CHAPTER 4: Support for Institutional Reform and Regulation

4.1 THE SETTING

4.1.1 Regulatory Reform for Infrastructure: The Challenges Ahead

As the discussion in Chapter 3 indicates, a strong sustained improvement in the quality and quantity of infrastructure services in the decade ahead will require a substantial increase in private investment in infrastructure assets and services, especially in electric power, railways, civil aviation, and ICT. It will also require significant progress in restructuring the parastatals operating in the infrastructure sectors. This combination of events raises a range of key policy issues related to the regulation of public and private services in these sectors. At present, regulatory entities monitor civil aviation, electric power, and ICT services. There are no formal regulatory agencies for water and sanitation services or road and rail transport.

The reality is that the regulatory environment for infrastructure service providers in Zimbabwe is deficient. The WEF (2009) report on African competitiveness ranked Zimbabwe 112th out of 118 countries included in the survey, with a regulatory environment ranked as the poorest within the entire 118 countries whose data were used to construct an enabling trade index. The findings of a 1998 study of the regulatory environment of Zimbabwe by Godana and Hlatshwayo continue to resonate. They concluded that the legal and institutional framework for public enterprises imposed constraints on the effectiveness, autonomy, and accountability of these enterprises. They observed that to alleviate budget deficits, parastatals were urged to compete effectively and turn a profit, but from an administrative point of view parent ministries continued to regard their public enterprises as coming under the relevant Acts of Parliament in such matters as labor law, investment, borrowing, reporting, supervisory mechanisms, and the rules and regulations governing public procurement.

4.1.2 Lessons from International Experience

One of the important challenges for the medium-term is to strengthen the regulatory framework of the country. In doing so, Zimbabwe can draw on a rich background of analysis and assessment of the regulatory experience of other countries over the past 50 years. The World Bank (2010) reports that “The standard infrastructure reform and policy prescription package of the 1990s — market restructuring, private involvement up to and including privatization, establishing independent regulators, and enhanced competition — yielded … positive results in Africa.” Further research by the World Bank (2010) indicates that there is evidence of “… strong links between institutional reforms … and improvements in the quantity and quality of infrastructure services.” Experience elsewhere in Africa indicates that most African countries have undertaken preliminary institutional reforms, mainly the broader sectoral policy and legal measures, but regulatory and governance reforms have taken much more time to produce results. The World Bank report goes on to say that: “Typically in Sub-Saharan Africa, new laws and regulatory bodies have been introduced for telecommunications and electricity, whereas few countries have created water or transport regulators. On the technical side, regulation needs must employ solid methodological tools with resulting decisions clearly communicated to the business community and public at large. On the political side, regulation requires a degree of autonomy

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2 See World Bank (2010), page 105.
from government interference while remaining accountable to society.

International experience suggests that an essential element of an effective regulatory framework for the development of adequate backbone infrastructure in a liberalized competitive environment is to place the responsibility for regulation in an agency with the required independence, autonomy, expertise, and accountability. The standard recommendations for the creation of a regulatory agency are straightforward and revolve around the following three broad principles: (i) the regulator’s sectoral breadth of authority, (ii) the desirable qualities of a regulator, and (iii) the division of labor between the regulator and the government. These basic principles have provided a guide for the assessment in this Chapter of the future regulatory environment that may be best able to meet Zimbabwe’s evolving needs in the infrastructure sectors.

The regulator’s sectoral breadth of authority can be industry-specific such as rail and electricity; sector-specific such as transport as in the case of Argentina and Peru; or multi-sectoral with a single regulatory agency for all or most infrastructure sectors as in Australia, Canada, Costa Rica, and Jamaica. In the case of transport, it is often the case that a single government ministry is responsible for the sector, in which case it makes sense to have a regulatory agency with the same coverage.

In determining the desirable qualities of a regulator, a few minimum requirements must be addressed for regulation to be successful. These include independence with a reasonable amount of discretionary powers, autonomy and expertise, and accountability. Regulators should have an arm’s length relationship with ministries and with the business entities in the sectors being regulated and they must have a degree of discretion in making decisions. The rules pertaining to the role and responsibility of the regulator must be clearly spelled out in the charter or contract that establishes the regulatory agency. Autonomy can be facilitated by ensuring that the regulatory authority has access to its own sources of funding and is not depend on annual transfers from the national budget. In monitoring compliance and enforcement, the regulatory authority must be able to impose penalties according to clearly defined rules.

4.2 REGULATION OF THE TRANSPORT SECTOR

4.2.1 Background

At the present time, civil aviation is regulated by the Civil Aviation Authority of Zimbabwe (CAAZ), which is also the operator of airport and navigation services for the industry. In the case of railways and road transport there are no formal regulatory bodies. In the event that customers wish to lodge complaints about the quality of price of services, the only avenue is the Competition Commission. In the case of the roads sub-sector, responsibility for technical standards for road construction and safety rests with the Department of Roads (DoR), while responsibility for oversight of the road transport industry is dispersed among several entities.

The current and prospective constraints on the ability of the Zimbabwe Government to fund the very large backlog of rehabilitation and periodic maintenance required for the transport sector has led to a renewed interest in mobilizing private investment for this purpose, especially in the railways and civil aviation sub-sectors. International experience since the 1970s suggests that with a significant increase in the role of the private sector in provision of transport services and infrastructure, there will be a need for a careful assessment of the regulatory environment within which these services are provided in Zimbabwe.

This renewed interest in the role of the private sector in transport services and infrastructure stems, in part, from international experience over the past four decades during which there were dramatic changes in the
provision of transport services. As Estache and de Rus (2000) point out, at the end of the 1970s, most countries relied on the public sector to build the basic infrastructure in airports, roads, railways, and ports, and to produce the related transport services. In this environment, the role of private firms in transport was secondary. In the 1990s liberalization of transport policies took place and the role strengthened of private operators and investors in transport infrastructure throughout the world. A major driving force in this process has been the effort by governments to find alternative sources of funding for the development of transport infrastructure and services. After the extensive period of privatization in the 1980s and 1990s, the private sector became the main provider of transport services and in many cases assumed a leading role in the provision of infrastructure as well. In many developing countries, publicly owned companies were sold and many transport services were contracted to private operators under concession arrangements, especially in Asia and Latin America. These changes often created new transport monopolies or oligopolies in which the price, investments, and service quality commitments of operators required supervision to protect transport users. As the same time, governments had an obligation to ensure that the rights of the transport operators that entered the transport industry under these liberalization programs were also protected.

