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CSR Submission Inquiry into Unconventional Gas in Victoria

CSR Limited welcomes the opportunity to make a submission to the Inquiry.

The Inquiry has the potential to positively and strongly influence the future of manufacturing in Victoria by recommending implementation of consistent policy settings for gas development and marketing in the State. While principally concerned with the development of unconventional gas in Victoria, accompanying reforms to ensure the realisation of a transparent and flourishing gas market are equally as critical to the allocation and distribution of gas in eastern Australia and in our view should also be a focus of the Inquiry.

The availability of gas from a multiplicity of suppliers and efficient supply networks, together with transparent, accessible, and liquid gas markets are fundamental to the productivity and growth of manufacturing in Victoria. The future direction of gas in Australia is the greatest single energy issue facing CSR as a domestic manufacturer of trade exposed building products.

Decisions on the issues being examined by the Inquiry will have major implications for the cost competitiveness and viability of our businesses as well as for manufacturing industry and consumers in Victoria.

In its submission, CSR has restricted its commentary to specific issues relating to:

- the supply, demand and cost of natural gas and its impact on CSR's manufacturing operations
- the functioning of domestic gas markets and
- Commonwealth and State cooperation and gas market regulatory reform.

My team and I would welcome the opportunity to discuss the issues raised in this submission with you.

Yours sincerely

1. CSR Background in Victoria

CSR Limited is an ASX 100 company with operations throughout Australia and New Zealand. The company employs approximately 3,000 people producing high quality building products at over 70 manufacturing and distribution facilities throughout Australia. In its 2015 financial year, it contributed over $2000m to the Australian economy in the form of taxes and royalties, wages, contractor and supplier payments, capital investment and corporate social investment programs.

CSR Limited is a significant investor in Victoria. With 7 of its largest manufacturing facilities located in Victoria, CSR employs over 1000 people in the State, with an additional 200 contractors.

CSR's Viridian business is Australia's largest provider of architectural glass. It holds a market leading position covering most types of residential and commercial glass variants including innovative energy-efficient and special-use materials. Viridian's glass facility at Dandenong is the only Australian manufacturer of float glass and hard coat performance products. It has a central role in providing the Australian building industry with shorter lead times relative to imports, specialised high quality, Australian standard compliant products, flexible solutions, and extensive product warranties backed by CSR. A $150m major upgrade to the Dandenong factory was completed in 2008 to provide a world class operation. The facility is energy intensive and its products heavily trade exposed.

CSR rationalised glass production by closing its factory in Sydney and increasing its capacity utilisation in Dandenong. Part of the driver for this was to improve international competitiveness by accessing cheaper gas in Victoria.

Through a joint venture in bricks launched in May 2015, CSR owns a 60% share in the major east coast bricks producer, Boral CSR Bricks Pty Limited. The joint venture produces over 87 million bricks each year at its Victorian sites, the largest facility being at Scoresby. CSR also manufactures concrete and terracotta roof tiles at Monier Roofing sites at Springvale and Vermont. Energy intensive products such as bricks and terracotta tiles, while not directly trade exposed, are vulnerable to product substitution as relative costs increase.

In March 2012, the $168 million new state of the art Gyprock™ plasterboard factory in Yarraville was completed. As a new facility, there is a heavy investment in robotics to improve its competitiveness against import and other substitutes.

The imperative for competitive energy costs was recognised by the Victorian Government by exempting three of CSR's facilities from the cost burden associated with the VEET programme. This includes the Dandenong glass factory, the Yarraville Gyprock plant and the Vermont tile factory. These plants have all been modernised and re-built recently to higher standards of energy efficiency.

A notable characteristic of these manufacturing processes is that they are gas dependent and cannot be shut down for short periods in the event of any gaps in supply of energy. Any kiln based process, like a brickworks for instance, can take several days to cool down and inevitably requires a significant rebuild before starting up.

As a leading manufacturer of building products, the Company is committed to ongoing innovation, comfort and energy efficiency improvement in the built environment. CSR has filed 29 patent applications over the last twelve months. Many of these relate to improvements in energy efficiency in the construction and use of buildings. CSR's Bradford Energy Solutions business, managed from Clayton, Victoria, is a leading provider of services and solutions aimed at improving efficiency and reducing the energy footprint of residences, and commercial and industrial operations.

