In 1997 the government accepted recommendations for the Ghanaian power sector to restructured à la the standard model of reform. The vertically integrated Volta River Authority (VRA) would be unbundled into a separate transmission and system operations company, VRA would retain generation and the national distributor of electricity, the Electricity Corporation of Ghana would be horizontally unbundled in readiness for privatisation. Also, independent power producers (IPPs) would be allowed to enter the market.

The need to reform had been brought about by a debilitating electricity crisis that started in the early 1980s, and spanned over two decades. It was caused primarily by the effect of poor rainfall on a power sector that relied exclusively on hydropower – essentially a power-system planning failure. A poorly performing distribution sector, and a general lack of investment were additional factors driving reform.

Two industry regulators, the Public Utilities Regulatory Commission (PURC) and the Energy Commission (EC) were subsequently formed charged with undertaking economic and technical regulation respectively. And soon thereafter the country’s first IPP entered into service in 2000. But beyond this, reform proceeded slowly and it was only in 2008 that the VRA was unbundled.

Although rainfall has generally been sufficient since 2007, the threat of drought is always present. Faced with this, and an ever-increasing demand for electricity brought about by an economic turn around, the government of Ghana has pronounced that intends to bring into service an additional 5 000MW of mainly IPP generation by 2015. For a system with an installed capacity in 2010 of approximately 2 000MW this is clearly an ambitious target. But given the discovery of oil in the Jubilee field off the Ghanaian coast, and the emergence of Chinese investors (bringing alternative funding models, seeking to unlock previously shelved projects and becoming important partners for Africa), this goal may yet be achieved. The PURC and the EC must take their place and facilitate what could be one of Africa’s greatest successes

**Power-sector overview**

The structure of Ghana’s power sector is shown in Figure 6.1. As we have seen in all the other countries covered, the government through the Ministry of Energy is responsible for policy formulation and aspects of its implementation. Uniquely for Ghana, regulatory oversight of the power sector is undertaken by two separate bodies, the Public Utilities Regulatory Commission (PURC) and the Energy Commission (EC), loosely referred to as the ‘economic regulator’ and the ‘technical regulator’. Ghana and Namibia are the only two countries in this volume where there is no specialist agency for to spearhead rural electrification.

Once again at industry level all the features of a hybrid power market are evident. It is dominated by state owned entities; Volta River Authority (VRA), Ghana Grid Company (GridCo) and the Electricity Company of Ghana (ECG), while independent power producers (IPPs) have began to enter on the margins of the industry. The VRA is a power generation company but also carries out some limited distribution through its Northern Electricity Department division, GridCo is responsible for transmission and system operations whereas the ECG is the national distribution utility.
**Figure 6.1: The structure of the power sector in Ghana, 2010**

**Generation capacity and demand forecast**

In 2010, total installed generation capacity in Ghana was 2 112MW as shown in Table 6.1. Out of this amount approximately 1 700MW was available capacity due to various technical and hydrological constraints. The significant contribution of hydropower to the generation mix in Ghana has provided a cheaper source of power but also, like we have seen previously, exposed the country the risk of inadequate supplies due to drought. Following significant drought in 1983/4 the government decided to compliment hydro with thermal generation, which helped ameliorate the effects of a subsequent drought in 1998.

**Table 6.1: Installed generation capacity, 2010**

<table>
<thead>
<tr>
<th>Type</th>
<th>Plant</th>
<th>Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydro</td>
<td>Akosombo</td>
<td>1 020</td>
</tr>
<tr>
<td></td>
<td>Kpong</td>
<td>160</td>
</tr>
<tr>
<td>Thermal</td>
<td>TAPCO (Takoradi I)</td>
<td>330</td>
</tr>
<tr>
<td></td>
<td>TICO (Takoradi II)</td>
<td>220</td>
</tr>
<tr>
<td></td>
<td>Tema</td>
<td>126</td>
</tr>
<tr>
<td></td>
<td>Sun Asogli</td>
<td>200</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>2 056</td>
</tr>
</tbody>
</table>

