Kevin Stevenson
Chairman
Australian Accounting Standards Board
PO Box 204
Collins Street West VIC 8007

via email: standard@aasb.gov.au

3 June 2013

Dear Kevin

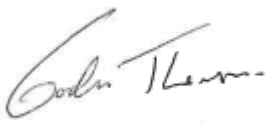
Re: Invitation to Comment on IASB Request for Information on Rate Regulation (ITC 28)

I am enclosing a copy of PricewaterhouseCooopers' response to the International Accounting Standards Board's Request for Information: *Rate Regulation* (ITC 28).

The letter reflects the views of the PricewaterhouseCoopers (PwC) network of firms and as such includes our own comments on the matters raised. PwC refers to the network of member firms of PricewaterhouseCoopers International Limited, each of which is a separate and independent legal entity.

I would welcome the opportunity to discuss our firm's views at your convenience. Please contact me on (03) 8603 3574 if you would like to discuss our comments further.

Yours sincerely,



Gordon Thomson
Partner, PricewaterhouseCoopers

International Accounting Standards Board
30 Cannon Street
London EC4M 6XH
United Kingdom

30 May 2013

Dear Sir/Madam

Request for Information: Rate regulation

We are pleased to respond to the invitation by the IASB to respond to the Request for Information ('RFI') 'Rate regulation' on behalf of PricewaterhouseCoopers. Following consultation with members of the PricewaterhouseCoopers network of firms, this response summarises the information prepared by those member firms that commented on the RFI.

'PricewaterhouseCoopers' refers to the network of member firms of PricewaterhouseCoopers International Limited, each of which is a separate and independent legal entity.

We support the board's efforts to gather information on this topic, which should enhance the analysis in the Discussion Paper ('DP') phase of the project.

The regulated industry and why it should be considered

You have asked for information about the types of regulation it would be useful to consider in the DP. The concept of regulation could be interpreted very broadly, and regulation can take many forms. It might govern all of an entity's operations or simply one aspect of its operations (for example, the price charged to customers, capital maintenance or safety).

The DP should explore the distinction between different types of regulation, but be clear about when regulation could lead to the existence of rights and obligations that might be recognised in an entity's financial statements. Regulation that governs the price that an entity can charge its customers is the most common type of regulation that could have accounting consequences not already addressed specifically by other standards. Such regulation creates accounting issues when there is a timing difference between regulated (or 'allowed') income, or the amount an entity is permitted to recover, and the amount that is billed to and collected from customers in a specific period. It is not necessarily specific to a single industry, jurisdiction or to the type of good or service delivered.

Price regulation normally occurs when there is a monopoly or near-monopoly. This most often arises in connection with the delivery of a public service for which it would be inefficient to have competition (for example, because of the nature of the investment). The objective of the regulation is to maintain a safe and reliable service and to balance the interests of customers and investors (that is, to balance a fair price and a fair return). Price regulation might be designed in different ways to achieve these objectives. The design could be influenced by a variety of factors including, but not limited to, the nature of the good or service, customer behaviour and the existence of other linked objectives (for example, to reduce carbon consumption).

There are two broad frameworks commonly employed for price regulation: cost-based regulation and incentive-based regulation. The distinction between them is not always clear and some jurisdictions use a combination of the two frameworks. It might be helpful for the board to consider the different forms of rate regulation, but the DP should focus on the rights and obligations and the accounting consequences that might arise from price regulation, rather than how the overall framework might be categorised. For example, the DP might consider the *right* to recover amounts from a customer and the *obligation* to refund cash to its customers.

The DP should also explore the potential overlap between the accounting for service concession arrangements and the potential accounting for rights and obligations arising from price regulation. Service concession arrangements generally achieve similar objectives to price regulation, and the regulation of prices is a key consideration in evaluating whether an arrangement is within the scope of IFRIC 12.

Other questions

We have responded to Questions 2 to 5 for a selection of jurisdictions. Our response reflects our understanding of these arrangements in our role as auditors and accountants.

The information in the appendices covers a range of regulatory models, some of which are commonly known as 'incentive based' and others commonly known as 'cost based'. This highlights the similarities across what are often perceived to be fundamentally different forms of regulation. For example, regulatory models might use different bases to determine the prices charged to customers, but they often have a similar mechanism that allows an entity to recover or settle under- or over-recoveries. This mechanism in many cases is the adjustment of future prices. We also note that there are few examples, in practice, of entities subject to price regulation entering and exiting a regulated market. This makes it difficult to assess what happens to the rights and obligations when the entity ceases to provide the regulated goods or services.

Our response is not a complete picture of regulation globally or within each of the jurisdictions on which we have commented. We have included information provided by those member firms that commented on the RFI that we believe is relevant to the DP. You have asked for information about the rights and obligations arising from regulation. Regulators and legal experts might be better placed to confirm the details of such rights and regulations.

The responses to Questions 2 to 5 are included in the appendices.

If you have any questions, please contact John Hitchins, PwC Global Chief Accountant (+44 207 804 2497) or Tony de Bell (+44 207 213 5336).

Yours faithfully

PricewaterhouseCoopers

APPENDICES

We have included in the appendices our response to Questions 2 to 5 in respect of those jurisdictions for which member firms commented on the RFI, together with relevant background information and information that supplements our answer to Question 1 included in the attached cover letter. Our response does not reflect a complete picture of regulation globally or within each of the jurisdictions on which we have commented. We have included information that we believe is relevant to the DP.

The jurisdictions addressed are as follows:

Appendix 1 – Brazil
Appendix 2 – Canada
Appendix 3 – Germany
Appendix 4 – Hong Kong
Appendix 5 – India
Appendix 6 – Italy
Appendix 7 – United Kingdom
Appendix 8 – United States

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Appendix 1 – Brazil

The responses below are for Brazil rate regulation of the energy distribution, gas distribution, water treatment and road concession sectors. These sectors are near-monopoly activities due to their nature. It is also important to highlight that regulation and related contractual arrangements in Brazil are old and unclear on a number of aspects, and so they are subject to ongoing review and discussion.

Question 1 – Supplementary information

It would be helpful if you could include information about what local GAAP is applied and how the effects of the rate-regulatory scheme are reported in accordance with that local GAAP.

Brazil adopted full IFRS in 2010 as local GAAP, including IFRS for SME for smaller entities. This process was implemented by issuing national standards with text equivalent to the relevant IFRS. Application of a GAAP other than IFRS is limited to a few sectors (real estate, pension funds and some smaller financial institutions), but this is not relevant for rate-regulated activities. So all comments below are in relation to the application of IFRS in Brazil.

Question 2 – What are the objectives of the rate regulation and how do they influence the interaction between the rate regulator, the rate-regulated entity and customers?

(a) what are the high-level objectives of the rate regulation (for example, to restrict prices or to influence the levels of supply and demand or to restrict or encourage competition); and

The primary objective of regulation in Brazil is to improve the quality of public services and as an instrument of public monetary policy. Also, in passing this service to a private initiative, there is a general feeling that the quality of the service would improve; but regulation to guarantee quality and alignment with public monetary policy is, in this case, even more necessary.

(b) how these objectives are reflected in the nature of the rate-setting mechanism?
(i) is the rate-setting mechanism designed to give the rate-regulated entity a 'fair rate of return' (for example, a cost-plus mechanism) or is the focus more on reducing the cost to customers (for example, a price-cap or other incentive-based mechanism);
(ii) are there incentives to meet targets that are not directly related to the cost-rate relationship (for example, efficiency, service levels, infrastructure investment, increased supply capacity or reliability, use of alternative resources or reduction in customer demand or usage);

The rate-setting mechanism was designed to meet two objectives: reduce cost, and provide a 'fair rate of return'. The federal government has recently had an increased focus on reducing costs, but an 'economic balance' clause remains in most, if not all, arrangements.

Brazil is still developing its ideal infrastructure, and so the level of required investment is usually very high. For example, even if the necessary level of investment is set at the inception of the contract, this is periodically reviewed (and modified) with the objective of improving services or reducing cost. The policy varies from one sector to another. For example, postponing investments is quite common for road concession contracts, but a high level of investment is still an important target in the water

treatment sector. Some sectors, such as energy distribution, now consider key performance indicators when reviewing the tariff.

Tariff reviews are performed periodically. Smaller reviews (for example, inflation update and a cost worksheet) might be performed annually, while more complex aspects (for example, an assessment of the level of investment required) might be considered every four to five years. The concept of 'prudent investment' is also very common when determining whether a cost will be included in the tariff review.

(iii) does the rate regulation fix the price per unit or does it provide some flexibility for the entity to set prices (for example, through price ranges or caps, based on either unit prices or total revenue or total profitability); and

The price is usually fixed per unit with no flexibility.

(iv) are there other aspects of the rate-setting mechanism that reflect any specific objectives not envisaged above?

The infrastructure and natural resources in the water treatment sector are often shared between more than one city. The tariff is determined considering the areas all together, provoking a 'cross-subsidy'. This makes determining the objective of the rate-setting mechanism more difficult.

Question 3 – What sort of rights or obligations does the regulation create?

(a) whether the rate-regulated entity has an exclusive right to operate in the market;

The rate-regulated entity has a near-exclusive right to operate in the market.

(b) if the entity's right to operate in the market is established by licence:
(i) is there a cost to acquire the licence; and
(ii) can the licence be revoked, renewed or transferred;

The licensing arrangement depends on the sector. The entity awarded the right to operate is sometimes the one that offers the lowest tariff and, in this case, there is no payment for the licence. The tariff might also be predetermined, and the entity that is awarded the right to operate will be the one that offers the most for the licence. There are also sectors where there is a cost to acquire the licence.

The right to operate is generally granted for a specified period. For example, in the energy distribution sector, this period is usually 30 years for new distribution arrangements and can be renewed at the granting authority's discretion.

(c) how competition is excluded or encouraged;

'Competition' is normally encouraged through industry benchmarks combined with rate regulation, as most of the entities are operating on a near-monopoly basis.

(d) how the rights and obligations are expressed, for example, as a cap on the rate of return, as the right to recover entity-specific costs, as a right to recover an allowed level of costs (whether or not

incurred by the entity), or as a right to recover specific types of costs without limit if and when incurred; and

The expression of rights and obligations varies by sector. Some sectors have less flexibility to change the tariff. Others might be allowed to recover all costs within a 'prudent' level of investment, as described above. This is generally the case where more investment is needed. Some costs are deemed current costs, and so they are included in the definition of the tariff. Other costs might be considered part of the investment and, in this case, are usually capitalised as part of the concession cost.

(e) whether the entity can choose to stop providing the goods or services that are subject to rate regulation and, if so:
(i) how is this achieved; and
(ii) what are the consequences for the entity?