2. Major Challenges in Gas

Victoria is the hub of Australia's major manufacturing industry. The availability and cost of gas is crucial to the viability of manufacturing, with many processes unable to be converted to other energy sources.

Traditionally, Victoria has been the preeminent supplier of gas for industry in the State and in eastern Australia more generally.

The development of the LNG terminals at Gladstone in combination with the highly concentrated control of Australia's gas resources in the hands of the owners of the LNG terminals over the past few years has seen substantial and growing uncertainty in domestic gas supply.

Facing a major energy challenge in the form of availability, medium term committed supply and the pricing of gas, CSR commissioned external research and analysis to understand and quantify the potential impact on its future business should the business as usual situation in the current gas market be allowed to continue.

CSR's expectation is that from 2015 onwards, gas prices for Australian businesses will more than double, and there may be critical gas shortages and outages of 10 or more days. The most immediate impact on businesses and households is from the steep rise in the wholesale price of gas. Households and businesses are likely to respond to higher gas charges by substituting electricity driven equipment and appliances thus fundamentally changing the pattern of gas usage. Of significant concern is the potential for significantly higher network charges if gas demand falls away compounding higher resource charges. Ensuring adequate gas supplies are available in Victoria and on the east coast more generally will be critical to the ongoing competitiveness of manufacturing in the state.

CSR's direct experience from contract negotiations heightens its concerns about supply insecurity. Until the recent fall in oil prices, there has been little interest from suppliers in engaging in even preliminary discussions for supply of gas beyond 2016. Notwithstanding the fall in offshore gas prices, domestic supply appears restricted to one or 2 major suppliers and gas prices appear to be higher than export netback pricing (as far as can be ascertained in the absence of a liquid and transparent domestic gas market).

Furthermore, the private industry analysis commissioned by CSR shows that from 2018, a growing domestic shortfall will emerge against 2P reserves which could be a 30% shortfall by 2025 on the basis of the current volume capacity of the Gladstone LNG plants. We also note that 2P reserve status will inevitably and by definition see some shortfall relative to expectation. With the de-bottlenecking of the plants' processes high on the agenda of the plant owners, further substantial increases in capacity in the LNG facilities would result in a further increase in demand by an estimated 20 to 25%.

Although some assessments, such as AEMO's, have tended to discount shortages, this is because of the assumption that Australian industry will substantially reduce its gas utilisation, implying major permanent closures of manufacturing sites. Demand destruction is not and should not be a foregone conclusion. If these circumstances were to transpire, it would result in significant job losses, and a substantial reduction in Victoria's competitiveness and its capacity to host integrated manufacturing – and would largely be the direct result of inaction by State and Federal governments, in establishing an appropriate regulatory regime governing the development and availability of gas resources, gas infrastructure, and competitive and transparent gas markets.

The development of further gas resources in Victoria will have a highly material and favourable impact on the availability and price of gas, and therefore on the viability of many of our businesses.

The CSR Board will need to make a decision in the next two years to invest $80m to re-furbish the Dandenong glass factory. The Board is following the issue of gas supply and demand closely and the outcome of this inquiry and the ACCC investigation together with action by Government will be a key input to their considerations. The alternative is to co-invest overseas in new manufacturing capacity or to develop long term supply agreements with overseas suppliers.

CSR is agnostic to the supply and development of gas resources by type of field or technology. Suffice to say that whatever source or method used for gas extraction, a solid scientific foundation underpinning good government decision making processes and oversight of the exploration and development industries will assist in growing and sustaining community confidence and support. The State Government has a critical role to play in engaging with communities and making them aware of the importance of gas to the ongoing viability of business and employment in Victoria.

Developing an active and flourishing gas market on the east coast on the back of resource development will strongly influence continuing confidence to invest in manufacturing in Victoria.

3. Issues and Concerns

Bring on new gas supply from a multiplicity of suppliers as quickly as possible.

Bringing on new gas supplies is vital – however, while highly necessary it is insufficient. We have no confidence that development of resources under current policy settings, in the absence of market opening and development reforms, will resolve the crisis in domestic supply. Reforms to encourage the entry and growth in many gas suppliers, depth in pipeline and network markets, and liquidity in a fully functioning gas market are critical.