In response, many countries reassessed the role of their regulatory bodies and created new regulatory agencies or units. To be effective, these regulatory bodies have had to ensure that prices are neither excessive nor inadequate, that services meet the desired standards, and that governments and investors comply with the commitments they make. A number of key lessons have emerged from this experience (Estache and de Rus 2000):

• Regulatory concerns must be addressed during the formation of these public-private collaborations. It is important to ensure that regulatory needs are built into the obligations of operators during the transfer of responsibilities. Privatization teams and regulators must ensure that investors receive fair treatment and returns on their investment. If investors lack that confidence, they are likely to demand higher returns to hedge against regulatory risk or further increase the risk that they will simply not choose to invest enough;

• There is also a need to ensure that these collaborative arrangements provide protection against excessive or abusive prices or declining quality of service. In this connection, it is important to ensure that the regulatory regime and process allows users to voice their concerns through formal channels rather than leaving them to informal channels susceptible to manipulation by interest groups;

• In many instances, civil servants recruited to staff regulatory agencies have not had the necessary technical skills to become effective economic regulators. Demands for training and training materials to develop regulatory skills in the transport sector often went unmet, and as a result, the effectiveness of regulatory bodies was undermined.

4.2.2 The Approach to Regulation in the Transport Sector

This Report calls for the creation of a single regulatory agency for the entire transport sector, including roads, rail, civil aviation, and ports, because the role of the private sector in provision of services in these sub-sectors, as well as increased responsibility for some of the transport infrastructure, will likely expand substantially in the decade ahead. Under these circumstances, an integrated approach to the regulation of transport services, with due attention to inter-modal competition, would appear to best serve the country at this time. For the purposes of the Report, the new regulatory agency is called the Transport Regulatory Agency of Zimbabwe (TRAZ).
In addition to the above-mentioned lessons from international experience, the effectiveness of a regulator also depends on the clarity with which the sectoral responsibilities have been divided between a regulator and a transport ministry, and with other government agencies. Table 4.1, devised by Estache and de Rus (2000), provides some practical guidelines for such division of responsibility for the transport sector. They note that their suggested framework entails a degree of subjectivity and that adjustments are needed for country-specific circumstances; for example, should the regulatory agency be involved in the design of privatization and concession contracts because it would have the main responsibility for implementing these provisions? The position taken in this Report is that a transport regulator in Zimbabwe should be in place prior to the design of the concession contracts for railways and civil aviation.

### 4.2.3 Possible Next Steps

In the event that the Government decides to set up a regulatory agency for the transport sector, the first step would be the preparation of a detailed business plan. The follow-up work would include drafting of new legislation for the establishment of such an agency, along with decisions on the organizational structure of the agency. With respect to the latter, the agency would likely have separate technical units for road transport, railways, civil aviation, and ports. It would also have a number of support units, including finance, legal, human resources and communications. A substantial amount of work will also be needed on the specifics of the agency’s responsibilities, staffing requirements of each of the units and recruitment, and funding arrangements. An early start on such an initiative would have the advantage of helping lay the foundations for the design of concession contracts in the transport sector and for the reporting obligations of concessionaires.

#### 4.2.4 Illustrative Arrangements for Regulation of Civil Aviation

For the purposes of this Report, some indicative work on regulatory arrangements has been done for the civil aviation sub-sector. The transport regulatory authority would be charged with promoting, regulating, and enforcing civil aviation and security standards consistent with the requirements of the International Civil Aviation Organization (ICAO). The key

<table>
<thead>
<tr>
<th>Features</th>
<th>Government</th>
<th>Regulator</th>
<th>Other entities</th>
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<tbody>
<tr>
<td>Legal framework &amp; sectoral policy</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Planning</td>
<td></td>
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<td></td>
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<tr>
<td>Privatization design</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Decisions on taxes and subsidies</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Concessioning &amp; procurement auctions</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Pricing policy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control &amp; penalties</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical regulation</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Quality standards</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental regulation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antitrust policy</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

objectives of the authority would be threefold: (i) to promote and maintain a safe, secure and sustainable civil aviation environment while adhering to international standards, (ii) to regulate and oversee the functioning and development of the industry in an efficient, cost effective, and customer-friendly manner, and (iii) to promote an enabling environment for development of the air services industry.

To exercise its oversight responsibilities for civil aviation, the new regulatory authority could have several technical units for civil aviation, namely, Air Safety Operations, Aircraft Safety, Air Safety Infrastructure, and Aviation Security.

• **Air Safety Operations (ASO).** The ASO would perform oversight on scheduled fixed wing aircraft, helicopters, and flight schools. The unit would also establish testing standards and administer pilot exams. Another important function of ASO would be the flight inspection unit. This unit would calibrate navigation equipment. It would also regulate the medical aspects of airline operations.

• **Aircraft Safety (AS).** The major role of the AS unit would be to license aircraft and perform oversight activities on aircraft maintenance organizations or similar institutions. Other activities of the unit would include certification, management and standards development, and certification engineering. The unit would also be responsible for aviation environment protection.

• **Aviation Security (AVSEC).** The AVSEC unit would provide security oversight in various areas. One of the important functions would be to ensure safe transportation of dangerous goods. Other important functions would include the direct oversight of airlines and airports in order to prevent unlawful acts of interference, the training and certification of personnel, and the approval and or accreditation of training organizations.

• **Air Safety Infrastructure (ASI).** The ASI unit would perform various safety oversight functions in the aviation infrastructure. One of the main duties would be to license aerodromes. In addition, the unit would issue annual licenses to commercial airports after having successfully concluded oversight duties. Communication, navigation, and surveillance oversight would be performed on designated airports of the country.

The regulatory agency would be mandated to generate its funding requirements from user fees from the civil aviation industry, including, for example, a charge on departing scheduled passengers and a fuel levy payable by the general aviation industry. Other sources of revenue could include various service charges, for example, aircraft registration, examination and registration of pilots, and various licensing activities.

An indicative financial plan has been drawn up for the civil aviation portion of the regulatory agency (Table 4.2). The assumptions used to develop this indicative financial plan are based on comparable revenue and cost data for the South African Civil Aviation Authority (SACAA). The total revenues are based on the projected growth in passenger traffic as set out in Figure 4.1 below. The safety charge currently applied by the SACAA is 12 rand per passenger ticket issued (US$1.55). The security fee accounts for 77 percent of total revenues. For the purposes of this Report, the same safety charge is assumed for TRAZ and receipts from this fee are assumed to be 77 percent of total revenues. The indicative cost structure of the civil aviation unit of TRAZ is also assumed to be comparable to that of the SACAA, with personnel costs accounting for 75 percent of total revenues. Regulatory activities for civil aviation are assumed to run a small operating surplus each year.
4.3 REGULATION OF THE ELECTRIC POWER SECTOR

4.3.1 Current Arrangements for Regulation of Electricity Services

_institutional arrangements_. The Electricity Act of 2002 provided for the creation of the Zimbabwe Electricity Regulatory Commission (ZERC) as the regulatory body for the electricity sector. The Commission became operational in 2005. ZERC was expected to promote the efficient provision of safe, secure and reliable electricity, promote competition as well as private sector participation in service provision. It has the following specific objectives:

- To ensure a fair and balanced regulation for licensees, consumers, investors and stakeholders in the electricity sector.
- To pursue efficient industry and market structures and to ensure the optimal utilization of resources for the provision of such services.