There is limited history illustrating what happens when an entity chooses to stop providing goods or services, and the contracts are not totally clear in this regard. We understand that participants in the regulated sectors generally believe that an agreement with the regulator is possible if the quality of the service is not affected. Generally, contracts are not terminated early, and it is rare for government to take them over.

Question 4 – How does the rate-regulated entity enforce its rights, or how does the rate regulator enforce the settlement of the rate-regulated entity's obligations?

(a) does the rate regulation provide for retrospective recovery or reversal of under- or over-recoveries of allowable costs? If so, how is this achieved, for example through cash payments or other asset transfers to or from parties outside the rate-regulated entity (such as individual customers or groups of customers, the rate regulator or the government);

The rate regulation does not provide for retrospective recovery or reversal of under- or over-recoveries of allowable costs due to the nature of the relationship between the service provider and the customers. All compensation occurs through an adjustment to the tariff on future service deliveries.

(b) are the rights and obligations separable from the business; and
(c) what happens to the rights or obligations when the entity ceases to provide the rate-regulated goods or services?

There is no clear evidence that the rights and obligations are separable from the business. But, if the licence to operate is transferred to the grantor or another party, the rights and obligations are generally considered as part of the transition arrangements. For example, some contracts consider (for indemnification purposes) the rights and obligations generated in the last five years before the end of the contract, especially those related to investments. Also, rights and obligations related to cost differences that arose in the last year of operation might be reimbursed to, or paid by, the outgoing operator. Contracts are not always clear in this regard, but the difference is usually expected to be settled before the end of the contract.

Question 5 – How does the rate regulation ensure the recovery or reversal of under- or over-recoveries of allowable costs? Are these mechanisms effective in recovering or reversing those amounts within the targeted time frame?

(a) what is the mechanism for tracking the recovery or reversal of such variance amounts;

In most sectors, there are mechanisms to ensure the recovery or reversal of under- or over-recoveries of allowable costs (that is, variance amounts) within, usually, the next 12 months. For example, the regulatory agency in the energy sector requires the regulated entity to prepare financial information in accordance with regulatory standards in order to determine the basis for the tariff. But, in many road concession arrangements, the variance in costs is at the risk of the operator.

(b) how does the rate-setting mechanism adjust for unexpected changes in demand for the rate-regulated goods or services;

The rate-setting mechanism does not normally consider changes in demand. Variances normally relate to cost structures. These variances might also include costs in foreign currency that, due to changes in the exchange rate, could result in variances. However, most, if not all, contracts have an economic balance clause. This is usually considered when setting up the tariff or indemnification and when contracts terminate, with rights and obligations still open.

(c) has there been a recent trend whereby the balances of the variance amounts have been increasing?

There is no trend that provides evidence that variance amounts will not be settled. In some instances, where variances are significant, the regulated entity is given more time to recover the right or pay the obligation.

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Appendix 2 – Canada

Canada is a federation of ten provinces and three territories. With the exception of certain federally regulated oil pipeline operations, most utility operations are subject to provincial legislative frameworks and provincial regulators. In some provinces and territories with government-owned utility companies, rates are set through a legislative process or by the government shareholder rather than by an independent regulator balancing the interests of consumers and utilities. Our responses focus on those jurisdictions where utilities are regulated and rates set by a regulator independent of the utility.

Question 1 – Supplementary information

It would be helpful if you could include information about what local GAAP is applied and how the effects of the rate-regulatory scheme are reported in accordance with that local GAAP.

Prior to 2011, most Canadian utilities reported results in accordance with Canadian GAAP, whose principles for accounting for the effects of rate regulation mirrored US GAAP ('ASC 980'). ASC 980 is further discussed in Appendix 8. In 2011, IFRS as issued by the IASB replaced Canadian GAAP as the accounting framework for publicly accountable enterprises in Canada.

Due to uncertainty surrounding the accounting for balances arising from rate regulation under IFRS, the Canadian securities regulators and Canadian Accounting Standards Board provided a temporary exemption for regulated utilities from the requirement to adopt IFRS. Listed Canadian utilities were granted the option to report in accordance with US GAAP, and others were given the option to continue to report under legacy Canadian GAAP. Legacy Canadian GAAP requires regulated utilities to recognise regulatory assets and liabilities in a manner similar to ASC 980. Most Canadian regulated utilities availed themselves of these exemptions and report either in accordance with US GAAP or legacy Canadian GAAP.

There is diversity in practice for the few Canadian regulated utilities that chose to adopt IFRS in 2011. For example, under IFRS, one large regulated utility has continued to recognise regulatory assets and liabilities, while others have chosen to derecognise regulatory assets and liabilities on adoption of IFRS.

Question 2 – What are the objectives of the rate regulation and how do they influence the interaction between the rate regulator, the rate-regulated entity and customers?

(a) what are the high-level objectives of the rate regulation (for example, to restrict prices or to influence the levels of supply and demand or to restrict or encourage competition)?

The regulators are independent agencies of government to operate and administer applicable utility legislation. Because utilities are generally natural monopolies obliged by law to provide an essential or nearly essential service, the objective of regulation is to ensure safe, reliable and non-discriminatory utility services at rates that are fair to both customers and owners of the utilities. A common theme across legislation in Canada is that the regulators must set rates that provide the utility with an opportunity to recover its prudently incurred costs, including a return on investment (often referred to in law as 'just and reasonable rates').

The requirement for regulators to set just and reasonable rates, that allow regulated entities to earn sufficient revenue to finance the cost of their services, has been confirmed by court decisions. Several Canadian utilities have obtained legal opinions supporting the assertion that regulators are required by law to permit utilities an opportunity to recover prudently incurred costs, and that it would be an error in law if a regulator were to deny a utility its opportunity to recover prudently incurred costs.

(b) how these objectives are reflected in the nature of the rate-setting mechanism?
(i) is the rate-setting mechanism designed to give the rate-regulated entity a 'fair rate of return' (for example, a cost-plus mechanism) or is the focus more on reducing the cost to customers (for example, a price-cap or other incentive-based mechanism);

As noted above, the rate-setting mechanism is designed to support the legal requirement for a regulated utility to recover prudently incurred costs and earn a reasonable return at rates that are fair to consumers. Utilities are generally monopolies, on the basis that the introduction of competition would be inefficient. Therefore, independent regulation is necessary to achieve this objective.

Some regulators have introduced incentive- or performance-based regulatory mechanisms to improve the efficiency of the regulatory process and to incentivise utilities to manage costs. But, although these models might include sharing and other price cap mechanisms to encourage efficiencies, rates are regularly reset (generally every 3 to 5 years) based on actual cost incurred.

(ii) are there incentives to meet targets that are not directly related to the cost-rate relationship (for example, efficiency, service levels, infrastructure investment, increased supply capacity or reliability, use of alternative resources or reduction in customer demand or usage);

Some regulators in Canada have introduced incentive- or performance-based regulatory mechanisms to encourage efficiency in utility operations or achieve certain targets. These mechanisms might include the sharing of cost savings above a prescribed level between utilities and customers, or rate caps. During the period covered by these performance-based rates, the relationship between cost incurred and rates might temporarily diverge; so, at the end of the period, there is a re-basing of rates based on actual cost incurred. Furthermore, where rates become materially different from actual cost incurred, there are usually provisions to adjust the formula or adjust rates for the costs that differed materially. Consequently, despite a temporary disconnect between actual costs incurred and rates charged, the basis for the rates continues to reflect cost and the legal requirement for rates to be set in such a way that allows the utility to recover its incurred costs. There are sometimes also provisions allowing the utility to revert to a more pure cost-based model. For example, an 'off-ramp' provision to return to cost-of-service could be invoked where, due to circumstances beyond the control of the utility, there is a significant divergence between cost-to-serve and allowable revenues under the incentive-based mechanism.

(iii) does the rate regulation fix the price per unit or does it provide some flexibility for the entity to set prices (for example, through price ranges or caps, based on either unit prices or total revenue or total profitability); and

Regulators do not allow the utility to set its own prices. Rates might include a fixed service component (a monthly charge) as well as consumption-based charges. These rates and charges could vary across different customer classes. The utility might have input into the rate design and the allocation of the rates and charges to the different customer classes; but the regulator has the final decision and authority to establish rates.

(iv) are there other aspects of the rate-setting mechanism that reflect any specific objectives not envisaged above?

Utilities might be leveraged to accomplish certain policy objectives. For example, a regulator might instruct a regulated utility to collect a specified amount through rates to fund a state-mandated public purpose program (such as low income and energy conservation programs). The rate is established by the regulator, and the amounts collected must be used for the specified purpose. If the amounts collected are not used for the specified purpose, they will be refunded to ratepayers through a reduction in future rates.

Question 3 – What sort of rights or obligations does the regulation create?

Regulated utilities in Canada have a right to recover prudently incurred costs of providing utility services and a reasonable return (usually reflecting the utilities cost of capital). Similarly, regulation imposes obligations on the utility to refund amounts collected from customers through rates in excess of cost incurred and a reasonable return. These rights and obligations are supported by legal opinions obtained by Canadian utilities which cite legislation and court interpretations.

As monopolies, regulation also imposes the obligation to provide the service on a non-discriminatory basis to all consumers within the utility's service area.

(a) whether the rate-regulated entity has an exclusive right to operate in the market;

Regulated utilities are granted a monopoly to provide designated services to the public within a defined service area.

Several Canadian provinces have introduced competition in supply of the commodity (for example, gas and power). In these markets, consumers have the option to purchase electricity or gas from independent retailers under fixed-price contracts or pay market rates by purchasing from the regulated utility. However, the utility remains the supplier of distribution services. Where consumers choose to purchase direct from the utility, the utility recovers its cost of the commodity through rates (known as 'flow-through').

(b) if the entity's right to operate in the market is established by licence:
(i) is there a cost to acquire the licence; and
(ii) can the licence be revoked, renewed or transferred;

In most provinces, market participants are required to hold a licence that is granted by the regulator or other governing body. The licence typically has a fixed term but can be extended by the regulator. The regulators are generally prohibited from arbitrarily cancelling or deciding not to renew a licence and are required to make licensing decisions in accordance with their public interest mandate.

(c) how competition is excluded or encouraged;

There is no competition for distribution services as it is not efficient to have competition in this market. Competition in electricity generation and oil pipeline activities is more common.

(d) how the rights and obligations are expressed, for example, as a cap on the rate of return, as the right to recover entity-specific costs, as a right to recover an allowed level of costs (whether or not incurred by the entity), or as a right to recover specific types of costs without limit if and when incurred; and

The rights and obligations are expressed as the regulated utility's right to recover its costs and earn a reasonable return and the obligation to provide an ongoing service, ensuring reliability and delivery of the product. In general, a regulated utility's base rates are established through general rate cases that occur on a periodic basis. General rate cases typically utilise a 'historical test year' (that is, costs from a specified year, including adjustments for unusual items) or, in certain provinces, a 'forward test year' (that is, costs are estimated for the year in which rates will go into effect) as a baseline to determine the capital and operating costs and the return to be earned by the regulated utility. The return is calculated based on the net assets used in delivering the regulated service multiplied by the weighted cost of equity and debt capital. As described further below, some rate mechanisms might, in general rate cases, provide for expenses that are volatile and cannot be reliably estimated, to ensure there is no over- or under-recovery.