Full reform is unlikely to occur in time to solve the impending resource shortage or pricing problem. Under the current market structure, more supply from existing suppliers means more gas for export. Given the importance of Victorian supply to the domestic market, it is critical that the State Government address these issues and lead reform across Australian governments if necessary. In our view, the State should assume an overall responsibility to ensure that gas users in Victoria do not run short of gas or bear an exceptional and uncompetitive cost burden.

It would appear that there is already abundant knowledge and experience from a scientific and technical perspective to safely develop gas resources in Victoria. The issue is gaining (and in some cases recovering) the confidence of communities - this will not happen overnight. It is notable that Queensland has been able to develop a burgeoning industry, without the substantial issues or controversy seen elsewhere.

Transitional measures such as prioritising and fast tracking the most advanced projects in Victoria are necessary, in combination with mechanisms to retain the gas in the State for

domestic use; for example, through a scaled royalty regime, and or approving projects conditional on direction to domestic supply while reform measures are enacted and take effect. Energy corridors could be established to focus development. Importantly, the Government needs to restore confidence in users that it is taking the issue seriously and taking timely and positive action towards improved outcomes within the State.

Advance Institutional arrangements to support and ultimately sustain a liquid and competitive domestic gas market while improving the availability and quality of market information to improve market transparency and competition.

While Victoria has the most advanced short term gas market in Australia, there is much more to be done. The State Government has already identified the necessary steps to develop an effective and efficient gas market in Australia[1].

The key issues to be addressed include:

- Multiple trading arrangements across multiple jurisdictions, facilitating only very short term trading
- A patchwork of market conventions, protocols, jurisdictions, and access arrangements
- Largely opaque and difficult to access carriage arrangements which form a significant barrier to entry for new suppliers and to access for gas users
- Inadequate information and poor transparency on all aspects from resources to pricing; information flow contrasts very poorly with other markets such as the UK market which provides real time information on all gas movements
- Small numbers of suppliers
- High barriers to entry for new gas suppliers

Victoria is well placed to facilitate hub development in the presence of a greater number of State based suppliers.

Address supply structure issues

While necessary, market reforms are not sufficient for a fully functioning market where the market is lopsided with multiple buyers and few sellers. Domestic demand is small fraction of total Australian production. The economics of filling LNG plants to capacity to maximise scale benefits and avoid the high contractual penalties of failure to supply likely to drive exporter behaviour for some time to come. Without supply reforms, the domestic market will function only as a residual market, in fact not directly connected to export parity (net back) pricing. Without the market equalising benefits of two way trade in gas ie potential imports as well as exports (as seen in the USA), the domestic market price will be inflexible, and reflective of neither Asian spot prices (as we see currently) nor domestic demand.

The market place asymmetry is compounded by the high degree of contractual and ownership integration through the supply and value chain.

Development of a truly competitive market requires a larger number of suppliers of size, ease of access to infrastructure, and confidence of consumers in the trading platform and hub, among other things. Work needs to start immediately so that investors and businesses have confidence in making future investment in Australia.

[1] Mark Feather, Executive Director, Energy Sector Development Branch, Victorian Department of Economic Development, “AEMC East Coast Wholesale Gas Market and Transmission Pipeline Frameworks Review”, public forum 25 February 2015

COAG Review

COAG processes are slow to deliver. The latest announcement by COAG is welcomed, although it does not go far enough. Specifically, it is silent on any use it or lose it provisions.

The COAG plan focuses on the Wullumbilla Gas Supply Hub. This is too remote from and is not relevant to domestic gas users. We provide more detailed comment on development of a trading hub in the Appendix. Further hubs should be developed as the number of suppliers and supplying geographies increase, in combination with opening of pipelines.

The COAG plan also overlooks third party access provisions to processing plant, as recommended in the 2002 Parer review into energy markets. The COAG communique and Gas Market Development Plan does not provide sufficient emphasis on de-constructing the supply chain from well head to consumer. A "use it or lose it" regime is required to ensure resource suppliers are sufficiently incentivised to bring gas to market and to encourage the entry of new participants.