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Table 4.2: Projected Income Statement for Regulation of Civil Aviation (US$ '000 at 2009 constant prices)

<table>
<thead>
<tr>
<th>Item</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety charges</td>
<td>1663</td>
<td>1746</td>
<td>1833</td>
<td>1998</td>
<td>3519</td>
</tr>
<tr>
<td>Other income</td>
<td>497</td>
<td>522</td>
<td>548</td>
<td>597</td>
<td>1051</td>
</tr>
<tr>
<td>Total revenues</td>
<td>2159</td>
<td>2267</td>
<td>2381</td>
<td>2595</td>
<td>4570</td>
</tr>
<tr>
<td>Operating expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personnel costs</td>
<td>1620</td>
<td>1701</td>
<td>1786</td>
<td>1946</td>
<td>3428</td>
</tr>
<tr>
<td>Communications</td>
<td>108</td>
<td>113</td>
<td>119</td>
<td>130</td>
<td>229</td>
</tr>
<tr>
<td>Other operating expenses</td>
<td>324</td>
<td>340</td>
<td>357</td>
<td>389</td>
<td>686</td>
</tr>
<tr>
<td>Depreciation</td>
<td>65</td>
<td>68</td>
<td>71</td>
<td>78</td>
<td>137</td>
</tr>
<tr>
<td>Total operating expenses</td>
<td>2116</td>
<td>2222</td>
<td>2333</td>
<td>2543</td>
<td>4479</td>
</tr>
<tr>
<td>Net operating income</td>
<td>43</td>
<td>45</td>
<td>48</td>
<td>52</td>
<td>91</td>
</tr>
</tbody>
</table>

Source: Estimates by authors.
• To optimize access to electricity services (in both urban and rural areas) and ensure adequate supply of electricity.

• To ensure fair prices that also are sufficient to finance operation, maintenance and investments, and obtain reasonable earnings for their efficient operation.

• To ensure safety, security, reliability, and quality of service in the production and delivery of electricity to consumers.

Although the regulatory provisions state that the ZERC must be independent, it is under the direct control of the Minister of Energy and Power Development. As a result, there is overlap between the regulatory roles of ZERC and the Minister. The Electricity Act gives the Minister of Energy and Power Development the authority to issue regulations on many aspects related to the power sector, including: the Commission’s administrative affairs; the duties, powers, rights and obligations of a licensee; the procedure for applying, amending, or canceling licenses; price and tariff setting by licensees; fees, levies, fines, and penalties that may be payable by licensees of consumers; the regulation of investments, assets, and properties, and the interest in such assets and properties, held in connection with the electricity industry; customer-related matters, including complaints, practices concerning customers that are having difficulty paying bills, and connection and disconnection procedures; the regulatory treatment of rural electric schemes and investments; procedures for addressing licensee mergers, acquisitions, and affiliate relationships; procedures for monitoring and mitigating market power; and terms and conditions to access to the transmission and distribution networks.

The absence of a comprehensive set of regulations hampers ZERC from performing its duties. The ability of ZERC to discharge its responsibilities effectively has also been limited by human resource constraints, and in particular the shortage of regulatory professionals in the country and lack of operational autonomy. Moreover, the Commission’s members have not been reappointed since the end of their last official term several years ago.

**Licenses.** The regulatory framework requires that any operator in the sector must be issued a license. ZERC issues licenses for the following: generation located in the country or abroad (to supply electricity to any transmission, distribution, or supply licensee); primary transmission (in charge of generation scheduling, commitment and dispatch, transmission scheduling and generation outage coordination, transmission congestion management, power pooling, and ancillary services scheduling, among other responsibilities); independent transmission; bulk supply (traders); primary distribution (to connect customers to the network, metering, billing and collection, and so on); independent distribution; and retail supply (to trade electricity at the retail level). Key features of the licensing arrangement include the following:

- The primary transmission operator may purchase power for the purpose of reselling in bulk to one or more licensees, in which case it must purchase power in an open, transparent, and competitive manner, subject to the review of the Commission;

- The distribution operator may provide electricity to its distribution customers, in which case it must purchase power in an open, transparent, and competitive manner, subject to the review of the Commission. In such cases, and under exceptional circumstances, the Commission may allow an alternative method;

- Whenever there is interaction between the primary distribution operator and independent distribution operators, the former is considered the default service provider.

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3 All operators with capacity to generate, transmit, distribute, or supply more than 100 kW of electricity must hold a license.
provider for end users, including those who chose an alternative provider that failed to meet its obligations.

- Any license transfer, including the purchase of a licensee by a current licensee (that is, a horizontal or vertical merger) must be approved by the Authority;
- There is some room for the Authority’s discretion on the licensee’s running business, since the Act allows for the possibility of an exclusive area (which is reasonable in some cases), for all or part of the period of the license, for a specific purpose, for a geographical area.

Licenses are valid for up to thirty years (they are currently set at 25 years), with a possible twenty-year extension if the Commission agrees. Licensees shall comply with consumer standards, as well as health, safety and environmental standards, set forth by the authority. There is a list of conditions of enforcement and cancellation of a license that is lax. For example, a cause of cancellation is that “the financial position of the licensee is such that it is unable to fully and efficiently discharge the duties and obligations imposed on him by his license”. This is a subjective criterion for an important event like the cancellation of a license.

**Competition and market power.** ZERC oversees whether electricity services are provided competitively and determines whether a service with fixed price can be provided competitively – in which case, ZERC may deregulate it, subject to the approval of the Minister of Energy and Power Development. Also, the Commission has the authority to monitor electricity markets to determine the presence of dominant market power – in which case, it may issue cease and desist orders, levy monetary penalties (in concurrence with the Competition and Tariff Commission), or refer the matter to the Competition and Tariff Commission for investigation.