*Source: PURC, personal communication, 2010*

The capacity and energy balance forecasts for Ghana are given in Figures 6.2 and 6.3 respectively. They reveal that while existing generation is able to meet the load as at 2010, from around 2014 the country will begin to experience shortfalls in energy, and in 2017 this will extend to generation capacity. New investment in generation capacity and power-network expansions will therefore be required to meet future electricity needs.
Power-sector reform

Although utility provision of electricity was introduced to Ghana in 1914 when the Gold Coast Railway Administration powered up its facilities at Sekondi, it was not until the 1920s when it took root and began to be deployed across the country. This included Accra, which began being supplied by the Public Works Department (PWD) in 1922 first with direct – current but two years later with alternating – current. The arrival of alternating current was made possible by diesel generating power.
plants that began spreading across the country in the 1920s. Electricity use continued to grow and in 1949 an 11kV network was built from Tema to Nsawam, the first transmission network.

With electricity use increasingly commonplace, the government in 1947 formed the Electricity Department under the Ministry of Works and Housing that took over the electricity related operations of the Public Works Department and the Railway Administration. The following decade in 1956, Ghana’s first major power station, at Tema, was commissioned. Initially Tema had a capacity of about 2MW but by 1964 this had been increased to 35MW, reputed to be the largest diesel power station in Africa at the time.

Meanwhile as far back as 1915 the Volta River had been identified as a potential source of hydropower. The discovery of bauxite that would require significant amounts of electricity to be converted into aluminium could possibly increase the viability of such a hydropower project. Studies in the 1950s confirmed this and it was proposed that a dam be built across the Volta River at Akosombo. Thus in 1961 the Volta River Authority (VRA) was established with responsibility of constructing a dam at Akosombo and generating power from the Volta River and by other means. The following year the first phase of the Akosombo project commenced and in 1966 the plant was commissioned with four generators of a total capacity of 588MW. The addition of two generators brought total capacity to 912MW in 1972. At the time, the reservoir created by the Akosombo dam was the largest in the world by surface area. With cheaper and more reliable electricity supply the diesel plants started being retired.

The development of Akosombo was always going to be linked to the production of aluminium and so in 1962 the government had signed a ‘Master Agreement’ with the Volta Aluminium Company (VALCO) that included a Power Purchase Agreement (PPA) for the supply of electricity from Akosombo to the VALCO smelter. Construction of the smelter was completed in 1967. In the same year, which was one year after Akosombo entered service, the government established the Electricity Corporation of Ghana (ECG) that took over the assets and operations of the Electricity Department and became the national distributor of electricity.

With excess capacity at Akosombo, it was possible to consider other customer options and so in 1969 the VRA signed a PPA with Communauté Electricité de Benin (CEB), the power utility of Benin and Togo, and following the commissioning of a 161kV transmission line in 1972, the Ghanaian power system was now interconnected with that of Togo and Benin. The interconnected system would extend to Côte d’Ivoire with the commissioning in 1983 of a 220kV transmission line from Ghana. Besides Akosombo, the VRA was in 1970s also considering other possibilities of hydropower generation to meet the country’s future electricity demand. This effort culminated in the development of the Kpong Hydroelectric Power Plant that was commissioned in 1982 with a total capacity of 160MW.

Hydro electricity however can lead to low levels of availability in the event of drought. Ghana’s first dose of this occurred when a severe drought hit most parts of Africa from 1981 to 1983 (Ofori-Sarpong 1986). With available capacity depleted there was no option but to institute load-shedding (Malgas 2008). As a consequence of the adverse impact of drought, government in 1985 took the decision that the nation’s hydropower would be complemented by thermal generation and even before these plans were implemented a second drought struck the country from 1993 to 1995 (Malgas 2008). By 1999 the 330MW Takoradi Power Station had been commissioned. As fate would have it, in 1998 before the last unit at Takoradi was installed, drought struck again (US Agency for International Development 1999). Its effects were not as severe as the previous drought due to the recently installed thermal capacity (Malgas 2008) but still the government was forced to procure 60MW of emergency diesel generation from Messrs Aggreko Limited and Cummins Ltd (30MW each). The emergency fleet was retired in 2000.