Each province has a specified process for the review and approval of rates, including testimony by representatives of the company, ratepayer advocates and utility board staff. Some costs might be questioned and ultimately disallowed through this process. The final rates established by the regulator incorporate the results of the evaluation and testimony process, as well as any negotiations between the company and regulator within the applicable statutes and legal requirements of the province. Base rates do not generally change between rate cases, although some rate cases might specify rate increases in subsequent years. The rates are determined based on a total revenue requirement for the population of customers in the service territory. In other words, the total amount to be recovered (that is, the revenue requirement) is determined, and then the rate per unit to be charged to the customers is calculated by dividing the revenue requirement by the estimated usage by customers.

(e) whether the entity can choose to stop providing the goods or services that are subject to rate regulation and, if so:
(i) how is this achieved; and
(ii) what are the consequences for the entity?

Utilities are legally obliged to provide services to customers within their service area as a condition of their licence. They cannot stop providing goods or services that are subject to rate regulation without the approval of the regulator.

Question 4 – How does the rate-regulated entity enforce its rights, or how does the rate regulator enforce the settlement of the rate-regulated entity's obligations?

A regulatory compact binds the regulator, customers, the utility and the utility's investors. The regulatory compact gives regulated utilities an enforceable right and imposes an obligation to recover from or refund amounts to customers, which is typically effected through adjustments to future billings. A considerable body of case law supports the legal enforceability of historical actions taken by a regulator. Regulatory laws generally prohibit the concept of 'retrospective ratemaking', so that a regulator cannot retroactively reverse the actions of a previous decision. The effect is that, once a regulator provides for the recovery of a previously incurred cost in future rates, the utility is legally entitled to recover the amounts.

(a) does the rate regulation provide for retrospective recovery or reversal of under- or over-recoveries of allowable costs? If so, how is this achieved, for example through cash payments or other asset transfers to or from parties outside the rate-regulated entity (such as individual customers or groups of customers, the rate regulator or the government);

Regulators often provide for retrospective recovery or reversal of under- or over-recoveries of allowable costs through special rate mechanisms. See further discussion under Question 5 below.

(b) are the rights and obligations separable from the business; and

Although rights and obligations generally appear to be linked to the regulated utility's business, there are situations where rights and obligations appear to be separable. For example, a regulated utility could securitise its enforceable right to impose a surcharge or tariff. In this case, it obtains cash from investors in exchange for future regulated cash flows representing the surcharge or tariff. Such securitisations are typically set up through a trust that sells the securities and administers the ongoing cash flows related to those securities.

(c) what happens to the rights or obligations when the entity ceases to provide the rate-regulated goods or services?

There are no recent relevant examples in Canada of a regulated utility ceasing to provide the regulated service. The ability to recover or refund amounts would depend on the individual situation and be subject to legal interpretation.

Question 5 – How does the rate regulation ensure the recovery or reversal of under- or over-recoveries of allowable costs? Are these mechanisms effective in recovering or reversing those amounts within the targeted time frame?

There are a variety of mechanisms used by regulators to ensure the recovery or reversal of under- or over-recoveries of allowable costs. These mechanisms are often used to allow recovery of volatile costs that cannot be reliably estimated (for example, commodity/fuel costs) or one-time charges such as storm costs. Differences between the amounts collected and the amounts paid result in under- or over-recoveries that are included in periodic filings and result in adjusting future rates. Additionally, regulators will often provide adjustments to future rates where there is a significant variance in incurred costs from what had previously been estimated and included in allowable costs (for example, storm costs). The period over which a utility recovers or refunds these amounts varies from months to several years and can vary by customer. Often, amounts from industrial customers are recovered from specific customers, while recoveries from mass market or retail customers are from the customer class. This reflects a desire for administrative ease of recovery.

(a) what is the mechanism for tracking the recovery or reversal of such variance amounts;

Balancing accounts are the mechanism for tracking the recovery or reversal of variance amounts. For example, a regulator might give the regulated utility the right to recover fuel costs, environmental remediation costs or pension costs in excess of those included within rates, or impose an obligation to refund to customers amounts collected in excess of amounts incurred. In other instances, specific regulatory decisions since the last general rate case might allow for recovery of previously incurred costs that exceeded those included within the test year. For example, a regulator might give the regulated utility the right to recover significant storm costs if they are in excess of those included in rates. In some cases, costs are built into the carrying amount of assets. For example, amounts might be

included as a component of fixed assets that are recovered over time as recoveries of depreciation expense.

(b) how does the rate-setting mechanism adjust for unexpected changes in demand for the rate-regulated goods or services;

Some provinces have rate normalisation plans that adjust billings for the effects of weather abnormalities, broad external factors, or to compensate the regulated utility for demand-side management initiatives. The recovery of incurred costs subject to these types of rate-setting mechanism is part of the overall regulatory compact.

(c) has there been a recent trend whereby the balances of the variance amounts have been increasing?

The balances in variance and deferral amounts for utilities fluctuate. Increases often reflect capital renewal programmes or special initiatives that give rise to increased costs in certain periods (for example, large capital renewal projects and smart metering programmes).

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Appendix 3 – Germany

The regulatory environment in Germany comes in various forms. The following discussion solely refers to the rate regulation mechanism for power and gas transportation and distribution networks which was determined to be most relevant for the purpose of the Discussion Paper.

Question 1 – Supplementary information

Listed entities in Germany are required to apply IFRS as endorsed by the European Union.

Question 2 – What are the objectives of the rate regulation and how do they influence the interaction between the rate regulator, the rate-regulated entity and customers?

(a) what are the high-level objectives of the rate regulation (for example, to restrict prices or to influence the levels of supply and demand or to restrict or encourage competition);

Transportation and distribution networks in Germany are operated by a large number of suppliers, each serving one or more 'grid' area exclusively. Operators of the networks are monopolies and, unlike participants in competitively organised markets, do not have a vested interest in cutting costs and passing these cost reductions on to their customers in order to achieve a competitive advantage and to increase market share.

The primary objective of rate regulation is to earn a fair rate of return. It is also aimed at improving efficiency which results in substantive decreases in network distribution charges. The security, stability and quality of the gas and power supply also constitute necessary conditions which are to be ensured by the regulatory body.

(b) how these objectives are reflected in the nature of the rate-setting mechanism?
(i) is the rate-setting mechanism designed to give the rate-regulated entity a 'fair rate of return' (for example, a cost-plus mechanism) or is the focus more on reducing the cost to customers (for example, a price-cap or other incentive-based mechanism);
(ii) are there incentives to meet targets that are not directly related to the cost-rate relationship (for example, efficiency, service levels, infrastructure investment, increased supply capacity or reliability, use of alternative resources or reduction in customer demand or usage);
(iii) does the rate regulation fix the price per unit or does it provide some flexibility for the entity to set prices (for example, through price ranges or caps, based on either unit prices or total revenue or total profitability); and
(iv) are there other aspects of the rate-setting mechanism that reflect any specific objectives not envisaged above?

The rate mechanism to achieve the objectives mentioned above was significantly changed in 2009. Until 2009 the regulator determined the rates for power and gas network usage by applying a fixed margin to the pre-approved cost structure of the operator (that is, prices were developed by means of a cost-plus mechanism). Network operators were thereby enabled to earn a fair rate of return. The rigid coupling of costs and prices set appropriate incentives for additional investments, but it did not encourage network operators to improve efficiency because their costs were compensated regardless. The cost-plus mechanism was replaced by an incentive regulation scheme in 2009. This is described under Question 3 below.

Question 3 – What sort of rights or obligations does the regulation create?

(a) whether the rate-regulated entity has an exclusive right to operate in the market;

The rate-regulated entity has an exclusive right and obligation to operate in the specified network area. It owns the assets and is entitled by government agency.

(b) if the entity's right to operate in the market is established by licence:
(i) is there a cost to acquire the licence; and
(ii) can the licence be revoked, renewed or transferred;

There is no specific cost for the licence, except that the assets need to be maintained in an operating condition. If the entity does not provide services as specified by laws and regulations, the government agency can initiate misuse proceedings against the operator and, as a final consequence, revoke the licence to operate.

(c) how competition is excluded or encouraged;

It is a natural monopoly. Competition is excluded by the nature of assets (there is only one network in each specified area). Efficiency however is achieved by an incentive based regulatory mechanism that separates cost and returns.

(d) how the rights and obligations are expressed, for example, as a cap on the rate of return, as the right to recover entity-specific costs, as a right to recover an allowed level of costs (whether or not incurred by the entity), or as a right to recover specific types of costs without limit if and when incurred; and

The incentive regulation in Germany defines a total revenue cap for each network operator rather than determining prices by adding a fixed surcharge on the individual operator's cost base. The starting point for calculating the revenue cap is the pre-approved cost base of the operator. A systematic distinction is made between costs that cannot be influenced by the operator and costs which are under the operator's control. Controllable costs are subject to individual efficiency targets which are determined by a benchmarking exercise that compares the level of efficiency of similar network operators operating in other 'grids'. If the proceeds received within a predefined period exceed the revenue cap by a specified rate, the operator is obliged to reduce the network charges immediately. Security, stability and quality of the power and gas supply are taken into account through additions to the revenue cap which reflects the respective investments made by the operator.

The concept of incentive regulation is based on the decoupling of costs and proceeds. A set revenue cap encourages network operators to increase profits by reducing their costs. Less-efficient operators are forced to improve their cost structure in order to avoid any losses.

(e) whether the entity can choose to stop providing the goods or services that are subject to rate regulation and, if so:
(i) how is this achieved; and
(ii) what are the consequences for the entity?

An entity cannot choose to stop providing the goods or services that are subject to rate regulation. If the shareholder of the entity intends to stop doing business in the specified area, it is required to sell the entity to another shareholder who is then obliged to operate the network as required by regulation.

Question 4 – How does the rate-regulated entity enforce its rights, or how does the rate regulator enforce the settlement of the rate-regulated entity's obligations?

(a) does the rate regulation provide for retrospective recovery or reversal of under- or over-recoveries of allowable costs? If so, how is this achieved, for example through cash payments or other asset transfers to or from parties outside the rate-regulated entity (such as individual customers or groups of customers, the rate regulator or the government);

The regulatory responsibilities are assumed by government agencies. These regulatory agencies have comprehensive authorities, in particular the following:

- approval of the network fees for the delivery of electricity and gas;
- prevention and/or removal of objects that block supplier and consumer access to the energy supply network;
- pursuit of misuse proceedings against network operators; and
- passing of uniform federal provisions to ensure equal business conditions throughout Germany.