However, as Chapter 8 indicates, there is practically no private supply of electricity to the network in Zimbabwe. There are several reasons for this situation: (i) the wholesale price paid from ZTDC to ZPC is low (lower than the average import cost). For ZESA Holdings, this is an internal transfer from one unit to another; for a private generator it results in a price that does not cover its costs; and (ii) the return on capital recognized by the regulator is only 8.5 percent, which is lower than the return used by other regulators in Zimbabwe and likely to be below the opportunity cost of capital in the country.

**Regulation of power tariffs.** The regulator is also responsible for setting tariffs. ZERC is responsible for defining the pricing methodology and sets prices and tariffs (after consultation with the Minister of Energy and Power Development). Currently, under the tariff schedule, marginal rates increase with volumes; this design aims to discourage consumption. Formally, tariffs are to be set on a cost-plus principle. However, they are being revised once a year to cover budget costs and capital expenditures partially, with an 8.5 percent rate of return. All components of the tariff, including the price of the electricity, are revised and approved at the same time because there is no need to distinguish between the cost components of generation and those of transmission and distribution at the present time.

According to the regulatory framework, tariffs across categories should be set to phase out or substantially reduce cross-subsidies, while allowing for lifeline tariffs for some customers and subsidies under the Rural Electrification Fund. However, there is resistance to tariff increases that would impact adversely on consumers. As a result, the average tariff is low compared to domestic estimates of costs. In 2009, the average end-user tariff for ZESA was 6.5 US cents per kWh, while ZERC estimated the economic cost to provide the service at 9.8 US cents per kWh. Subsequently, price adjustments were made to bring the average price to about 7.5 US cents a kWh in 2010. Rough estimates put the generation cost of a new thermal plant based on coal (excluding the environmental cost) in
the range of 12 to 15 US cents per kWh. The average residential consumer should therefore have paid a higher price than the average of 6.5 cents that prevailed in 2009. Tariffs in other parts of the region range between 8 and 12 US cents a kWh. The implication is that the present economic signals to potential private investors in power generation in Zimbabwe are poor.

4.3.2 Measures to Strengthen the Regulatory Environment

The Government is currently drafting a new Bill that provides for the creation of the Zimbabwe Energy Regulatory Authority, a single regulator for the entire energy sector, including electric power, petroleum products and all other forms of non-renewable and renewable energy. The proposed Authority will be the successor of the current Electricity Regulatory Commission and the Petroleum Regulatory Authority. The proposed responsibilities of the new Authority are set out below in Box 4.1. The proposed move to a single regulator for the entire energy sector offers an opportunity to address a number of concerns about the existing regulatory environment for the power sector.

A key issue going forward is the extent to which the current regulatory arrangements for the electric power sector will be carried forward into the operations of the new Authority and whether these regulations will be seen as adequate by potential investors in new generation capacity under IPP arrangements or in additional transmission capacity that can facilitate wheeling of power across Zimbabwe.

The position taken in this Report is that establishment of independent regulator for the electric power sector is essential to ensure a level playing field to attract investment. The current overlap between the Minister and ZERC in regulating the electricity system and market should be minimized. In this regard, a particular concern about the current draft of the Bill is the degree to which the Authority will have autonomy as an independent regulator. Some of the key features of the proposed new authority appear to give the Minister considerable authority over the operations of the Authority.

- The draft Bill proposes that the Authority reports to the Minister of Energy and Power Development;
- The draft Bill specifies that “the Minister may give the Board such general directions relating to the policy the Authority is to observe in the exercise of its functions as the Minister considers to be necessary in the national interest;”
- The members of the Regulatory Board will be appointed for a term not exceeding five years by the Minister of Energy and Power Development with the approval of the President;
- The Minister will be responsible for appointing the chairperson and vice-chairperson of the Board;
- Regulations issued by the Board pertaining to its operations must be first approved by the Minister before they can become effective.

In the case of the Energy Regulatory Board of Zambia, for example, the Regulator reports to the Parliament which gives it autonomy to play a fair arbitrator role in conflict resolution in the sector. Another option might be the establishment of a Tribunal which looks into conflicts that might arise between the Authority and the MEPD. This mechanism is used in Tanzania and Kenya, which have similar institutional arrangements.

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4 The draft Bill defines the energy industry to mean persons in Zimbabwe who, in the private or public sphere are concerned with the generation, procurement, distribution, transportation, transmission and production of energy. It defines renewable energy to include energy generated from natural resources such as sunlight, wind, rain, tides, geothermal heat, plants and biomass which are naturally replenished, and in particular includes any renewable fossil fuel.
The functions of the proposed Energy Regulatory authority include the following:

- Regulate the procurement, production, transportation, transmission, distribution, importation and exportation derived from any energy source;
- Create, promote and preserve an efficient energy industry market for the provision of sufficient energy for domestic and industrial use;
- Promote the procurement, production, transportation, transmission and distribution of energy in accordance with public demand and recognized international standards;
- Promote coordination and integration in the importation, exportation, and pooling of energy from any energy source in the SADC and COMESA region;
- Exercise licensing and regulatory functions in respect of the energy industry;
- Ensure that prices charged by licensees are fair to consumers in the light of the need for prices to be sufficient to allow licensees to finance their activities and obtain reasonable earnings for their efficient operation;
- Maintain and promote effective competition within the energy sector;
- Promote and encourage the expansion of the energy industry and advancement of technology relating thereto;
- Promote, identify and encourage the employment and development of sources of renewable energy;
- Advise the Minister on all matters relating to the energy industry;
- Advise and educate consumers and licensees regarding the efficient use of energy;
- Ensure the maximization of access of energy by all consumers that is affordable and environmentally sustainable;
- Establish appropriate consumer rights and obligations regarding the provision of energy services;
- Establish or approve operating codes of safety, security, reliability, quality standards and any other sector related codes and standards;
- Arbitrate and mediate disputes among and between licensees and consumers; and
- Assess, promote and advise the Minister and Licensees on environmental impact of energy projects before licensing.