With demand rising and the devastating effects of drought a reality the government had earlier in 1994 made a policy pronouncement that recognised the introduction of private sector participation in the sector. Consequently VRA had in 1999 entered into joint venture agreement with CMS Energy of the USA for a 220MW expansion to Takoradi. Thus in 2000, Ghana’s first IPP, the Takoradi
International Company (TICO), commissioned its plant and made the retirement of emergency diesels a more palatable prospect.

In 2006/07 the power sector was in crisis again. Drought had returned, there was lack of investment in the sector and electricity demand had been buoyed by robust economic growth (Malgas 2008). Load shedding ensued and the need to attract new investment in electricity generation made more evident.

**Restructuring initiatives**

The first major dose of restructuring was forced upon the Ghanaian power sector when in 1987 ‘substandard service levels, a poor financial situation, labour disputes, and disruptions at senior level’ (Malgas 2008 pp 9) at the ECG resulted in government assigning its four northern regions Brong-Ahafo, Northern, Upper East and Upper West to the VRA. Subsequently the Northern Electricity Department of the VRA was established.

To enhance the performance of the ECG, the Irish Electricity Supply Board managed the company under contract for a few years in the 1990s and giant French utility Electricité de France was invited to help improve customer service and collections. While these efforts did yield some benefits, they were not sustained.

With improvements in the ECG’s performance not being achieved, demand rising and just having experienced the effects of the second drought, the need for a more fundamental transformation of the power sector was apparent and World Bank was applying pressure in this regard. The government therefore retained the services of SYNEX Consulting Engineers from Chile to advise and recommend the restructuring of the power sector. The consultants recommended that VRA that had hitherto carried out both the generation and transmission be unbundled. VRA would retain its generation business while its transmission and system operations functions would become vested in a successor state-owned company. In distribution it was proposed that five distributors be formed from the unbundling of the ECG and integration of the NED to supply consumers with load less than 5MW while those consumers above this threshold would have an option to participate in the wholesale power market. It was further proposed that at a later stage, the five distributors be privatised.

With respect to regulation, it was recommended that a regulatory body be established that would be responsible for licensing and tariff setting.

In 1997 the government accepted the proposals and recommendations; the power sector was on its way to be restructured.

**Implementation of a new structure**

Soon after accepting the restructuring recommendations, the government in 1997 passed the Public Utilities Regulatory Commission Act and the Energy Commission Act which established the Public Utilities Regulatory Commission (PURC) and the Energy Commission (EC) respectively. The PURC’s regulatory mandate is to:

- provide guidelines on rates chargeable for electricity services;
- examine and approve rates;
- protect the interests of consumers and providers of utility services;
- monitor the standard of performance of utilities; and
- promote fair competition.

The EC’s mandate on the other hand is to:

- receive and access applications and grant licences to public utilities for the transmission, wholesale supply and distribution of electricity;
- establish and enforce, in consultation with the PURC, standards of performance for the relevant public utilities;
- promote and ensure uniform rules of practice for the transmission, wholesale supply and distribution of electricity.
It is somewhat surprising that there are two separate regulatory bodies that carry out functions that would typically be assigned to a single institution. However prior to 1997 there existed the National Energy Board (NEB) a quasi-independent unit in the Ministry of Energy that played a strong advisory role. The Energy Commission, which is modelled along the lines of the NEB, is an effort by the authorities to ensure that the competencies of that unit are retained.

Despite the establishment of the regulators, progress on restructuring the actual industry was slow. It was only in 2005 when the VRA was unbundled and the Ghana Grid Company formed. As at 2010, the Northern Electricity Department remains a unit of the VRA, and the ECG has not been unbundled.

### Power-sector performance

Performance indicators for the VRA are shown in Table 6.2 for the period 2005 to 2009. Notably the VRA posted losses for each of the years covered with the exception of 2009. Also, return on equity was negative and debt service ratio less than one and even negative in some years.