Decisions made by the regulatory agencies on the approval of network fees are issued in the form of notices (primarily as maximum fee notices), against which objections and appeals could be raised with the competent State Supreme Court.

The Incentives Regulation Act regulates the revenue cap for network operators, which is equivalent to the total permitted network costs. A network operator's revenue cap (which the operator is allowed to reach as a result of the combination of income from network fees and other earnings) is determined at the beginning of every five-year regulatory period for every year of the upcoming regulatory period based on a cost review. Each year, the difference between the revenue cap and the actual earnings is entered into a regulatory account (see under Question 5 below) by the regulatory agency.

The enforceability of entitlements is governed by law. The network user is required to enter into a network usage agreement with the network operator into whose network the user feeds the energy or from whose network the user procures the energy. Network operators are required to publish the network fees that will be in effect for the following year by 15 October of the preceding year.

(b) are the rights and obligations separable from the business; and
(c) what happens to the rights or obligations when the entity ceases to provide the rate-regulated goods or services?

The method described above ensures that the regulatory entitlements of network operators can be enforced, provided their own network operation is implemented properly. If a network operator should fail to meet its obligations, the competent regulatory agency has the option to initiate misuse proceedings against this operator.

Question 5 – How does the rate regulation ensure the recovery or reversal of under- or over-recoveries of allowable costs? Are these mechanisms effective in recovering or reversing those amounts within the targeted time frame?

(a) what is the mechanism for tracking the recovery or reversal of such variance amounts;
(b) how does the rate-setting mechanism adjust for unexpected changes in demand for the rate-regulated goods or services;

The network operator calculates the expected usage charges for its customers in order to meet the revenue cap. Such charges depend on various factors including the future demand and, as such, are only derived as an estimate. This method results in variances between the revenue cap and the actual revenue. These 'over- and under-revenues' are accounted for in the regulatory account.

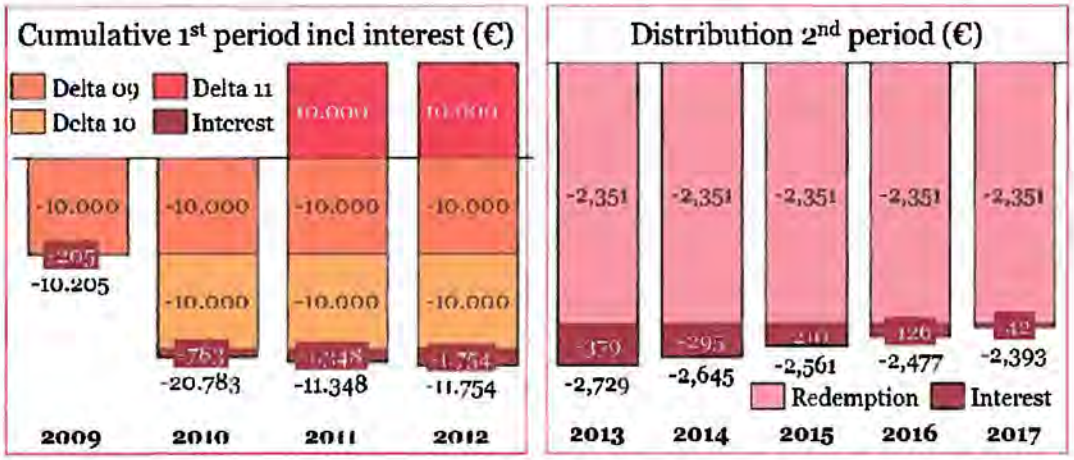
The regulatory account is carried forward over the regulatory period of five years. The annual over- and under-revenues are accounted for to build up a cumulative balance over the regulatory period. The cumulative average of the beginning and ending value of the regulatory account for a calendar year (1/1 and 31/12) is multiplied by an annual interest rate based on the 10-year average of German issuer corporate bonds. The interest charge is added to the balance of the regulatory account.

An example of this is as follows:

Calendar year	**2009**	**2010**	**2011**	**2012**	**Total**
Revenue cap (k€)	1,000	1,000	1,000	-	3,000
Actual revenues (k€)	1,010	1,010	990	-	3,010
Delta on year end (k€)	-10	-10	+10	-	-10
Previous year balance (k€)	0	-10.2	-20.8	-11.3	
Average year begin and end values (k€)	-5.0	-15.2	-15.8	11.3	
10-year average bonds of German corporate issuers (%)	4.09	3.80	3.58	3.58	
Interest (k€)	-205	-578	-565	-406	
Total balance after interest (k€)	-10.2	-20.8	-11.3	-11.8	

If the over-revenue for a year is more than 5% above or below the revenue cap, the network operator is required to lower, or allowed to increase, the network usage charges. The adjustment of the network usage charges takes place in the second year after the 5% criterion was fulfilled.

The cumulative balance of a regulatory period is allocated by uniform charges to the five years of the next regulatory period. The difference in the last year of a regulatory period is generally not included in the cumulative balance for the next regulatory period, but will be added to the following regulatory period. Interest is calculated on an annual basis on the remaining cumulative balance of the regulatory account brought forward.



(c) has there been a recent trend whereby the balances of the variance amounts have been increasing?

We are not aware of any specific trends in the build-up of the regulatory account.

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Appendix 4 – Hong Kong

The regulatory environment in Hong Kong comes in various forms. The following discussion solely refers to the rate regulation mechanism for electricity which was determined to be most relevant for the purpose of the Discussion Paper.

Question 1 – Supplementary information

Entities incorporated in Hong Kong are required to apply Hong Kong Financial Reporting Standards which are fully converged with IFRS from 2005, other than differences in particular transitional provisions.

Question 2 – What are the objectives of the rate regulation and how do they influence the interaction between the rate regulator, the rate-regulated entity and customers?

(a) what are the high-level objectives of the rate regulation (for example, to restrict prices or to influence the levels of supply and demand or to restrict or encourage competition);

The primary objectives of rate regulation are as follows:

- to secure the reliable supply of electricity for Hong Kong through an attractive managed capital investment programme;
- to ensure the supply is at an affordable price for consumers by forcing transparency of this; and
- to provide price stability for consumers by agreeing the price in advance each year.

Under the Scheme of Control ('SoC'), the rate-regulated entity has the contractual right to adjust tariffs to reflect changes in fuel costs and other operating costs. Customers are charged a rate that is pre-agreed between the rate-regulated entity and the government. There is no individual negotiation between the rate-regulated entity and the end customer.

All price changes are agreed between the government and the rate-regulated entity through the tariff adjustment mechanism specified in the SoC. The basic tariff rates are projected under the Development Plan review with government, covering a period of five years. After the Development Plan has been approved, basic tariff rates can be increased by up to 5% above the level specified in the Development Plan for a particular year without further government approval. A tariff review is conducted each year with government to agree on the implementation of tariff adjustments for the next year.

(b) how these objectives are reflected in the nature of the rate-setting mechanism?
(i) is the rate-setting mechanism designed to give the rate-regulated entity a 'fair rate of return' (for example, a cost-plus mechanism) or is the focus more on reducing the cost to customers (for example, a price-cap or other incentive-based mechanism);

The Permitted Return is currently set at the sum of (i) 11% of the total value of Average Renewables Net Fixed Assets and (ii) 9.99% of the total value of Average Net Fixed Assets. All fuel and other operating costs are passed through to the end customer in accordance with the SoC.

The SoC specifies a number of balances or accounts to capture customer monies which are not for the benefit of the shareholders. We describe some of the significant ones below:

- Fuel Clause Recovery Account – captures the cumulative difference between the standard cost of fuel (as agreed between the government and the entity) and the actual cost of fuel to the entity. This is recovered from, or passed back to, the customers through adjusting the fuel clause charge or rebate on future electricity sales.

- Tariff Stabilisation Fund – the difference between the gross tariff revenues and total operating costs plus the Permitted Return and tax. The purpose of the Tariff Stabilisation Fund is to accumulate funds to facilitate tariff reduction where appropriate. If gross tariff revenues for any year exceed or are less than the sum of (i) total operating costs, (ii) Permitted Return and (iii) SoC taxation charges, the excess is added to (or the deficit is deducted from) the Tariff Stabilisation Fund. An exception is that, in case of a deficit, the amount transferred is limited to the balance of the Tariff Stabilisation Fund. The balance of the account must always be in a liability position (that is, cumulative under-recovery cannot be recognised). The SoC specifies that the final liability will be discharged / settled by the rate-regulated entity after the expiry of the SoC. The mechanism for doing this will be agreed between the rate-regulated entity and the government.

- Rate Reduction Reserve – represents the accumulation of interest applied to the Tariff Stabilisation Fund balance for up to four years' worth of interest. Funds are accumulated to facilitate tariff reduction through rebate, where appropriate. The balance of the account must always be in a liability position and the SoC specifies that the final liability will be discharged after the expiry of the SoC.

- Asset decommissioning – represents the amount collected from customers during the term of the SoC for the costs of dismantling and removing fixed assets and restoring the sites on which they are located. The SoC specifies that the fund collected will be used for settlement of asset decommissioning costs.

(ii) are there incentives to meet targets that are not directly related to the cost-rate relationship (for example, efficiency, service levels, infrastructure investment, increased supply capacity or reliability, use of alternative resources or reduction in customer demand or usage);

Yes. The Permitted Return (that is currently set at 9.99% of the Average Net Fixed Assets) is adjusted for excess capacity, emissions performance incentives, customer performance incentives and energy efficiency and renewable incentives. The SoC specifies the mechanism and how Permitted Return is to be adjusted for these items. The mechanism for making these adjustments includes both adjustments to what is allowed to be included in the average net fixed assets and also adjustments to the Permitted Return percentage (in the range of -0.43% to +0.2% of the Average Net Fixed Assets), depending on the specific adjustment.

(iii) does the rate regulation fix the price per unit or does it provide some flexibility for the entity to set prices (for example, through price ranges or caps, based on either unit prices or total revenue or total profitability); and

As discussed above, the rate regulation allows a Permitted Return. The tariff rates charged to customers are reviewed and agreed with the government within the guidelines and the framework set out in the SoC to allow the rate-regulated entity to achieve the Permitted Return.

(iv) are there other aspects of the rate-setting mechanism that reflect any specific objectives not envisaged above?

No.

Question 3 – What sort of rights or obligations does the regulation create?

(a) whether the rate-regulated entity has an exclusive right to operate in the market;

There are two electricity suppliers responsible for generation, distribution and retail. The supplier is determined by the location of the customer. There is no customer discretion to select a supplier.

(b) if the entity's right to operate in the market is established by licence:
(i) is there a cost to acquire the licence; and
(ii) can the licence be revoked, renewed or transferred;

The right to operate is not established by a separate licence. While not formally established under the SoC, in practice this prevents other entrants from operating in the market. There is no cost associated with entering into the SoC. The right to operate can only be revoked if there is material breach of contract and cannot be transferred. The government has an option to renew on expiry of the term.