There are several other aspects of the existing regulatory framework for electric power that need to be reviewed in the course of preparing the new Bill. These include the following:

- Transmission operators are currently able to mix physical and commercial operations (trades bulk energy), thereby creating a risk of double-sided monopoly. It is better to separate physical operation of the transmission system from its commercial aspects, with the latter left to traders and distributors;
- The existing framework, which requires the primary distribution company to be default provider, raises the risk of the operator; for example, the entry of traders or other distributors may result in the primary distributor being left with insufficient funds to finance operation and expansion;
- The Electricity Act allows entities to disconnect consumers that do not fulfill their financial commitments; however, this is not respected in practice, with serious financial consequences for the distribution company;
- A revision of energy price and distribution margins to cost-reflective levels may facilitate entry of private investors in the medium-term. The agency should be ready to refine the operational rules for the generation segment (dispatch, pricing). The possibility of writing the details of power supply agreements into a license may be an example of reducing opportunistic risk-taking by the dominant public firm if private generation of electricity increases.
4.3.3 Possible Next Steps

The position taken in this Report is that the proposed new Bill that provides for the creation of the Zimbabwe Energy Regulatory Authority represents an important shift towards an integrated approach to the regulation of the entire energy sector. Before the new legislation is finalized, a thorough review of the current regulatory framework for the electric power sector will need to be undertaken to ensure consistency and compatibility with the regulation of other industries in the energy sector. As with the regulatory environment for other infrastructure services reviewed in this Chapter, the essential element of an effective regulatory framework for energy infrastructure and services is to place the responsibility for regulation in an agency with the required independence, autonomy, expertise, and accountability. The agency must protect the interests of both users and investors, and must do so in a fair and transparent manner. The standard recommendations for the creation of such an agency are straightforward and revolve around the following three broad principles: (i) the regulator’s sectoral breadth of authority; (ii) the desirable qualities of a regulator; and (iii) the division of labor between the regulator and the government.

The revised version of the Bill that deals with electric power will therefore need to give attention the following types of concerns that were identified in the preceding Section:

- Creation of an authorization framework that provides opportunities for new companies and investors to establish power supply, transmission and distribution businesses. Given the importance of the proposed private investment program for the power sector, as outlined in Chapter 8, the revised bill will need to give close attention to potential legal and other regulatory and policy impediments that may restrict private sector participation in the power sector, in addition to the requirement for an Independent Power Producers (IPPs) policy that clarifies the roles of various participants;
- Regulating competition (including tariffs) involving the effective enforcement of fair and equitable competitive market principles, restraining the power of dominant suppliers and leveling the playing field for new entrants;
- Interconnection of power generation, transmission and distribution networks and facilities;
- Promoting universal access to electricity services, either as part of a national network, or through the development of solar power, micro-hydro plants and other forms of renewable energy for those communities isolated from the national network;
- Minimizing the burden and costs of regulation and contract enforcement.

The next steps should also include decisions on the organizational structure of the regulatory agency. The new entity would likely have separate technical units for the various industries within the energy sector. It would also have a number of support units, including finance, legal, human resources and communications. A substantial amount of work will also be needed on the specifics of the agency’s responsibilities, staffing requirements of each of the units and recruitment, and funding arrangements. Early decisions on these arrangements will, in turn, facilitate the design of IPP arrangements for potential investors in the power sector, thereby laying the foundations for the design of contracts in the power sector and for the reporting obligations of IPPs.

The proposed Action Plan includes funding for a detailed assessment of the regulatory requirements for the power sector within the context of regulation of the energy sector as a whole.
4.4 REGULATION OF WATER SUPPLY AND SANITATION SERVICES

As Chapter 7 indicates, access to improved water resources has declined during the past decade, together with the capacity for management of water resources. There has been deterioration in the quality of water due to poor sewage treatment and conveyance. The decline of the sector has been accompanied by lack of regulatory resources and intermittent changes in the policy and institutional environment for the water sector.

4.4.1 Current Arrangements for Regulation of the Sector

Regulation of water supply and sanitation services is dispersed among various acts of Parliament. The Water Act regulates the management of water resources, while the regulation of water and sanitation services is guided by other Acts (including the Mines and Minerals Act, Urban Councils Act, Rural District Councils Act, and Environment Act).

**The Water Act of 1998.** The forerunner to the Water Act of 1998 was the 1976 Water Act that primarily protected the water interests of commercial farmers. The 1998 Act replaced the earlier Act and included the following general provisions:

- The nation’s water resources are vested in the State;
- There will be equal access to water by all Zimbabweans as a basic right, regardless of economic and historical status;
- Decision making on the development, management and use of water resources shall be undertaken at the local level, through the creation of catchments and sub-catchments councils;
- The water resources of the nation shall be developed and utilized in line with the principles of integrated water resources management;
- The Water Act vests the Minister of Water Resources Development and Management with the development of policies to ensure the availability of water and its equitable and efficient allocation, subject to quality and environmental requirements. The Minister regulates quality and consumer-protection standards for water supply provided by any person and ensures that affordable clear water reaches underprivileged communities.

The Water Act does not make reference to issues of regional integration. Of particular importance for Zimbabwe is the fact that more than 70 percent of the water resources are in shared river basins. There is scope for integrated planning and management of shared water resources that can be built on the existing regional water course commissions (the Zambezi Water Course Commission, Limpopo Water Course Commission, and the Mozambique-Zimbabwe Water Course Commission).

The Act creates a Water Fund to clean up pollution and alleviate environmental effects associated with water. The main source of funds is fees imposed to permits to discharge or dispose wastewater. It would appear that a substantial portion of these funds have not been used for the intended purposes, resulting in some disgruntlement among those paying the fees and fines.

**Water Resources Management Strategy for Zimbabwe** of 1998 complemented the Water Act. It provided a framework for implementation of the provisions of the Water Act. The strategy addressed the following set of issues in water management:
• Water resources were to be viewed from a complete hydrological perspective; groundwater and surface water were to be treated as part of a unified hydrological system;

• There was to be equitable access to water for all legitimate users in catchments. Water was no longer privately owned, and water rights were replaced by water use permits. Permits would be issued for a limited period and could only be renewed subject to water availability and evidence of efficient use;

• Increased emphasis on demand management to ensure sustainability of the water resource;

• Development of financing mechanisms for water resources development through the recognition that the water sector contributes to public health and economic growth;

• Greater consideration of environmental aspects of water use, with more control over pollution and the adoption of the principle that the “polluter pays.”

• Increased emphasis on integrated land and water use planning;

• Strategies for dealing with shared trans-boundary water;

• The decentralized stake-holder Catchment Councils and Sub-Catchment Councils would have more say on water allocation and general water management on a day-to-day basis.

*Zimbabwe National Water Authority.* The Prior to the Water Act of 1998, the Zimbabwe National Water Authority Act of 1996 had led to the establishment of the Zimbabwe National Water Authority (ZINWA), whose responsibilities were as follows:

• Assume responsibility for operational aspects of what was then part of the work of the Department of Water Development. Responsibilities for water policy and regulation were to remain with the Department of Water Development;

• Develop and manage the national water resources. In discharging these responsibilities, ZINWA was to operate on a commercial basis, except for certain non-commercial functions for which levies would be imposed on certain groups of water consumers.