**Table 6.2: Volta River Authority performance indicators, 2005 - 2009**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue from electricity sales (US$ '000)</td>
<td>357,766</td>
<td>466,093</td>
<td>398,795</td>
<td>508,151</td>
<td>526,374</td>
</tr>
<tr>
<td>Profit before tax (US$ '000)</td>
<td>(10,973)</td>
<td>(174,194)</td>
<td>(317,428)</td>
<td>(71,449)</td>
<td>7,873</td>
</tr>
<tr>
<td>Return on average equity</td>
<td>(0.78)</td>
<td>(11.55)</td>
<td>(19.68)</td>
<td>(4.64)</td>
<td>(0.53)</td>
</tr>
<tr>
<td>Current assets ratio</td>
<td>1.79</td>
<td>1.46</td>
<td>1.13</td>
<td>1.55</td>
<td>1.49</td>
</tr>
<tr>
<td>Debt service ratio</td>
<td>0.79</td>
<td>(1.66)</td>
<td>(1.69)</td>
<td>(0.1)</td>
<td>0.31</td>
</tr>
<tr>
<td>Energy sent out (GWh)*</td>
<td>7,560</td>
<td>9,007</td>
<td>7,092</td>
<td>8,144</td>
<td>9,126</td>
</tr>
</tbody>
</table>

*Note: a. Includes imports and other purchases less own use.*

### The Electricity Company of Ghana

Table 6.3 gives performance indicators for the ECG over the period 2005 to 2009. Over the period gross profit was positive. Distribution losses remain high and also high over the period was the debtor days. In 2009 the average tariff (tariff yield) was calculated at USc10.3/kWh.


<table>
<thead>
<tr>
<th>Indicators</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue (US$ '000)</td>
<td>244,571</td>
<td>312,301</td>
<td>392,581</td>
<td>529,188</td>
<td>460,981</td>
</tr>
<tr>
<td>Gross profit (US$ '000)</td>
<td>56,073</td>
<td>60,098</td>
<td>80,655</td>
<td>147,755</td>
<td>132,097</td>
</tr>
<tr>
<td>Maximum demand (MW)</td>
<td>-</td>
<td>-</td>
<td>889</td>
<td>927</td>
<td>1,036</td>
</tr>
<tr>
<td>Energy sales (GWh)</td>
<td>3,762</td>
<td>3,978</td>
<td>3,909</td>
<td>4,316</td>
<td>4,481</td>
</tr>
<tr>
<td>Losses (%)</td>
<td>25.44</td>
<td>24.3</td>
<td>24.3</td>
<td>25.6</td>
<td>26</td>
</tr>
<tr>
<td>Debtor days</td>
<td>179</td>
<td>138</td>
<td>162</td>
<td>130</td>
<td>122</td>
</tr>
<tr>
<td>Average tariff (USc/kWh)</td>
<td>6.5</td>
<td>7.9</td>
<td>10.0</td>
<td>12.3</td>
<td>10.3</td>
</tr>
</tbody>
</table>

### Regulatory governance

The legislative framework for the regulation of Ghana’s electricity sector is set out in Public Utilities Regulatory Commission (PURC) Act and the Energy Commission (EC) Act both of 1997. Curiously the effect of the PURC and EC Acts is the establishment of two independent regulatory agencies for the electricity sector as opposed to a single entity, as tends to be the case in many other countries. The PURC, loosely referred to as the ‘economic regulator’, is primarily responsible for tariff setting, performance monitoring, promotion of competition and complaints handling. The EC, referred to as the ‘technical regulator’, is responsible for licensing, technical standards and performance monitoring and renders policy advice on the energy sector to the Minister.

It should be noted that the mandate of both regulatory agencies extends beyond the electricity sector. The PURC’s includes the water sector and the EC’s the petroleum and gas sectors.
Independent regulatory agencies should have the authority to make final decisions without the need for approvals from other agencies or arms of government. In Ghana it the independence of the PURC is enshrined in Section 4 of the PURC Act, which states that ‘Subject to the provisions of this Act, the Commission shall not be subject to the direction or control of any person or authority in the performance of its functions.’