International Energy Agency

"The natural gas industry is well known for its tendency to behave as a natural monopoly, since the high cost of infrastructure investments prohibit the development of parallel infrastructures to supply the same customers (especially at retail level). It is widely recognised that these vertically integrated supply systems need to be broken up." according to the International Energy Agency. [2]

Experience from around the world shows that separation of resource, transport, and commercial activities is a pre-requisite to the development of vibrant and competitive markets. The evidence from other markets shows that increasing competition in the natural gas market is a process set in motion by government. Government must establish a market structure and regulatory regime that promotes competition. If done appropriately, the market competition will ultimately become self-sustaining, allowing government to step back to a market supervisory role.

2 International Energy Agency, Developing a Natural Gas Trading Hub in Asia, Obstacles & Opportunities 2013

Appendix - CSR views regarding market regulatory reforms

Context & Background

The Australian market for gas has profoundly changed. The development of the LNG market has radically changed the landscape. This has directly lead to much of Australia's resources being committed by the resource owners to their LNG operation with the result that these resources are unavailable to domestic users of gas.
The domestic Australian market is a tiny portion of a world market, and accounts for a small portion of domestic production. These changes have rendered the historical domestic market structure unworkable for buy side participants.

A handful of economic interests control almost three quarters of current reserves, while a similarly small group control almost 90% of Australian gas production (CSR commissioned research). At the present time, only a small fraction of available reserves is available to the Australian domestic market. The highly concentrated market has seen a high degree of integration from resource to consumer/ gas user, either directly or contractually, arguably substantially higher than seen in healthy, functioning markets. Despite the opening of export markets, joint marketing to the domestic market is still permitted by ACCC.

At the present time, confidence in market outcomes and supply security is low because of the background outlined above.

Because of the natural monopolies present in this type of market together with the legacy structure from a domestic only focus, addressing impediments to competition and facilitating market development is key, with surrogates for an open market to mitigate against the excessive market power delivered via natural monopolies and high concentration of supply side resources.

Transparency and opening of the domestic market to competitive operations is crucial to restoring confidence in the market to deliver.

Although many of the necessary requirements regarding markets would ideally be dealt with by COAG and/or the Federal Government, because of the importance of Victoria in gas, arguably many elements of the reforms which can specifically be dealt with by the Victorian Government alone. In this paper we have not attempted to separate the issues by jurisdiction.

Objectives:

Open, fair, competitive & transparent markets in all aspects of the gas value chain

- Facilitate a thriving contestable market in all possible points of the value chain and provide a surrogate for competition where there are natural monopolies or structural barriers to entry
- Reducing historical concentration and barriers to entry at all possible points
- Transparent pricing set by competitive and contestable markets
- Promote a competitive, accessible, transparent market place
- Recognise and mitigate the impact of market power and industry concentration
- Preventing discriminatory or selective service in key areas of infrastructure
- Encourage the further development of infrastructure
- Avoid the exercise of excessive market power
- Protect customers with little choice

- Promote secure, high-quality, environmentally sound energy infrastructure

Market structure

- Unbundle the value chain from resource ownership/control and production through to consumption, & ensure ownership is diverse, competitive, and separated at each point of the value chain
- Lower barriers to entry in all segments of the value chain
- Restrict the capacity of any one entity, joint venture, or partnership to control a large or dominating share of reserves, while promoting entry of new competitors from the point of resource control and extraction
- Actively facilitate the entry of new competitors and break down of existing concentration
- Ensure there is sufficient network capacity in existence and in development, with non-discriminatory access to promote confidence and competition
- Achieve transparency of information (volume, utilisation) & pricing, in markets at each point along the chain
- Provide access by third parties to processing facilities
- Regulation of all pipelines participating in a market for the supply of gas to the Australian market to promote a competitive framework within constraints of the natural monopoly
- The establishment of a gas hub and a gas price exchange with spot and futures markets that facilitate price discovery and provides a reliable price signal is a key attribute of a competitive natural gas market.[2]
  - Development of the most liquid and competitive gas hub market with hub pricing, to facilitate price discovery through the designation of the most viable and potentially competitive hub reflecting supply and demand of gas in the domestic market.
  - Facilitate development of traded gas price futures in Australia to provide long term pricing, and the potential for price risk management by suppliers and consumers.
  - Involvement of financial institutions as providers of liquidity and trading services
- Promote competitive and deeper public markets at each point along the chain by:
  - Mandating clear separate ownership of resources, pipelines, distribution, & retailing
  - Resource "owners" should be separated from ownership of storage, pipelines and end market distribution & sales – only transport to designated pipeline hubs via open access arrangements.
  - Resource explorers and owners should be subject to use it or lose it provisions – return of unexplored acreage after 3 years and undeveloped acreage after a further 3 years. Too frequently permitted entities sit on potential gas fields that others may wish to develop, preventing the development of a competitive market. The concept is to ensure gas fields are developed, there are a number of competitive potential suppliers, and that affordable gas is available to the domestic market.
  - Charging fees for sitting on undeveloped acreage where there is no current development approval in train – effectively a storage cost – supported by a 'use it or lose it regime' to encourage economic development and the entrance of new resource developers and suppliers. Australia has been attractive to some parties who can hold their Australian assets while developing those in other economies where there is a risk of losing their acreage.

