliers, as is also discussed in relation to compliance burden in Section 6.5.3 of this report. However, it also illustrates certain dilemmas in the regulation of the fuel sector in the Cayman Islands. To a large extent, any regulatory mechanism can work most effectively where it operates with some degree of cooperation between the stakeholders in regulated sectors and the regulator, with each of these stakeholders understanding the other's function in the market. This may speak in favor of a streamlined and regularized information gathering process and against the use of penalty mechanisms for enforcement in all except egregious cases of non-compliance. The Office acknowledges the challenges and the potential lack of cooperation in the information gathering process, and that it will need to take these challenges into consideration when setting up any further regulatory regime.

The first best solution to this dilemma is generally full voluntary compliance by regulated suppliers without the need for enforcement by way of penalties. To enhance voluntary compliance, the Office might therefore consider:

- Expanded outreach to, and education of, regulated entities regarding the Office's functions under the URC Act, the obligation on parties to cooperate with the Office, and the Office's powers and penalty options in cases of non-compliance. Moreover, it would be beneficial if parties fully understand that full compliance is more likely to be satisfied by complete and meaningful responses to questions, rather than by bare minimalist responses.
- The Office may review where its processes and functions are likely to involve regular requests for information, and to streamline these to the greatest extent possible. This may be achieved by enhanced use of templates and other similar regularization processes. Such streamlining may assist stakeholders to appreciate that they should consider such requests for information as a regular, uncontroversial part of being active in a regulated market, and to comply fully and in a timely manner as a matter of course. The Firm understands that the Office currently has such regular and streamlined information gathering processes, for instance in connection with the weekly gathering of fuel prices for publication on the Office's website, which is effective and may be expanded upon.
- Liaising with stakeholders to ensure that such regular information gathering processes, including the questions asked, are designed in a manner that achieves the Office's purposes while avoiding excessive and unreasonable

compliance burdens on suppliers. This may involve an interactive, iterative process of discussion with the stakeholders regarding both the contents and the form of regular information requests. Such interactions would in turn place an onus on the stakeholders to work reasonably and cooperatively with the Office, and the Office's willingness to use its compulsion and penalties powers if such cooperation is not forthcoming.

- The use of penalties in egregious cases of non-compliance.

As regards accounting record-keeping that may be required for a cost-based price regulatory regime, the Firm notes its observation during the course of this market assessment that the stakeholders who provided information do not currently record accounting information in the way that would be required for the purposes of regulatory accounts. For instance, the retail stations do not currently separate their records (regarding revenues, costs, or other items) between their fuels and their non-fuels (e.g. c-store) activities – they record information in the ordinary way as is common for small businesses, which is expected and standard practice for non-regulated small businesses, but which they would have to change if cost-orientated pricing regulation were introduced. The Office would need to develop a specific price-setting formula based on relevant costs, and would then need to develop a highly specific set of regulatory record-keeping rules for regulated sectoral providers. Those providers would then need to keep regulatory accounts according to these regulatory record-keeping rules, in addition to keeping their ordinary accounts for all other purposes. It would be expected that the Office would need to assist some stakeholders, in particular smaller operators, with establishing the necessary mechanisms and processes to comply with these regulatory record-keeping rules and obligations. Any precise templates would be designed after the precise information to be obtained is determined on the basis of the exact cost-based price setting formula to be adopted.

7 APPENDIX 1: TABLE SUMMARY OF STATE OF COMPETITION IN THE FUEL SECTOR

A table summary of the state of competition in the fuel sector is attached as an appendix.

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8 APPENDIX 2: THE MARKET DEFINITION REPORT

Click [here](#) to access the Market Definition Report.