Such unequivocal independence is however not granted to the EC and in fact the legislation specifically grants the energy minister the power to give directions under Section 3 of the EC Act:

The Minister may give to the Commission such directions of a general character as appear to him to be required in the public interest relating to the discharge of the functions of the Commission.

Table 6.4 lists the core functions of the PURC and the EC as set out in the legislation. Collectively the PURC and the EC have the minimum requisite legal power with the exception of the authority to enforce standards and rules. Although the EC has the power to suspend and even revoke a licence neither it nor the PURC can enforce sanctions such as fines and this remains under the remit of the High Court.

Table 6.4: Primary functions of the PURC and the EC, Ghana.

<table>
<thead>
<tr>
<th>Public Utilities Regulatory Commission</th>
<th>Energy Commission</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Provide guidelines on rates chargeable for provision of utility services</td>
<td>Recommend national policies for the development and utilisation of indigenous energy sources</td>
</tr>
<tr>
<td>2 Examine and approve rates chargeable for provision of utility services</td>
<td>Advise the Minister on national policies for the efficient, economical, and safe supply of electricity, natural gas, and petroleum products having regard to the national economy</td>
</tr>
<tr>
<td>3 Monitor standards of performance for provision of services</td>
<td>Prepare, review and update periodically indicative national plans to ensure that all reasonable demands for energy are met</td>
</tr>
<tr>
<td>4 Initiate and conduct investigations into standards of quality of service given to consumers</td>
<td>Secure a comprehensive data base for national decision making on the extent of development and utilisation of energy resources available to the nation</td>
</tr>
<tr>
<td>5 Promote fair competition among public utilities</td>
<td>Receive and assess applications, and grant licenses to public utilities for the transmission, wholesale supply, distribution, and sale of electricity and natural gas</td>
</tr>
<tr>
<td>6 Conduct studies relating to economy and efficiency of public utilities</td>
<td>Establish and enforce in consultation with the PURC standards of performance for public utilities engaged in the transmission, wholesale supply, distribution and sale of electricity and natural gas</td>
</tr>
<tr>
<td>7 To make such valuation of property of public utilities as it considers necessary for the purposes of the Commission (PURC)</td>
<td>Promote and ensure uniform rules of practice for the transmission, wholesale supply, distribution and sale of electricity and natural gas</td>
</tr>
<tr>
<td>8 To collect and compile such data on public utilities as it considers necessary for the performance of its functions</td>
<td></td>
</tr>
<tr>
<td>9 To advise any person or authority in respect of any public utility</td>
<td></td>
</tr>
<tr>
<td>10 To maintain a register of public utilities</td>
<td></td>
</tr>
</tbody>
</table>

Note: Functions specifically related to the petroleum and natural gas sectors have been omitted from this table.

Interestingly the Volta River Authority (VRA) is largely exempt from licensing through the provision of Section 30 of the EC Act that reads:

The Volta River Authority established under the Volta River Act, 1961 (Act 46) is exempted from the requirement for licence to produce and supply wholesale electricity from the hydropower installations on the Volta River Basin.

In addition, the following observations were made on the legal powers of the two regulatory agencies.
**Tariff-setting powers**

The law is clear on the fact that the PURC sets actual tariff levels. However in discussions with various stakeholders during the peer review, it was found that there was a perception that the PURC set a maximum tariff level and operators were free to charge at levels below this. In the short-term it could be politically expedient to charge tariffs that were lower than those approved but the effect of this in the longer term was to erode the financial viability of utilities and compromise future supply, reliability and quality of electricity.

**Technical and commercial standard setting**

The Energy Commission has the power to set commercial and technical standards through Clause (2)(f) of Section 2 (Object and Functions of the Commission) of the EC Act that reads:

> Without prejudice to subsection (1) of this section, the Commission shall... (f) Establish and enforce, in consultation with the Public Utilities Regulatory Commission, standards of performance for public utilities engaged in the transmission, wholesale supply, distribution and sale of electricity and natural gas.