- Resource developer must sell at closest designated hubs – open access markets for buyers to bid, must be non-discriminatory
- Pipeline transport pricing should be fair and non-discriminatory, determined using a published benchmark price for the injection and withdrawal points; open access via electronic markets provided to all market participants; participants requiring shipping can price and book transport off the electronic market
- Pipelines and networks should be designated assets of national importance as a key step to equality of access. Non-discriminatory and open access to networks, and sufficient network capacity available to all market participants will inhibit the development of 'island' that behave according to their own supply/demand dynamics within the network.
- Genuine shippers of gas who are holding spare capacity to have full rights to trade pipeline capacity among other shippers
- Gas is delivered, priced and traded at the designated hub closest to the well head, and must be published against a benchmark price. This will require the establishment of additional hubs, including one at Moomba. As further pipelines and supplies are developed other hubs can be added to the market place.
- Resource owners or retailers unable to restrict the re-sale of unused / no longer required gas by purchasers.
- Pipeline owners cannot integrate, either back into resources, nor forward into market distribution
- Where gas is sold by a retailer, the transport component must be identified and priced separately, with customers able to negotiate their own pipeline access if preferred
- Gas end-users with sufficient volumes and willingness to invest in the logistics & risk management should be able to price each point in the value chain based on their requirements
- Storage facilities –storage facilities should be owned independently to prevent gaming of the market by gas owners. Storage capacity should entail biddable transparent access to avoid 'cornering' or manipulation of the market; long term storage market available facility should not be owned by gas developer/ owners or transporters. The market is also subject to manipulation by gas owners/producers who "store" gas or fail to produce to game the market.
- Transporter pipelines
  - Independence of pipelines from supply and network is essential, as is a clear and unbiased investment regime based on a well developed and regulated code of conduct.
  - Pricing set via regulated maximums and minimums, for each injection & withdrawal point
  - Open trading market promoted and available – market liquidity improved by facilitating wide access to the pipeline, in standardised marketable parcels
  - No capacity "sitting" – ie no 'buy & hold' capacity purchasing by non-shippers, although broking or short term warehousing may be acceptable if it promotes liquidity
  - End-users / Customers who wish to arrange own access to pipelines should be freely and readily able to do so – pipeline owners should provide open & non-discriminatory access
- Distribution networks

    - As a natural monopoly, retailers should not own distribution networks and pipelines just as the reverse should also apply– full value chain separation is required
    - Retailers & gas users must be able to book capacity via an open access regime as desired.
    - Pricing set via regulated maximums and minimums
  - Retail competition – potential new participants must have real options to enter the retail market at every level, from consumer to large commercial
    - The preferred model is to develop an efficient market with many resource owners bidding into a liquid market. Similarly, for consumers to have choice of retail supplier – essentially they organise the logistics of supply, enter into long term contracts for gas, transport, & local distribution, but don't own any local distribution
- Reporting & disclosure requirements, daily/monthly/quarterly/ annual obligations
  - Sales volumes & prices at the hub daily
  - Facilities - quarterly
  - Large contracts – quarterly
  - Reserves – annually
- Full retail choice programme – natural gas customers should be able to purchase their gas from a choice of retailer, which will have open access to the local distribution network.
- A published and regulated code of conduct
- Promote the involvement of financial institutions as financiers and investors, providers of cash flow liquidity for market participants in addition to liquidity providers and promoters of hub pricing.
- The ingredients for a competitive and functioning market need to be instigated and guaranteed by the market regulator.