(c) how competition is excluded or encouraged;

Currently, competition is naturally excluded due to the size of investment involved and the presence of the SoC which allows the current operators to pass on fuel and operating costs to the end user.

(d) how the rights and obligations are expressed, for example, as a cap on the rate of return, as the right to recover entity-specific costs, as a right to recover an allowed level of costs (whether or not incurred by the entity), or as a right to recover specific types of costs without limit if and when incurred; and

See discussion under Question 2 above. The Permitted Return is currently set at the sum of (i) 11% of the total value of Average Renewables Net Fixed Assets and (ii) 9.99% of the total value of Average Net Fixed Assets. All fuel and other operating costs are passed through to the end customer in accordance with the SoC.

(e) whether the entity can choose to stop providing the goods or services that are subject to rate regulation and, if so:
(i) how is this achieved; and
(ii) what are the consequences for the entity?

The SoC is a finite arrangement. The SoC recognises that the rate-regulated entity has a 'continuing obligation to contribute to the development of HKSAR (Hong Kong Special Administrative Region) by providing sufficient facilities to meet the demand for electricity over the term of the agreement'. The SoC runs for a term of 10 years and gives the government an option to extend for a further term of five years.

Although the government might not extend the SoC, practically, there is no realistic possibility of building other power-generation facilities, so it is highly unlikely that the rate-regulated entity will stop providing services. Also, the rate-regulated entity might choose not to provide services after the

expiry of the term of the SoC. It is currently unclear what the rate-regulated entity and the government will choose to do at the end of the term.

During the term of SoC, it would be regarded as a breach of contract if the entity stopped providing goods or services under the contract.

Question 4 – How does the rate-regulated entity enforce its rights, or how does the rate regulator enforce the settlement of the rate-regulated entity's obligations?

(a) does the rate regulation provide for retrospective recovery or reversal of under- or over-recoveries of allowable costs? If so, how is this achieved, for example through cash payments or other asset transfers to or from parties outside the rate-regulated entity (such as individual customers or groups of customers, the rate regulator or the government);

Except for fuel costs, the current basic tariff-setting mechanism is not for the retrospective recovery or reversal of under- or over-recoveries of operating costs, taxation and Permitted Return. In October each year, a tariff review is conducted. See further discussion under Question 5 below.

The rate-regulated entity has the contractual right to adjust tariffs under the SoC in order to effect the recovery within predefined limits (even without formal government approval).

The SoC also discusses the recovery of any 'stranded costs'. 'Stranded costs' are costs that have not already been recovered and cannot in the future be recovered in the market as a result of a change implemented by the government to the electricity supply market structure causing material impact to any of the companies in respect of their electricity-related activities ('specified market change'). These might include a fair and reasonable return on the costs and would be net of appreciation in value of capital investments as a result of the specified market change. The SoC states that the entity and the government should 'in good faith discuss' these and 'having regard to international practices, agree on the mechanism for the recovery from the market of the Residual Stranded Costs'.

On an ongoing basis the SoC has been effective in recovering fuel costs. For example, the Fuel Clause Recovery Account has not increased to a material amount. The ultimate recovery at the end of the life of the SoC has not been tested.

(b) are the rights and obligations separable from the business; and

The rights and obligations are not viewed as being separable from the business. These rights and obligations are created by entering into a specific agreement (namely, the SoC) between the regulator and the rate-regulated entity. The SoC is not transferable.

(c) what happens to the rights or obligations when the entity ceases to provide the rate-regulated goods or services?

The rate-regulated entity is required to discharge its liabilities in respect of the Tariff Stabilisation Fund and the Rate Reduction Reserve at the end of the SoC term. The government could require continued maintenance of balances in these accounts; or, at least 12 months before expiry of the term, it could institute specific discussions regarding the way in which the rate-regulated entity should discharge these liabilities. Also, the rate-regulated entity could negotiate recovery of any stranded costs with the government.

Question 5 – How does the rate regulation ensure the recovery or reversal of under- or over-recoveries of allowable costs? Are these mechanisms effective in recovering or reversing those amounts within the targeted time frame?

(a) what is the mechanism for tracking the recovery or reversal of such variance amounts;

All price changes are agreed between the government and the rate-regulated entity through the tariff adjustment mechanism specified in the SoC. The basic tariff rates are projected under the Development Plan review with government, covering a period of five years.

After the Development Plan has been approved, basic tariff rates can be increased by up to 5% above the level specified in the Development Plan for a particular year without further government approval.

A tariff review is conducted each year with government to agree on the implementation of tariff adjustments for the next year.

This plan is subject to review and approval by the government (i) whenever development plans for major additions to the electricity generation, transmission and distribution system have been finalised; (ii) whenever development plans for major variations which would significantly increase basic projected tariff above a previously approved rate have been finalised; (iii) six months before expiry of the period covered by the previous development plan; and (iv) if the proposed basic tariff is more than 5% above the most recently approved basic tariff rate.

(b) how does the rate-setting mechanism adjust for unexpected changes in demand for the rate-regulated goods or services;

There is no specific mechanism for unexpected changes in demand for services.

Significant adjustments that might be required to basic tariff rates (that is, more than 5% above the most recently approved basic tariff rate), due to an unexpected change in demand, can be made through submission and approval of a new Development Plan, as described in Question 5(a) above.

The stranded cost recovery mechanism also exists for any cost variations arising from specified market change. See further discussion under Question 4 above.

(c) has there been a recent trend whereby the balances of the variance amounts have been increasing?

The balance in the Fuel Clause Recovery Account has been increasing due to an increase in the cost of fuel and the mix of more expensive fuel types. The fuel cost charge or rebate in the net tariff charge to customers is determined based on the projected fuel cost as well as the under- or over-recovery fuel clause account balance. The actual fuel cost might be different from the fuel clause charge to customers resulting in over- or under-recovery, which is captured in the fuel clause account. The entity is entitled to recover the under-recovery amount accumulated in the fuel clause account through the adjustment mechanism for fuel clause charge. Depending on negotiation and the political environment, only some of the under-recovery might be recovered in the following year. Any unrecovered amounts remain contractually recoverable and might be recovered in subsequent years (also through tariff adjustments).

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Appendix 5 – India

There are many forms of regulation in India. The two instances of rate regulation described below are: (i) a regulated maximum retail price (MRP) and subsidy mechanism for the manufacture of fertiliser; and (ii) a cost-plus mechanism for the distribution of power. The Indian fertiliser industry is a regulated industry wherein government regulates the MRP and also provides subsidies to farmers and agriculturists. Under the cost-plus mechanism, all reasonable costs of the power distribution utility, plus a return on equity (typically about 14%–16%), are allowed each year. Every state has an electricity regulator who is responsible for establishing regulations related to the distribution tariff (rate of electricity). These instances were determined to be most relevant for the purpose of the Discussion Paper.

Question 1 – Supplementary information

India applies Indian Accounting Standards. Indian Accounting Standards do not provide any specific guidance on rate regulation. However, power companies also need to follow the provisions of the Electricity Act in preparing their financial statements.

Question 2 – What are the objectives of the rate regulation and how do they influence the interaction between the rate regulator, the rate-regulated entity and customers?

(a) what are the high-level objectives of the rate regulation (for example, to restrict prices or to influence the levels of supply and demand or to restrict or encourage competition);
(b) how these objectives are reflected in the nature of the rate-setting mechanism?
(i) is the rate-setting mechanism designed to give the rate-regulated entity a 'fair rate of return' (for example, a cost-plus mechanism) or is the focus more on reducing the cost to customers (for example, a price-cap or other incentive-based mechanism);
(ii) are there incentives to meet targets that are not directly related to the cost-rate relationship (for example, efficiency, service levels, infrastructure investment, increased supply capacity or reliability, use of alternative resources or reduction in customer demand or usage);
(iii) does the rate regulation fix the price per unit or does it provide some flexibility for the entity to set prices (for example, through price ranges or caps, based on either unit prices or total revenue or total profitability); and
(iv) are there other aspects of the rate-setting mechanism that reflect any specific objectives not envisaged above?

<u>Regulated MRP and subsidy mechanism</u>

The objective is to ensure that products and services are available at affordable prices. The sale price is determined by the government. This price is generally lower than the cost of production. The difference between selling price and an 'expected cost of production' is paid by the government to the rate-regulated entity as a subsidy. The 'expected cost of production' is based on a predetermined formula which includes a reasonable rate of return for the rate-regulated entity. This process incentivises the rate-regulated entity to be cost efficient. The rate regulation fixes the price per unit.

Cost-plus mechanism

The objectives are to ensure that products and services are available at a fair price and are cost efficient, and that adequate investment is made to increase supply. The mechanism is designed to give rate-regulated entities a fair rate of return by using a cost-plus mechanism. The efficiency is ensured by benchmarking certain costs against specified norms. There are also incentives provided under the regulation if the distribution utility is able to perform better than the benchmark set by the regulator. Power distribution utilities are incentivised to achieve a lower distribution loss as compared to the norms. The tariff would be fixed considering a certain benchmark performance. For example, if the distribution loss target is set at 16%, and the distribution utility is able to achieve a distribution loss of less than 16%, the total return to the distribution utility would be the return on equity plus a share of the savings on account of lower distribution losses. The rate regulation fixes the price per unit.

To encourage competition, at times, the regulator has an option to fix the maximum price, and rate-regulated entities can sell at a price below the maximum price. However, such a scenario is yet to emerge in India, because there is only a single utility distributing power in most of the areas.

Question 3 – What sort of rights or obligations does the regulation create?

(a) whether the rate-regulated entity has an exclusive right to operate in the market;
(b) if the entity's right to operate in the market is established by licence:
(i) is there a cost to acquire the licence; and
(ii) can the licence be revoked, renewed or transferred;
(c) how competition is excluded or encouraged;
(d) how the rights and obligations are expressed, for example, as a cap on the rate of return, as the right to recover entity-specific costs, as a right to recover an allowed level of costs (whether or not incurred by the entity), or as a right to recover specific types of costs without limit if and when incurred; and
(e) whether the entity can choose to stop providing the goods or services that are subject to rate regulation and, if so:
(i) how is this achieved; and
(ii) what are the consequences for the entity?

Regulated MRP and subsidy mechanism

The rate-regulated entity does not have an exclusive right to operate in the market. The number of licences for a particular area would be decided by the respective state regulator. The main focus is on meeting the quality parameters, especially the nutrient content of the fertilisers. Generally, the cost of a licence is not material. The regulator can revoke the licence if the conditions are not met. However, India is still dependent on imports to meet the large part of its fertiliser demand.

Competition is encouraged by attracting various players to supply the product and services by investment policies in the sector.