Meanwhile Clause (1) and (2) of Section 13 (Standards of Performance of Public Utilities) of the PURC Act states the following:

1. The Commission shall monitor standards of performance established by the licensing authorities of public utilities for compliance by public utilities.
2. Where a public utility fails to meet any required standard of performance, it shall pay such compensation as the Commission in consultation with the licensing authority may determine to any person adversely affected as a result of the failure.

Further, Clause 3(b) of the same Section 13 (Standards of Performance of Public Utilities) of the PURC Act states that:

> The requirement for payment of compensation under this section:… (b) Does not preclude the Commission from taking any other measure or imposing any other sanction that the Commission has a right to impose in respect of the act or omission that constitutes the failure.

From the above clauses it is clear that authority to set performance standards rests with the EC. However there is overlap in the enforcement of these standards with the legislation granting both the EC and the PURC enforcement powers albeit in cooperation. In the absence of co-ordination between the two regulators, such overlap could lead to confusion in the electricity industry. Also the power to sanction non-compliance by both regulators is limited to the High Court with the only exception being the power that the PURC has to order utilities to compensate complainants.

**Subsidiary policy and rule making**

The PURC has authority to make subsidiary laws through Clause (1) of Section 48 (Regulations) of the PURC Act that reads:

> The Commission may by legislative instrument make such regulations as it considers necessary for the implementation of this Act.

The EC on the other hand does not have such power and can only advise the Minister of Energy on which regulations to enact, and only in terms of the following areas as specified by the Act:

* conservation of electricity;
* expansion, planning, safety criteria, reliability and cost effectiveness of the interconnected transmission systems;
* minimum standards and procedures for construction, operation and maintenance of facilities and installations;
* protection of mains, electrical installations and services;
* protection of life and property and general safety of the public in respect of electricity services;
* operation of the electricity transmission utility.
The power to promulgate subsidiary legislation limits the potential delays and also external influence. However the legislation appears to grant the PURC limitless discretion in this regard which could be subject to abuse. The approach in the EC Act where specific areas are listed lends itself to greater regulatory certainty.

**Administrative functions**

The Chief Executive Officer for both institutions is the Executive Secretary charged with the responsibility of day-to-day administration. In addition, Clause (4) of Section 45 (Executive Secretary) of the EC Act states that: ‘The Executive Secretary shall be responsible for the organisation of the Commission.’

This suggests that the Executive Secretary of the EC can determine the size and structure of the institution. With respect to the PURC it is unclear from the legislation where this power lies. It is however notable that Clause (1) & (2) of Section 34 (Appointment of Other Staff of the Commission) of the PURC Act and Clause (1) & (2) of Section 46 (Other Staff of the Commission) of the EC Act read as follows:

1. The President may acting in accordance with the advice of the Commission given in consultation with the Public Services Commission appoint such officers and employees as may be necessary for the effective implementation of the functions of the Commission.

2. The President may delegate the powers of appointment of public officers in accordance with Article 195 (2) of the Constitution.

The implication of this is that the President appoints all staff. In the absence of this power being delegated to either the Chairman or the Executive Secretary there could be inordinate delay in the appointment of even relatively junior staff.

**Adjudication of disputes**

The EC cannot adjudicate in disputes arising between licensees. However an aggrieved party can request the EC to set up an arbitration panel in accordance with Section 21 (Settlement of Disputes by Arbitration) that reads:

The Commission shall at the request of any person licensed under this Act set up an arbitration panel under the Arbitration Act, 1961 (Act 38) to arbitrate and settle any dispute arising between licensees where the parties cannot reach an agreement.

The only specific reference to ‘dispute/s’ in the PURC Act arises in Section 23 (Joint Use of Facilities) which states that a public utility may permit the joint use of its equipment and facilities by another public utility for a reasonable compensation, where such arrangement is convenient or necessary, and the use will not result in damage to the owner or other users of the equipment. Where a dispute arises with respect to any such arrangement, a complaint may be made by any of the parties to the Commission which shall settle the dispute.