Market structure – Creating a Natural Gas Hub

- To provide a "meeting place" for supply & demand, a platform or hub for exchange is needed. Ownership exchange at the hub is key. A physical hub is a geographical point in the network where a price is set for natural gas delivered on that specific location.[2] To be viable, the hub must represent the most logical place for ownership to change hands: the most centrally located and sufficiently interconnected point for the exchange to take place.
- Hub pricing facilitates efficient and transparent price discovery, and provides the building blocks for long term exchange & OTC contracted pricing. It also offers the incidental benefit of developing Australia as a major financial centre in the region.
- The physical hub that meets the key characteristics from which to build a viable and successful trading hub is Longford in the presence of a multi-supplier network or Moomba, being the closest point to 1. The most relevant gas fields combined with 2. multi-directional intersecting pipelines.
- We note that Wallumbilla is very distant from the natural exchange point for domestic markets, which would be as close as possible to relevant gas fields and multi-directional intersecting pipelines. It is impractical as a physical exchange point due to significant backhauling for domestic purposes.

- In our view, even if Wallumbilla is anointed by government, if it does not have the characteristics of a successful market hub, it will not develop, regardless of the desire to make it so. We note that the highly successful Henry Hub market place was selected by the New York Mercantile Exchange (NYMEX), not regulators or suppliers.
- We note there is no reason why there cannot be smaller, regional hubs and seen in the US, and Wallumbilla may well be an appropriate hub for the export industry for a spot market or short term exchange.
- Other markets use equally successful “virtual hubs”, but the delivery characteristics of the product are fundamental, and must be transparent but not overly complex ie related to the place of ownership exchange and considering transport costs to that point. That can add considerable complexities in a market such as east coast Australia, which will be domestically supplied (we expect) from a few major fields.

Transitional Measures:

We propose the following measures be implemented as a matter of urgency:

- Within Victoria, prioritise and fast track the most advanced projects, in combination with mechanisms to retain the gas in the State for domestic use; for example, through a scaled royalty regime, and or approving projects conditional on direction to domestic supply while reform measures are enacted and take effect.
- Implement a use it or lose it approach – if resources are not developed within 3 years, permits and licences should be relinquished back to the State
- Actively promote and assist new entrants to the gas exploration, development, and supply areas
- Actively promote the entry of new gas retailers within an open access regime to the netwrok
- Promote Institutional arrangements to support and ultimately sustain a liquid and competitive longer term domestic gas market while improving the availability and quality of market information to improve market transparency and competition
- Promotion of an appropriate hub within Victoria for pricing of all domestic gas sales
- Mandate the publication of all pipeline information: contracts, utilisation, injections, withdrawals, shipping volumes, storage
- Promote the establishment of a National Gas Authority (NGA)
  The NGA would be mandated by law to establish and oversight a competitive domestic gas market. It would be independent of AEMO, but work closely with them and the ACCC. In addition to working towards the adoption of global best practice, the NGA would assist State Governments in establishing a balanced framework for resource development to ensure resources were released at appropriate intervals into the domestic market.
  The NGA would develop a 3 year plan towards a transparent and competitive market, including directing all jurisdictions toward developing a national trading strategy, encouraging the development of financial instruments and futures markets, mandating provision of open and transparent information on all gas resource development, production, shipping & pipeline injection & withdrawals, domestic utilisation, storage, and export.

- A published and regulated code of conduct signed up to by industry participants
- Prohibition of sales by joint ventures within the State of Victoria
- Through COAG and the Federal Government:
  - Removal of all joint marketing arrangements and rights (as proposed in 2002 in the Parer Report) forthwith.
  - A comprehensive reporting & disclosure regime
  - Export licencing for both gas resource and LNG plants, potentially as an interim measure until domestic markets are fully functioning and ownership concentration issues are dealt with
  - Mandated transparent hub pricing, including prohibitions on allocation to internal marketing arm or affiliates ahead of other bidders. Disclosed bidding and allocation to internal markets; Internal markets or affiliates in no way to have an advantage
  - "Chinese walls" required immediately between production, transport, & markets functions as a prelude to splitting functions
  - Maximum levels of resource ownership and control implemented, with grandfathering of existing permitting only as an interim measure without automatic renewal for undeveloped acreage.
  - Development of a simplified national framework for approvals for exploration and development of gas resources, within a policy of actively encouraging and lowering barriers for new entrants