The primary right arising from the arrangement is a receivable from the government (that is, a subsidy due to the rate-regulated entity). The entity can choose to stop operating in a particular market but, in that case, the licence is revoked.

Cost-plus mechanism

Power distribution companies receive a licence to operate in a particular region. The licence might not be contractually exclusive, but there are generally a limited number of entities operating in a particular region. Generally, there is no significant cost to acquire the licence. However, there might be annual licence fees linked to revenue. The regulator can revoke the licence if the conditions specified when issuing the licence are not met.

Competition is encouraged by attracting new entities to supply the products and services through investment policies. The right is to recover entity-specific costs with a margin, subject to specified norms.

An entity can apply to the regulator for revocation of its licence. If the revocation is granted, the entity can stop providing services. The regulator invites applications for the sale of a utility whose licence is revoked. As an interim arrangement, the regulator can appoint the administrator of the utility. The purchaser will buy the utility free from any debt, mortgage or similar obligations. Such purchaser would be deemed to be the licensee going forward.

Question 4 – How does the rate-regulated entity enforce its rights, or how does the rate regulator enforce the settlement of the rate-regulated entity's obligations?

(a) does the rate regulation provide for retrospective recovery or reversal of under- or over-recoveries of allowable costs? If so, how is this achieved, for example through cash payments or other asset transfers to or from parties outside the rate-regulated entity (such as individual customers or groups of customers, the rate regulator or the government);
(b) are the rights and obligations separable from the business; and
(c) what happens to the rights or obligations when the entity ceases to provide the rate-regulated goods or services?

Regulated MRP and subsidy mechanism

The rate-regulated entity is entitled to receive a cash equivalent to the subsidy from the government. There are instances where the government has settled its obligations by issuing bonds rather than the payment of cash. The entity will receive the cash for existing receivables for the subsidy when it ceases to provide the rate-regulated goods or services.

Cost-plus mechanism

The rate regulation provides for recovery of under- or over-recoveries by changes in future prices. See further discussion under Question 5 below.

Question 5 – How does the rate regulation ensure the recovery or reversal of under- or over-recoveries of allowable costs? Are these mechanisms effective in recovering or reversing those amounts within the targeted time frame?

(a) what is the mechanism for tracking the recovery or reversal of such variance amounts;
(b) how does the rate-setting mechanism adjust for unexpected changes in demand for rate-regulated goods or services;
(c) has there been a recent trend whereby the balances of the variance amounts have been increasing?

Regulated MRP and subsidy mechanism

The cost of production is based on a predetermined formula in which under- or over-recovery does not arise. The government reviews the formula periodically. At times, based on the outcomes of the audits, the government changes the formula. These changes are generally prospective in nature.

Cost-plus mechanism

The rate-regulated entities are required to provide information to the regulator on a periodic basis. The regulator reviews the norms at periodic intervals, based on information and representations from rate-regulated entities, beneficiaries and the general public. The regulator conducts a mid-year performance review to revise its estimates, and a year-end 'true-up' for approving final costs and revenues for the relevant period. During every rate-setting exercise, the regulator conducts a 'true-up' for the recently completed year, a mid-year 'performance review' of the ongoing year, and estimates for the 'annual revenue requirement' for the next year.

Consolidated surplus and deficits are used to determine new rates for the next year. The timeline for recovery is described in the relevant electricity regulations. Ideally, the under- or over-recovery in a year should be recovered within the next two financial years. Most states allow for a specific charge which would cover the variation in fuel price (which constitutes a major portion of the tariff) on a quarterly basis, based on a pre-specified formula which is calculated outside the annual rate-setting exercise. Therefore, any increase (subject to a cap) in the fuel prices would be allowed to be recovered in the short term.

The variance amount is increasing as a result of an increase in demand or non-economic factors limiting a rise in rates, even for prudently incurred expenses by the utilities. This is primarily the result of delays in filing for under-recovery by the distribution utilities and inadequate rate adjustments provided by the regulator.

Appendix 6 – Italy

The following discussion focuses on the Italian energy sector. In this sector, the activities subject to tariff regulation generally relate to the operation of infrastructures for the transportation, distribution and storage of the commodities (electricity, natural gas and water). The regulation is performed by the Italian Authority for electricity and natural gas (AEEG). The AEEG issues specific resolutions every year in order to determine the tariffs applicable for the next year.

The transportation and storage activities are performed under licences granted by the State, which have an indefinite duration. By contrast, the distribution activities referred to above are carried out under concession arrangements having a specified duration.

Question 1 – Supplementary information

It would be helpful if you could include information about what local GAAP is applied and how the effects of the rate-regulatory scheme are reported in accordance with that local GAAP.

Listed entities in Italy are required to apply IFRS as endorsed by the European Union.

Concession arrangements related to distribution activities are considered as falling within IFRIC 12's scope and are accounted for accordingly.

Question 2 – What are the objectives of the rate regulation and how do they influence the interaction between the rate regulator, the rate-regulated entity and customers?

(a) what are the high-level objectives of the rate regulation (for example, to restrict prices or to influence the levels of supply and demand or to restrict or encourage competition); and

The AEEG pursues different objectives including the following:

- to grant access to the market to any operator by determining a remuneration of net invested capital, thereby encouraging competition;
- to incentivise efficiency by encouraging investments in infrastructures; and
- to reduce the cost to customers by determining mandatory tariffs.

In this way, the AEEG also allows any users to access the infrastructures on non-discriminatory terms.

(b) how these objectives are reflected in the nature of the rate-setting mechanism?
(i) is the rate-setting mechanism designed to give the rate-regulated entity a 'fair rate of return' (for example, a cost-plus mechanism) or is the focus more on reducing the cost to customers (for example, a price-cap or other incentive-based mechanism);
(ii) are there incentives to meet targets that are not directly related to the cost-rate relationship (for example, efficiency, service levels, infrastructure investment, increased supply capacity or reliability, use of alternative resources or reduction in customer demand or usage);
(iii) does the rate regulation fix the price per unit or does it provide some flexibility for the entity to set prices (for example, through price ranges or caps, based on either unit prices or total revenue or total profitability); and

(iv) are there other aspects of the rate-setting mechanism that reflect any specific objectives not envisaged above?

The conceptual framework adopted by the AEEG for determining the applicable tariffs is basically the same for all the activities/commodities involved. It substantially consists of applying a Remuneration Asset Based (RAB) mechanism. The tariff mechanism is primarily derived from the sum of the following three components: operating expenses, amortisation and depreciation, and remuneration on net invested capital.

The components mentioned above are calculated by the AEEG using the information obtained from the operators by means of mandatory data collection set out under specific resolutions by the AEEG. The tariff components based on the input data obtained from the operators are different from the corresponding figures shown in the operators' financial statements.

For operating expenses, the AEEG determines an average value for the industry and applies a certain level of discount depending on the efficiency goal. The net invested capital and the related amortisation and depreciation charges are determined by the AEEG using the information collected from the operators on capital expenditures, disposals and government grants. The AEEG stratifies the data received by year and assets category. It applies different rates to each category for inflation, and it calculates amortisation and depreciation charges on the basis of useful lives. The results obtained do not correspond to the financial statements since they are based on revalued costs rather than historical ones.

A rate (based on the model of weighted average cost of capital) is applied to the resulting net invested capital to determine the relevant component of the tariff. The remuneration rate is higher for new investments in order to incentivise operators to improve the infrastructure. Significant investments for enlarging and improving the existing infrastructure are authorised by the AEEG. The AEEG verifies whether the investments proposed by the operators are beneficial to the system.

The AEEG determines two types of tariff, based on the variables mentioned above: mandatory tariffs, and target tariffs. The mandatory tariffs are those the operators are obliged to apply to their customers in billing the services supplied. The target tariffs are used to determine the cap on the total amount of revenues. The AEEG publishes the mandatory and target tariffs each year for the next year. The operators invoice their customers based on the mandatory tariff during the year. They compare the total amount of revenues invoiced to their customers with the total amount of revenues resulting from applying the target tariffs at the year end. The difference between the two values is called the 'perequazione' (equalisation) and represents the adjustment to pay to (or receive from) the Cassa Conguaglio (CCSE), an equalisation fund managed by the AEEG.

Question 3 – What sort of rights or obligations does the regulation create?

(a) whether the rate-regulated entity has an exclusive right to operate in the market;
(b) if the entity's right to operate in the market is established by licence:
(i) is there a cost to acquire the licence; and
(ii) can the licence be revoked, renewed or transferred;
(c) how competition is excluded or encouraged;
(d) how the rights and obligations are expressed, for example, as a cap on the rate of return, as the right to recover entity-specific costs, as a right to recover an allowed level of costs (whether or not

incurred by the entity), or as a right to recover specific types of costs without limit if and when incurred; and

(e) whether the entity can choose to stop providing the goods or services that are subject to rate regulation and, if so:

(i) how is this achieved; and

(ii) what are the consequences for the entity?

Operators recognise revenues equal to the amount invoiced to the customers plus the difference between the revenues invoiced and the target revenues (calculated on the basis discussed above). This difference represents an asset or liability for the operators under IAS 32 and IAS 39. If the revenues invoiced to customers are lower than the target revenues, the operators will record an account receivable for the right to receive cash from the CCSE. If the revenues invoiced to customers are higher than the target revenues, the operator will record a liability for the obligation to pay cash to the CCSE.

The assets and the liabilities arise in the same year in which the operator has provided the services and invoiced the customers, even though the mandatory tariffs and target tariffs are based on inputs related to the previous years.

Question 4 – How does the rate-regulated entity enforce its rights, or how does the rate regulator enforce the settlement of the rate-regulated entity's obligations?

(a) does the rate regulation provide for retrospective recovery or reversal of under- or over-recoveries of allowable costs? If so, how is this achieved, for example through cash payments or other asset transfers to or from parties outside the rate-regulated entity (such as individual customers or groups of customers, the rate regulator or the government);

(b) are the rights and obligations separable from the business; and

(c) what happens to the rights or obligations when the entity ceases to provide the rate-regulated goods or services?

As discussed above, the entity collects any receivable and settles any payable with the CCSE in the year following the provision of the service. The entity is entitled to receive cash from (or obliged to pay cash to) the CCSE, even if they were to stop operating in the following year. Rights and obligations that have arisen during the period in which the entity operates the infrastructure remain with that entity, even if they cease to provide the service.

Question 5 – How does the rate regulation ensure the recovery or reversal of under- or over-recoveries of allowable costs? Are these mechanisms effective in recovering or reversing those amounts within the targeted time frame?

(a) what is the mechanism for tracking the recovery or reversal of such variance amounts;

(b) how does the rate-setting mechanism adjust for unexpected changes in demand for the rate-regulated goods or services;

(c) has there been a recent trend whereby the balances of the variance amounts have been increasing?