Section 12 (Agreement with Public Utility to Supply Service) does however appear to provide the PURC with the power to adjudicate over a wide range of disputes including those between licensees and between consumers and licensees:

- Where a public utility has entered into an agreement with any institution or body corporate for the provision, development or expansion of the service to be provided or being provided by the public utility and the implementation of the agreement is not effected within a reasonable time in any material respect without reasonable excuse, the institution or body may make a complaint to the Commission.

- Where the Commission, after giving the complainant and the public utility against which the complaint is made reasonable opportunity of being heard, is satisfied that the public utility concerned has failed or refused to implement the terms of the agreement, within a reasonable time, the Commission may -
* Direct the public utility to pay the institution or body such sum as it considers reasonable in the circumstances of the case; or
* Recommend to the licensing authority of the public utility, the cancellation or suspension of its licence; or
* Give such other directions as it considers just in the circumstances of the case.

**Independence of commissioners**

The President in consultation with the Council of State appoints the commissioners at both the EC and the PURC. Table 6.5 shows the composition of the Energy Commission and the Public Utilities Regulatory Commission.

**Table 6.5: Composition of the Energy Commission and the Public Utilities Regulatory Commission**

<table>
<thead>
<tr>
<th>Energy Commission</th>
<th>Public Utilities Regulatory Commission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chairperson</td>
<td>Chairperson</td>
</tr>
<tr>
<td>Representative of National Development Planning Commission</td>
<td>Trade Union Congress representative</td>
</tr>
<tr>
<td>Executive Secretary of the Commission</td>
<td>Association of Ghana Industries representative</td>
</tr>
<tr>
<td>Four (4) other persons with knowledge in matters relevant to the functions of the Commission</td>
<td>Representative of domestic consumers</td>
</tr>
<tr>
<td></td>
<td>Executive Secretary of the Commission</td>
</tr>
<tr>
<td></td>
<td>Four other persons with knowledge of matters relevant to the functions of the Commission</td>
</tr>
</tbody>
</table>

Tenure of office at both the institutions is five years. The terms are renewable without limit. In order to facilitate staggering, the Clause 5 of Section 5 (Tenure of Office of Members of the Commission) of the EC Act states the following:

(5) A member of the Commission other than the Executive Secretary shall be appointed for a period not exceeding five years and shall on the expiration of that period be eligible for re-appointment; except that of the members first appointed, the Chairman and two other members shall hold office for a period of five years, two for a period of four years and one for a period of three years.

This contrasts with the PURC Act that does not contain any specific provision for term staggering. In practice change of government triggers the appointment of new commissioners (i.e. the ‘four other persons with knowledge in matters relevant to the functions of the Commission’) and since interest group representation has tended to remain the same, this could be seen as a form of term staggering.

As is the case in other jurisdictions, commissioners at either the EC or the PURC can be removed from office on the grounds of repeated absenteeism from commission meetings, inability to perform the functions of their office, stated forms of misbehaviour. In addition a commissioner may be removed for ‘any just cause’. This provision raises the prospect of arbitrary removal from the commission.

The independence of the PURC is well enshrined in the legislation. The Minister of Energy did however caution that this independence should be seen within the context that the PURC was funded from the government treasury. Such sentiment could be the reason why other stakeholder asserted that the PURC was not an independent body.

**Financial and administrative independence**

**Energy Commission**

Parliament annually approves the EC’s budget, which is financed primarily from the Energy Fund (the Fund) established under the EC Act. The Fund is in turn financed by: a government levy on petroleum products, electricity and natural gas as determined by Cabinet and approved by parliament, money that accrues to the EC in the performance of its functions, and grants it may obtain.
The EC Act permits proceeds from the Fund to be applied to the:

- promotion of energy efficiency and productive uses of electricity, natural gas and petroleum products;
- promotion of projects for the development and utilisation of renewable energy resources, including solar energy;
- human resource development in the energy sector; and
- other relevant purposes as may be determined by the Commission.

The above list implies that most if not all of the EC’s operations can be financed from the Fund, which is managed and administered by the EC with the oversight of the government’s Accountant-General and Controller. In its management of the Fund the EC is required to:

- formulate policies to generate money for the Fund;
- determine the allocations to be made towards the objectives of the Fund; and
- determine annual targets of the Fund.