The provision of both raw and clear water and sanitation was handed to the Zimbabwe National Water Authority (ZINWA) in 2006, but handed back to local authorities (such as the Harare Water Authority and the Bulawayo Water Authority) at the beginning of 2009. ZINWA continues to hold residual obligations on raw water (to farmers and towns) and clear water (to end-users in small towns, rural and growth areas). ZINWA operates at the national level in the development of small and large dams, and boreholes that are sources of raw water for the urban, rural and mining water supplies, as well as agricultural irrigation water. It also develops and operates distribution systems for some urban and rural water supplies. The treatment and distribution of water to clear water reservoirs is also the responsibility of ZINWA.

ZINWA and other operators need a permit to extract and use water, and dispose of wastewater. The Minister may also issue regulations regarding permits (issue, amendment, or withdrawal) and the fee charged to permit holders. The permits last for 25 years and may be renewable. These permits are for own use and sale, in which case the permit must include such authorization.

The *Environmental Management Act* was promulgated in 2002. It provided for the establishment of the Environmental Management Agency (EMA) whose responsibilities included: (i) providing for the sustainable management of natural resources; (ii) protecting the environment; (iii) preventing pollution and environment degradation; (iv) preparation of a National Environment Plan and other plans for the management and protection of the environment; and (v) establishment of an Environmental Fund.
4.4.2 Transition to a More Effective Regulatory Environment

The foregoing series of legal and institutional reforms have had substantial implications for the development of the regulatory environment for the supply and use of the country’s water resources. Unfortunately, the economic deterioration of the past decade, compounded by the substantial lost of skills in the sector as a result of migration out of the country, severely hampered the further development of the regulatory environment for the four distinct areas of service in the sector: (i) water resources management; (ii) rural water supply and sanitation; (iii) urban water supply and sanitation; and (iv) irrigation. As things now stand, there is neither a unified Act for regulation of water and sanitation nor a formal Regulatory Agency that is responsible for the sector. As Chapter 7 indicates, there is overlap in the roles of the agencies that participate in the sector and there has been deterioration in coordination arrangements. The National Water Policy has remained in draft since 2004. And institutional arrangements need clarification as there are conflicting roles between ZINWA and local authorities related to mandates and ownership of water supply infrastructure.

The key issue for Zimbabwe at this juncture is the choice of the set of rules and organizations that will set, monitor, enforce, and change allowed tariffs and service standards for water and sanitation service providers. There have been proposals to create an independent Water and Sanitation Regulation Commission, but a rigorous analysis of the extent of centralization or decentralization of arrangements for service provision is still pending, along with questions about the extent to which private utilities and service providers will be encouraged in the decade ahead.

**International experience with regulation of water and sanitation services.** There is an extensive literature on the various approaches regulation of water services that have adopted in developed and developing countries.\(^5\) As Groom et al (2006) have noted, there are a number of general lessons from international experience with the regulation of water and sanitation services. These include the following:

- Economic regulation should be clearly defined. While there is overlap with other functions (for example, consumer dispute resolution and social policy), the domain of economic regulation should be kept narrow, clearly specified and distinguished from policy and governance functions;
- Designing effective regulation starts with an identification of the WSS objectives and a careful consideration of both the extent to which regulation can facilitate achievement of these goals and its attendant costs.
- WSS services typically require economic and technical regulation, but it is not necessary that all regulatory functions be undertaken by a stand-alone regulatory body. Legal rules and instruments can be used to set key regulatory parameters, especially in the case of privately owned water utilities. Assignment of functions will

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typically take account of a country’s social, political, and legal traditions; the capability of existing agencies; and potential impacts on sector reform programs. In the case of the WSS sector, there is no single “best practice” model for the allocation of functions to agencies or instruments.

- Where in-country capacity is scarce, there may be opportunities to use existing organizations, international panels of experts, or regional bodies.
- Where legal and governance traditions are supportive, as is the case in Zimbabwe, contracts can be an effective regulatory mechanism. However, if these are to be combined with the creation of regulatory agencies, care must be taken to avoid inconsistencies.
- International experience suggests that economic regulation can function well for extended periods without a “regulator.” In such cases, the regulatory mechanism may be a contract with a privately owned service provider, a process for decision making by a department or minister, or a performance contract/license with a publicly owned service provider.

### Table 4.3: Examples of Regulatory Models, Market Structures, and Ownership Models

<table>
<thead>
<tr>
<th>Market structure</th>
<th>Self-regulation</th>
<th>Regulation by contract</th>
<th>Regulation by contract with regulator</th>
<th>Regulation by agency with licensing regime</th>
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<tbody>
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<td>Municipal</td>
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<tr>
<td></td>
<td>France (Pu)</td>
<td>India (Pu)</td>
<td>Colombia (Pa + Pr)</td>
<td>Zambia (Pu)</td>
</tr>
<tr>
<td></td>
<td>Cambodia (Pr)</td>
<td>Durban (Pu)</td>
<td>Bolivia (Pu + Pr)</td>
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<td></td>
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<td>Argentina (Pu + Pr)</td>
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<td>Regional</td>
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<td>Peru (Pu)</td>
<td>England (Pr)</td>
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<td>Chile (Pr)</td>
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<td>National</td>
<td>Djibouti (Pu)</td>
<td>Gabon (Pr)</td>
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<td>Senegal (Pr)</td>
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<td></td>
<td></td>
<td>Burkina Faso (PU)</td>
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</table>

Source: Trémolet and Hunt (2006). Note: Pu = public operator; Pr = private operator.

As Table 4.3 indicates, there is a range of models in use for the regulation of water supply and sanitation services. The institutional models for regulation tend to vary depending on the market structure for service provision (municipal, regional, or national), and the ownership of the service provider. As a practical matter, in most countries water services are provided at the local level either by the municipality itself or a corporatized (but publicly owned) municipal utility. In some cases, municipalities have delegated the management of these services to a private operator, using a variety of private sector contracts. And in some countries, water services are provided by regional or even national utilities, which provide services to a number of municipalities and can be either publicly or privately owned.