All recoveries and reversals are tracked by the CCSE and settled in the following year. There is no estimation of future costs or income in determining the revenues and costs of the reporting year. There are no other adjustments to the mandatory tariffs and target tariffs determined for the reporting year.

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Appendix 7 – United Kingdom (UK)

The responses below are for UK regulation of the electricity and gas sectors – this is now limited to the near-monopoly activities of network operation of transmission and distribution. Regulation in the UK is also developing to meet the needs of the sector, and so it is increasingly difficult to label as one form of regulation or another.

Question 1 – Supplementary information

It would be helpful if you could include information about what local GAAP is applied and how the effects of the rate-regulatory scheme are reported in accordance with that local GAAP.

Both UK GAAP and IFRS are applied. The approach is similar under both, largely driven by FRS 12 under UK GAAP. FRS 12 provides an example indicating that a right and obligation to increase or decrease prices in future years is not an obligation at the balance sheet date. As a result, under- and over-recoveries are not recorded in the balance sheet.

After the release of FRS 12, there was mixed practice in the industry, and UITF released a practice note re-emphasising this point.

Question 2 – What are the objectives of the rate regulation and how do they influence the interaction between the rate regulator, the rate-regulated entity and customers?

(a) what are the high-level objectives of the rate regulation (for example, to restrict prices or to influence the levels of supply and demand or to restrict or encourage competition); and

The current objective of financial regulation of the electricity and gas transmission and distribution sectors is to enable operators to meet the challenges and opportunities of delivering the networks required for a sustainable, low carbon energy sector, whilst delivering value for money for existing and future consumers.

(b) how these objectives are reflected in the nature of the rate-setting mechanism?
(i) is the rate-setting mechanism designed to give the rate-regulated entity a 'fair rate of return' (for example, a cost-plus mechanism) or is the focus more on reducing the cost to customers (for example, a price-cap or other incentive-based mechanism);
(ii) are there incentives to meet targets that are not directly related to the cost-rate relationship (for example, efficiency, service levels, infrastructure investment, increased supply capacity or reliability, use of alternative resources or reduction in customer demand or usage);
(iii) does the rate regulation fix the price per unit or does it provide some flexibility for the entity to set prices (for example, through price ranges or caps, based on either unit prices or total revenue or total profitability); and
(iv) are there other aspects of the rate-setting mechanism that reflect any specific objectives not envisaged above?

The revenue-setting process is designed to deliver certain objectives. The basic formula is: revenue = innovation plus incentives plus outputs. Price controls are now set for an eight-year period, over which the network operator is required to deliver certain outputs by way of network reliability and new build, replacement and repair of the network.

The underlying basis is a fixed allowable revenue amount that is adjusted for inflation and an annual cost-efficiency assumption. The network operator is also incentivised to meet certain targets (or penalised for failing to meet them). These incentives are separately measured and rewarded. There is also the ability to open up or agree separately revenue in relation to specific areas of uncertainty.

The broad principle is there is an allowable total revenue for a 12-month period, and any amount over-collected should be reflected in the following year through price reduction, and any amount under-collected should be reflected in the following year by a price increase.

The underlying basis for setting the allowed revenue for the first year of a price control period is a business plan submitted by the network operator. The costs in that plan are compared to the regulator's view of a benchmarked efficient cost base. Revenue is then calculated targeting an efficient cost base, plus cost of asset construction and a return on the regulated asset base (based on a benchmark cost of capital). So, while the linkage between revenue and cost base is less explicit than traditional 'cost-based' regulation, there is still a linkage that is reset at the start of each price control period.

The regulator sets the total allowable revenue in any one year. Prices are then set by the network operator by forecasting system volume and setting a price per unit. So the actual amount of revenue collected will be greater or less than allowable revenue to the extent that there is an under- or over-forecast of volume. Any such amount is then added to or subtracted from the allowable revenue for the following year, and the calculation is re-performed. There are also various incentives that are unrelated to system volume which are collected through allowable revenue and costs related to one-off events that can be collected over a shorter period.

Question 3 – What sort of rights or obligations does the regulation create?

(a) whether the rate-regulated entity has an exclusive right to operate in the market;
(b) if the entity's right to operate in the market is established by licence:
(i) is there a cost to acquire the licence; and
(ii) can the licence be revoked, renewed or transferred;
(c) how competition is excluded or encouraged;
(d) how the rights and obligations are expressed, for example, as a cap on the rate of return, as the right to recover entity-specific costs, as a right to recover an allowed level of costs (whether or not incurred by the entity), or as a right to recover specific types of costs without limit if and when incurred; and
(e) whether the entity can choose to stop providing the goods or services that are subject to rate regulation and, if so:
(i) how is this achieved; and
(ii) what are the consequences for the entity?

The right to operate is established by the licence for each network. The licence is granted by the regulator, the Office of Gas and Electricity Markets (Ofgem). Ofgem establishes the price control and conducts the price control review.

The price control establishes the rights and obligations of the network operator with regard to specific operating performance and the associated financial implications through setting total allowable revenues and the basis on which that can be varied.

Question 4 – How does the rate-regulated entity enforce its rights, or how does the rate regulator enforce the settlement of the rate-regulated entity's obligations?

(a) does the rate regulation provide for retrospective recovery or reversal of under- or over-recoveries of allowable costs? If so, how is this achieved, for example through cash payments or other asset transfers to or from parties outside the rate-regulated entity (such as individual customers or groups of customers, the rate regulator or the government);
(b) are the rights and obligations separable from the business; and
(c) what happens to the rights or obligations when the entity ceases to provide the rate-regulated goods or services?

See under Questions 2 and 3 above for further discussion on the price control. The price control is binding on the entity once agreed. If the entity disputes the price control proposals set out by Ofgem, the entity has the right of appeal to the Competition Commission. Such appeals are rare. Ofgem has the power to fine the operators for non-performance or under-performance and has the ultimate sanction of licence withdrawal.

We are not aware of any instances under the current regulatory regime that have clarified whether the rights and obligations are separable from the business and what happens to those rights and obligations when the entity ceases to provide rate-regulated goods or services.

Question 5 – How does the rate regulation ensure the recovery or reversal of under- or over-recoveries of allowable costs? Are these mechanisms effective in recovering or reversing those amounts within the targeted time frame?

(a) what is the mechanism for tracking the recovery or reversal of such variance amounts;
(b) how does the rate-setting mechanism adjust for unexpected changes in demand for rate-regulated goods or services;
(c) has there been a recent trend whereby the balances of the variance amounts have been increasing?

The mechanism for tracking the recovery or reversal of variance accounts is discussed above. The accounts include the effects of any changes in demand. However, there are rarely significant unexpected and sustained changes in demand. There is no trend whereby the balances of the variance accounts have been increasing or decreasing.

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Appendix 8 – United States

Our responses to Questions 2 to 5 focus on the rate regulation of traditional utilities in the United States. Traditional utilities are defined as those that are generally the sole provider of utility services (primarily sale and distribution of electricity, natural gas and water) to customers and are subject to state and/or federal regulation by a regulator independent of the utility.

Question 1 – Supplementary information

It would be helpful if you could include information about what local GAAP is applied and how the effects of the rate-regulatory scheme are reported in accordance with that local GAAP.

The Financial Accounting Standards Board's Accounting Standards Codification 980, *Regulated Operations* ('ASC 980'), primarily addresses the accounting for traditional cost-based regulation whereby an entity's rates are set at levels to recover costs of providing regulated services, including a return on capital employed, subject to frequent review and adjustment. The purpose of ASC 980 is for financial reporting to reflect the economic effects of certain rate-regulated activities and actions taken by regulators that arise in the normal course of regulated operations. The basic premise of ASC 980 is that the actions of a regulator will impact the financial statements prepared for financial reporting purposes only if the action has an economic effect on the regulated utility and meets the requirements for recognition or deferral under the standard. If a regulated entity is subject to ASC 980, the applicable provisions within that standard are applied as an adjustment to, or in lieu of, other accounting principles generally accepted in the United States (where specifically required by ASC 980).

ASC 980 provides guidance on (1) determining whether an entity has regulated operations subject to rate-regulated accounting, and (2) accounting for certain assets, liabilities, and transactions arising from regulated operations. A regulated entity is required to apply ASC 980 if it meets three specified criteria:

- rates for regulated services are established by an independent, third-party regulator or its own governing board;
- regulated rates are designed to recover its costs of providing the regulated services or products; and
- rates that will recover its costs can be charged to and collected from the entity's customers.

An entity subject to ASC 980 will recognise a regulatory asset for all or part of an incurred cost that would otherwise be charged to expense if it is probable that the specific cost is subject to recovery in future revenues. An entity will recognise a regulatory liability for amounts which are probable of refund to customers, amounts currently collected for future expected costs, or gains which are probable of being returned to ratepayers.

Question 2 – What are the objectives of the rate regulation and how do they influence the interaction between the rate regulator, the rate-regulated entity and customers?

(a) what are the high-level objectives of the rate regulation (for example, to restrict prices or to influence the levels of supply and demand or to restrict or encourage competition)?

The primary objective of rate regulation of these entities is to provide safe and reliable utility services (for example, electricity, gas and water) at just, reasonable and affordable prices to customers and at rates that provide investors with a reasonable rate of return. Utilities are capital intensive and, in general, their products are not differentiated. So, to achieve the most efficient and cost-effective service to customers while ensuring access to sufficient capital, the model that developed in the United States was one where private investors provided the capital in exchange for monopoly status. This model results in the need for price regulation to balance the needs of customers and investors.

A regulatory compact binds the regulator, customers, the utility and the utility's investors. This regulatory compact involves:

- regulated utilities' rates being set by independent, third-party regulators empowered by statute to establish rates that bind customers and the utilities;
- the regulator granting monopoly status to utilities and creating a legal obligation to ensure the public interests are served with respect to the regulated utility's operations; and
- requiring utilities and their investors to seek regulatory approval for certain decisions (for example, business acquisitions and disposals).

(b) how these objectives are reflected in the nature of the rate-setting mechanism?
(i) is the rate-setting mechanism designed to give the rate-regulated entity a 'fair rate of return' (for example, a cost-plus mechanism) or is the focus more on reducing the cost to customers (for example, a price-cap or other incentive-based mechanism);

The rate-setting mechanism is primarily designed to provide the rate-regulated entity with recovery of its costs plus a fair rate of return. Some jurisdictions have introduced various other rate mechanisms, such as rate caps or sharing mechanisms for targeted costs, to help manage rates.

(ii) are there incentives to meet targets that are not directly related to the cost-rate relationship (for example, efficiency, service levels, infrastructure investment, increased supply capacity or reliability, use of alternative resources or reduction in customer demand or usage);

The regulator can supplement an overall cost-based rate model with additional rate-setting mechanisms. For example, regulators can provide rate programs that give the regulated utility the right to collect a fixed amount of revenue for the year, or a fixed amount per customer, to address fluctuations in consumption. In such cases, the amount of revenue provided is based on the utility's cost of service plus a return. In another example, regulators could provide utilities with additional revenue if specified customer service or safety criteria are met.