Generally the EC was adequately funded. This was not surprising given the steady revenue stream that the levy on energy service provision guarantees and the extent of the EC’s freedom in the application of the Fund’s proceeds.

Public Utilities Regulatory Commission

The PURC Act specifies four sources of funding for the PURC, namely: government subventions, any loans granted to the Commission, any monies accruing to the Commission in the course of the performance of its functions under this Act, and grants it may obtain.

Government subvention has been the single largest source of PURC funding since its inception. This is followed by donor funding the contribution of which at times has been sizeable on account of the scope of the project/s being funded.

Approval of the PURC’s annual budget is a two-part process. Firstly management completes its estimates of expenditure, which are presented to the Commission who approve a proposed budget. Minister of Finance then forwards the proposed budget to the government for approval. In more cases than not the finally approved budget is at a level than that initially approved by the Commission.

The PURC Act does not detail the procedures for budget approvals or disbursements. In interviews with PURC management it was however learnt that the Commission approves a budget that is sent to the government for final approval by the Minister of Finance. The PURC’s experience with this process was that over the ten-year period from 1999 to 2008 the government approved budget was on average 53 per cent of that submitted by the Commission. Exacerbating this state of affairs was the fact that in six of the years over the same period, actual disbursements fell short of government’s own approved level.

Given the poor level of funding, it was not surprising that the terms and conditions of service were uncompetitive. Out of a total of 51 staff recruited since the inception of the PURC, 21 had since left mostly citing the terms and conditions of service.

Accountability

Like the case in all the countries covered in this volume, both the PURC and the EC are expected to prepare annual reports that include audited financial statements. The financial statements are required to be submitted for auditing 3 months after the financial year – end and the annual report that also includes the activities and operations conducted over the year, should be submitted to Parliament within six months of year end.

Also as is the practice elsewhere, the PURC and the EC are occasionally requested to appear before committees of parliament to make representations on issues that fall within their mandate.
As at 2010 the PURC was in the process of developing an appeals process for cases when a party would be aggrieved by its decision. By law, the PURC had final decision-making authority however and though appeals could be lodged with the High Court, this could only be on matters of a procedural nature and the court would make a ruling on the substance of a regulatory decision.

**Transparency**

As has been found in all the countries in this volume with the exception of Namibia, board meetings at both the EC and the PURC were not open to the public. This was not necessarily by law but as a matter of practice.

Both the EC and the PURC have functional websites from which various information and documentation can be downloaded. But as we have already stressed, the ongoing usefulness a website depended on how regularly it was updated. In the case of the PURC, the website did contain elements of the tariff methodology that is applied in determining electricity tariffs. However, some stakeholders were of the view that the regulator had not been sufficiently forthcoming in describing the methodology in full (personal comm. 2009). It could prove to be useful for the PURC to launch a sustained awareness programme on these and other core regulatory matters. This may help in turning round the impression that had been created with some stakeholders that the PURC was beholden to government. In this regard, during a period of major power outages in and around the Accra area during 2009, some members of the press were surprised that the PURC had appeared to be reluctant to comment (personal comm. 2009). This was despite the fact that PURC had a very novel way of managing its engagement with the media and this was through a ten member liaison corps drawn from the print and electronic media.

Another feature of the regulatory system that aided transparency was the public meetings that were held throughout the country in the case of a tariff application. This had been the case during the 2010 electricity tariff determination process.

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**Notes**

1. The historical account contained in this section is adapted from the guide published by the Resource Centre for Energy Economics and Regulation (2005).
3. It should be noted that additional legislative power is granted in within the detail of each of the two Acts.
4. Some areas specific to natural gas have been omitted in this list.
5. The PURC Act defines Public Utility as: ‘any person engaged in the provision for a fee, whether directly or indirectly, of any of the following services to the public: (a) the supply, transmission or distribution of electricity; (b) the supply, transmission or distribution of water; and (c) such other public utility services as the Commission by legislative instrument prescribe on recommendation of the Minister responsible for the service.’

**References**