### 4.4.3 Policy Issues Related to the Design of a Regulatory Framework

As the discussion Chapter 7 indicates, a number of key decisions about the overall objectives for the supply of water and sanitation services, including the manner in which the services will be provided, are required before definitive positions can be taken on the most appropriate arrangements for regulation of these services.
The range of issues includes the following:

- The extent to which services will be provided by privately operated utilities. For these types of services, there are two distinct traditions with respect to regulation: one that relies on courts or arbitrators to fulfill the regulatory functions when the parties cannot agree; and the other that relies upon government-established regulatory agencies. The approach taken to regulation of such private services will depend on whether the government retains ownership of the assets with service provision provided by private suppliers under contract arrangements; or whether the assets of the utility are owned by the investors;

- The manner in which tariffs will be set and periodically adjusted. Most successful WSS programs have used a cost building-block approach that sets average prices or revenues on the basis of forecasts of reasonable costs by broad categories (operational expenditures, depreciation or renewal expenditures, and return on assets). Because it is forward looking, it provides incentives for a utility to improve its efficiency, and because it is reset on the basis of utility-specific costs, it provides some assurance that the utility will be able to recover reasonable costs (including the cost of capital);

- The approach to be taken in the event that the bulk of the WSS services continue to be provided by national government or local government utilities. As the experience of Zimbabwe indicates, government provision of WSS services is no panacea for acceptable levels of service. In some countries, governments have established independent regulators for their water utilities. These arrangements can increase transparency, reinforce incentives for utilities to operate within a framework of good governance, and create more political space for tariff increases. But reviews of international experience indicate that the approach is not without difficulties. Much depends on: (i) the overarching sectoral objectives; (ii) the extent of separation between governance, policy and regulatory functions; and (iii) institutional and capacity constraints within the country.

- The role of regulation in improving wastewater services in the decade ahead. International experience points to the fact that wastewater services often lag well behind access to water services. There are strong public health benefits from providing wastewater services, but their provision by a centralized network can be prohibitively expensive. Improving wastewater services may be a matter of improving or extending existing small-scale systems: for example, septic tanks, latrines, and small-scale local systems. In these cases, economic regulation may not be critical, but centralized environmental regulation may be necessary to ensure that health objectives are achieved. Recovery of the full costs of sanitation services may not be possible, or desirable (because of the community health benefits). There may therefore be a role for government subsidies in the provision of wastewater services.

4.4.4 Possible Next Steps

The position taken in this Report is that in the decade ahead the emphasis would be on the decentralized provision of water and sanitation services, either by municipalities themselves or under contract arrangements with private providers. More work is required on the details of an appropriate regulatory framework that would support this model for service provision. The proposed Action Plan therefore includes funding for a detailed assessment of these options.
4.5 REGULATION OF COMMUNICATIONS SERVICES

4.5.1 The Setting

The legislative framework for regulation of ICT. Four separate pieces of legislation have a bearing on the regulatory environment for the Information and Communications Technology industry in Zimbabwe. These are the Postal and Telecommunications Act of 2000, the Broadcasting Services Act of 2001, the Access to Information and Protection of Privacy Act of 2002, and the Interception of Communications Act of 2007. At the present time, regulation of the ICT sector is divided between the Broadcasting Authority of Zimbabwe (BAZ), the Postal and Telecommunications Authority (POTRAZ) and the Media and Information Commission (MIC). POTRAZ is accountable to the Minister of Transport and Communications, while BAZ and the MIC report to the Minister of Media, Information, and Publicity.

The Postal and Telecommunications Authority (POTRAZ) was established under the Postal and Telecommunications Act of 2000. The responsibilities of POTRAZ are as follows:

• To exercise the licensing and regulatory functions of postal and telecommunications service in Zimbabwe;

• To exercise the licensing and regulatory functions of the allocation and use of satellite orbits and the radio frequency spectrum in Zimbabwe, including the establishment of standards and codes relating to the same;

• To secure that reasonable demands for postal and telecommunications services are satisfied;

• To promote the interests of consumers, purchasers, and other users, in respect of the quality and variety of postal telecommunications services provided and telecommunications apparatus supplied;

• To maintain and promote effective competition between persons engaged in the provision of postal and telecommunications services;

• To monitor tariffs charged by cellular telecommunications and postal and telecommunications licenses with a view to eliminating unfair business practices among such licenses.

The Broadcasting Services Act outlines the functions of the BAZ:

• Preparation of frequency allotment and license area plans;

• Ensuring economic and efficient use of the broadcasting frequency spectrum;

• Issuance of broadcasting and signal carrier licenses.;

• Monitoring of the conduct, quality, and program standards of broadcasters;

• Licensing, promotion and monitoring of marginalized community-based radio including promotion of local languages and local content;

• Creation of a Broadcasting Fund to help finance local broadcasting and related initiatives and to provide for matters incidental to or connected with the foregoing.

The Access to Information and Protection of Privacy Act provides members of the public with the right to records and information held by public bodies. It makes public bodies accountable by: (i) giving the public the right to request correction of misrepresented personal information; (ii) preventing the unauthorized collection, use, or disclosure of personal information by public bodies; and (iii) protecting personal privacy. It also provides for the regulation of the mass media and establishes a MIC whose purpose includes the following:

• Foster freedom of expression in Zimbabwe;
• Make information readily available to anybody requiring it;
• Foster a Zimbabwean national identity and integrity;
• Enforce and monitor the enforcement of provisions of the Act;
• Develop mass media and uphold professional and ethical codes of conduct;
• Ensure unbiased and balanced reporting by the mass media in Zimbabwe.

The MIC is under the control of the Minister of Media, Information, and Publicity, with the Minister responsible for appointing all MIC Board members and setting their terms of office — arrangements that leave the MIC open to political interference. In fact, media registration and accreditation of journalists have been contentious issues for MIC in the past, with representatives of the media accusing the government of actions aimed at controlling both local and international media. The Interception of Communications Act provides for the lawful interception and monitoring of certain communications in the course of their transmission through a telecommunication, postal, or any other related service or system in Zimbabwe. It also provides for establishment of a Communications Monitoring Center. Enforcement of this Act now rests with the Ministry of Information and Communications Technology. There has been criticism of the Act by the media watchdog body Media Institute of Southern Africa to the effect that Act does not contain basic safeguards against the invasion and unwarranted intrusion into privacy as found in countries with similar Acts.6

4.5.2 Emerging Issues for ICT Regulation

Issues and concerns about the regulatory environment for ICT services have emerged in recent years and have become more pressing since the creation of the Ministry for Information and Communications Technology. First, the Ministry does not have formal oversight of the two regulatory bodies — POTRAZ and BAZ. The Media Institute of Southern Africa (MISA) represented in Zimbabwe describes the existing legal and regulatory framework as “one of the few in the region with virtual government monopolies in broadcasting and fixed telephone service provision.” A new ICT Bill has been drafted, but it does not spell out how the various ICT Acts would relate to each other or indicate which ones would be repealed. Second, there are no laws that govern cyber transactions in digital signatures, contracts made over the internet, and a framework covering issues of convergence of telecommunications, broadcasting, and computing. The Minister for Information and Communications Technology has committed to enact laws that control and manage online transactions.