(iii) does the rate regulation fix the price per unit or does it provide some flexibility for the entity to set prices (for example, through price ranges or caps, based on either unit prices or total revenue or total profitability); and

The regulator establishes the rates that can be charged to customers through the rate-setting process. Rates can include a fixed service component (a monthly charge) as well as consumption-based charges. These rates and charges can vary between different regulated utility customer classes. The utility might have input into the rate design and the allocation of cost of service between customer classes; but, under rate regulation, the regulator has the final decision and authority to establish rates. In some jurisdictions, specified customer classes or a component of the service could be subject to competition (for example, generation of electricity). In such cases, the regulated utility might be able to participate

in competition (and thus would not be subject to regulation) or might continue to be regulated as the 'provider of last resort'.

(iv) are there other aspects of the rate-setting mechanism that reflect any specific objectives not envisaged above?

Utilities might be leveraged to accomplish certain policy objectives. For example, a regulator might instruct a regulated utility to collect a specified amount through rates to fund a state-mandated public purpose program (such as low income and energy conservation programs). The rate is established by the regulator, and the amounts collected must be used for the specified purpose.

Question 3 – What sort of rights or obligations does the regulation create?

Legal proceedings and regulatory rulings over the years have defined the details of the current regulatory system. The *Munn v. Illinois* case in 1877 established the precedent that business interests used for the public good could be regulated by the government. The *Bluefield Waterworks v. Public Service Commission of West Virginia* case in 1923 established the right of the regulated utility to charge rates which provide recovery of its prudently incurred costs, plus a fair return on capital. The *Federal Power Commission v. Hope Natural Gas Company* case in 1944 established that regulatory commissions have the right to establish rates in any reasonable manner which they see fit, as long as the result is a rate which meets the standard established in the *Bluefield* case.

These decisions, along with others, have established the legal obligations of a regulated utility to incur all costs necessary to provide, maintain, and restore service to customers within its designated service areas on a non-discriminatory basis. In addition, these decisions create a regulated utility's rights to recover the costs prudently incurred in fulfilling these obligations, and to earn a reasonable return on their capital, and create the obligation for the regulated utility to refund to customers over-recoveries of allowable costs.

(a) whether the rate-regulated entity has an exclusive right to operate in the market;

Regulated utilities are granted a monopoly to provide designated services (for example, electric power, gas and water) to the public within a defined service area. In some jurisdictions, specified customer classes or a component of the service could be subject to competition, as discussed below.

(b) if the entity's right to operate in the market is established by licence:
(i) is there a cost to acquire the licence; and
(ii) can the licence be revoked, renewed or transferred;

The licensing construct varies from one jurisdiction to another.

(c) how competition is excluded or encouraged;

Competition for distribution services is generally excluded, given the monopoly status granted to regulated utilities. Competition for the sale of electricity or natural gas to some or all customer classes might be allowed, depending on the state. In states that provide retail choice for electricity or gas, the distribution systems remain regulated, because customers continue to purchase distribution services despite purchasing the commodity from a competitive marketer.

As regards electricity, beginning in the 1990s, a number of states passed retail electric choice legislation. Retail electric choice provides for the retail sale of electricity to some or all classes of customers. This form of deregulation is generally intended to give customers the right to choose suppliers (either the regulated utility or a competitive marketer), with the potential to purchase the commodity at a cost lower than rates permitted by the regulator to be charged by the regulated utility. As part of retail choice legislation, some states required investor-owned utilities to dispose of generation assets, through sales to independent power producers, banks or non-regulated affiliates. As a result of the California energy crisis in 2000 and 2001, the shift to electricity deregulation slowed significantly. Currently, 15 states provide for retail electric choice.

Competition for the sale of natural gas to most large commercial and industrial consumers has been allowed for many years. Competition for the sale of natural gas to smaller commercial and residential customers began in the 1990s.

(d) how the rights and obligations are expressed, for example, as a cap on the rate of return, as the right to recover entity-specific costs, as a right to recover an allowed level of costs (whether or not incurred by the entity), or as a right to recover specific types of costs without limit if and when incurred; and

The rights and obligations are expressed as the regulated utility's right to recover its costs and earn a reasonable return and the obligation to provide an ongoing service, ensuring reliability and delivery of the product. In general, a regulated utility's jurisdictional base rates are established through general rate cases that occur on a periodic basis. General rate cases typically utilise a 'test year' (that is, an estimate of costs for the year in which rates will go into effect) to determine the capital and operating costs to be recovered and the return to be earned by the regulated utility. The return is calculated based on the net assets used in delivering the regulated service multiplied by the weighted cost of equity and debt capital. As described further below, specified rate mechanisms might be provided for in general rate cases for expenses that are volatile and cannot be reliably estimated, to ensure there is no over- or under-recovery.

Each state has a specified process for the review and approval of rates, including testimony by representatives of the company, ratepayer advocates, and utility commission staff. Some costs might be questioned and ultimately disallowed through this process. The final rates established by the regulator incorporate the results of the evaluation and testimony process, as well as any negotiations between the company and regulator, within the applicable statutes and legal requirements of the state. In general, base rates do not change between rate cases, although some rate cases might specify rate increases in subsequent years. The rates are determined based on a total revenue requirement for the population of customers in the service territory. In other words, the total amount to be recovered (that is, the revenue requirement) is determined, and then the rate per unit to be charged to the customers is calculated by dividing the revenue requirement by the estimated usage by customers.

(e) whether the entity can choose to stop providing the goods or services that are subject to rate regulation and, if so:
(i) how is this achieved; and
(ii) what are the consequences for the entity?

Given the legal obligation to provide services to customers within its service area that is embodied in the regulatory compact, utilities cannot stop providing goods or services that are subject to rate regulation without the approval of the regulator.

Question 4 – How does the rate-regulated entity enforce its rights, or how does the rate regulator enforce the settlement of the rate-regulated entity's obligations?

The regulatory compact provides regulated utilities a right to recover amounts from, and an obligation to refund amounts to, customers, which is typically effected through adjustments to future billings. A considerable body of case law supports the legal enforceability of historical actions taken by a regulator. State regulatory laws generally prohibit the concept of 'retrospective ratemaking', so that a current regulator's decision cannot retroactively reverse the actions of a previous regulatory order. The effect of this prohibition is that, once a regulator provides for the recovery of a previously incurred cost in future rates, state laws support the legality of that recovery and generally prohibit future regulators from reversing the previous conclusion.

(a) does the rate regulation provide for retrospective recovery or reversal of under- or over-recoveries of allowable costs? If so, how is this achieved, for example through cash payments or other asset transfers to or from parties outside the rate-regulated entity (such as individual customers or groups of customers, the rate regulator or the government);

Although retrospective recovery or reversal of under- or over-recoveries of allowable costs is not guaranteed, regulators often provide special rate mechanisms that will mitigate such occurrences. For example, the regulator might instruct a utility to collect a specified amount through rates for a specified cost. The rate might continue for a specified period of time, or the commission could require periodic filings as to the amounts collected and incurred, with a process to adjust or update the rate as considered necessary. Balancing accounts are often used for tracking the recovery or reversal of under- or over-recoveries of specific allowable costs (such as fuel costs) during the relevant period (typically, one year). Amounts are accumulated in a regulated asset or liability account and included as an adjustment to future rates for recovery.

(b) are the rights and obligations separable from the business; and

Rights and obligations generally appear to be linked to the regulated utility's business because recoveries or refunds are passed on or provided to future customers, irrespective of whether those customers existed at the time the rights and obligations arose. However, there are situations where rights and obligations appear to be separable. For example, a regulated utility could securitise its enforceable right to impose a surcharge or tariff. In this case, it obtains cash from investors in exchange for future regulated cash flows representing the surcharge or tariff. Such securitisations are typically set up through a trust that sells the securities and administers the ongoing cash flows related to those securities.

(c) what happens to the rights or obligations when the entity ceases to provide the rate-regulated goods or services?

The partial deregulation that occurred in some states several years ago is the best example of a situation whereby regulated utilities ceased to provide rate-regulated services. At the time, regulated utilities were provided with recovery of all prudently incurred costs to date, even where future services were subject to competition. These 'stranded costs' were generally collected through a surcharge to the regulated utility's customers over a fixed period of time after the deregulation event.

Question 5 – How does the rate regulation ensure the recovery or reversal of under- or over-recoveries of allowable costs? Are these mechanisms effective in recovering or reversing those amounts within the targeted time frame?

There are a variety of mechanisms used by regulators to ensure the recovery or reversal of under- or over-recoveries of allowable costs. These mechanisms are often used to allow recovery of volatile costs that cannot be reliably estimated (for example, commodity/fuel costs) or one-time charges such as storm costs. Differences between the amounts collected and the amounts paid result in under- or over-recoveries that are included in periodic filings and result in adjusting future rates. Additionally, regulators will often provide adjustments to future rates where there is a significant variance in incurred costs from what had previously been estimated and included in allowable costs (for example, storm costs). These types of mechanisms generally recover or reverse those amounts within the targeted specified time frame.

(a) what is the mechanism for tracking the recovery or reversal of such variance amounts;

Balancing accounts are the mechanism for tracking the recovery or reversal of variance amounts. For example, a regulator might give the regulated utility the right to recover fuel costs, environmental remediation costs or pension costs in excess of those included within rates, or impose an obligation to refund to customers amounts collected in excess of amounts incurred. In other instances, specific regulatory decisions since the last general rate case might allow for recovery of previously incurred costs that exceeded those included within the test year. For example, a regulator might give the regulated utility the right to recover significant storm costs if they are in excess of those included in rates.

(b) how does the rate-setting mechanism adjust for unexpected changes in demand for the rate-regulated goods or services;

Some states have rate normalisation plans that adjust billings for the effects of weather abnormalities, broad external factors, or to compensate the regulated utility for demand-side management initiatives. The recovery of incurred costs subject to these types of rate-setting mechanism is part of the overall regulatory compact.

(c) has there been a recent trend whereby the balances of the variance amounts have been increasing?

The following data reflect the regulatory balances* since 2002 from eight large regulated utilities:

Balances in millions (US$)	2012	2007	2002
Net regulatory assets	$ 15,065	$ 4,183	$ 11,355
Net regulatory assets excluding pension/OPEB and COR*	$ 14,721	$ 8,887	$ 11,355
Total assets	$ 168,644	$ 120,823	$ 91,972
Revenue	$ 44,954	$ 43,391	$ 36,761
Pre-tax income	$ 6,230	$ 4,558	$ 5,708

* Regulatory asset and liability balances associated with pension, other post-employment benefits (OPEB) and removal costs (COR) have been excluded to improve comparability, because these balances arose as a result of adopting new related accounting standards and had not previously been recognised.