Third, both POTRAZ and BAZ regulate ICT activities. There is overlap and duplication of functions between these agencies and the fragmented nature of these arrangements impedes efficient development and harmonization of efforts. Both POTRAZ and BAZ manage radio frequencies and regulate electronic transmission of information and data. They each require resources from Government to perform most of their functions, including human resources with similar qualifications. The duplication of functions between POTRAZ and BAZ also spills over into relationships with international and regional bodies, such as the International Telecommunications Union (ITU), the Common Market for Eastern and Southern Africa (COMESA), and the Southern Africa Development Community (SADC). International trends recommend one national body to coordinate ICT related issues at national level, a situation that is in line with

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6 See MISA (2007).
convergence of technologies. Wastage of both financial and human resources stems from the current overlap in responsibilities and duplication of effort results. The ICT Ministry and other stakeholders advocate the merger or convergence of BAZ into POTRAZ for better coordination of activities in the ICT industry.

Fourth, as discussed in Chapter 12, though there is some degree of infrastructure competition in the telecommunications sector, the creation of more effective competition is needed among backbone network operators. Lack of competition is constraining investment in high-capacity networks and preventing the market from achieving economies of scale. It also has a knock-on effect in the providers (ISP) and the data services market as a whole.

Fifth, the existing framework does not address adequately the emerging regulatory issues that arise from the impeding transition to a fiber optic backbone network for the country, as proposed in Chapter 3. With the rapid development of high capacity backbone networks in the Southern Africa region, Zimbabwe has the opportunity to improve substantially its communications services and lower the cost of these services. At present, the small expanse of backbone network already established is used mainly to provide backbone services for the operator’s own retail customers, most of whom are mobile subscribers. Wholesale markets in backbone capacity do not exist in Zimbabwe at this time. In many parts of Sub-Saharan Africa, and in Zimbabwe, the prevailing regulatory environment does not actively encourage the development of such backbone networks, and in many instances, these frameworks actively constrain efforts to do so. In some cases, mobile operators are allowed to build their own backbone networks for provision of services to their retail customers, but are prevented from selling backbone services to other operators on a wholesale basis. This form of regulation actively constrains the development of a market in backbone network services. Such restrictions also limit opportunities for taking advantage of economies of scale in network infrastructure and reduce incentives for private investment in high capacity backbone networks. As a result, in Zimbabwe and elsewhere, mobile operators have built their own networks that operate parallel to each other and there is very little consolidation of traffic onto core backbone networks. Sixth, where fiber backbone network development has taken place in Zimbabwe, it has been concentrated in urban areas and on interurban routes, leaving smaller towns and rural areas dependent on low-capacity wireless backbone networks.

4.5.3 Guiding Principles for Design of the Regulatory Agency

In many parts of the world, the substance of ICT regulation has evolved rapidly in recent decades in response to advances in communications technologies. The liberalization of ICT markets has stimulated cumulative interacting innovations in products, services, and technologies with a general convergence or blurring of distinctions between platforms, products, and services in an IP or net-centric world. These developments necessitate some form of regulatory response either to support or impede them.7

**Responsibilities of the regulator.** Often there are sector-specific regulators, general regulators (such as competition authorities), and special agencies or ministries charged with specific tasks (such as spectrum management), that all share common duties. The UN Task Force on Financing ICT has noted that the most important duties of the regulator(s) include:

7. For an extensive discussion about evolving experience with the regulation of communications networks, see Cohen, Tracy (2007), “Next Generation Networks (NGN) Regulation Overview.” Independent Communications Authority of South Africa (ICASA), February, 2007; the International Telecommunications Union (ITU), and in particular on the ICT Regulation Toolkit of the ITU; and Williams, Mark D. J. (2010), Broadband for Africa: Developing Backbone Communications Networks. World Bank, Washington DC, 2010.
• Implementing the authorization framework that provides opportunities for new companies and investors to establish ICT businesses. Simple authorization procedures tend to maximize new entry;

• Regulating competition (including tariffs) involving the effective enforcement of fair and equitable competitive market principles, restraining the power of dominant suppliers, and leveling the playing field for new entrants;

• Interconnecting networks and facilities. Normally transparent rules are established for interconnecting all types of traditional and new communications networks and associated cost-based payments;

• Implementing universal service/access mechanisms to ensure the widespread (and affordable) diffusion of ICT;

• Managing the radio spectrum effectively to facilitate new entrants and new technologies; this is particularly relevant to new broadband wireless opportunities such as Wi-Fi and Wimax;

• Establishing sufficient safeguards to ensure that consumers, particularly children, are protected against bad business practices, cyber crimes, and violations of data privacy;

• Minimizing the burden and costs of regulation and contract enforcement.

All of the above continue to evolve and to present new challenges in the context of market and technological developments, especially the growing availability of broadband and the increasing prevalence of convergence. Many countries have adopted consumer protection regulations specifically designed for ICT customers, which are enforced by the ICT regulator and/or a designated consumer protection agency. The Australian Communications and Media Authority (ACMA) has instituted measures to protect consumers’ interests in the Internet Age by investigating complaints about online content and gambling services, encouraging the development of codes of practice for ISPs, and educating the public about internet safety and privacy risks, particularly for children.

To better adapt to the new converged landscape, governments have also been developing coherent national broadband strategies as a vital component of overall deployment and access to broadband services. For instance, those OECD countries leading in broadband penetration rates have typically established national broadband policies. These countries include Korea, Denmark, the Netherlands, Sweden, Finland, and the United Kingdom.

**Box 4.2: The Experience of the European Union**

The evolutionary nature of regulation is evident in the European Union (EU). There have been successive “packages” updating the regulatory framework for communications from 1987 to 1998 and, most recently, to 2002. Increasing numbers of countries are adopting this framework as they accede to the EU or become candidate members. The EU regulatory approach is also reaching outside of Europe and influencing the frameworks that other countries are adopting. Consultations and recommendations on a new framework with new subjects took place in 2006 with a continued shift to less sector-specific and more *ex post* regulation in the European Union. Significantly, these EU regulatory packages have been forcefully linked to broader policy objectives concerning inclusiveness, innovation, job creation, growth, energy, and environmental issues in the New Economy or Information Society. The EU is not alone in this process; most ITU members have also implemented ICT strategies.

The role of the regulator in broadcasting is similar to some of the functions of the ICT regulator, such as allocating and managing the radio spectrum, licensing service providers, and ensuring universal access. But broadcasting regulators have additional duties regarding the social and cultural impact of the sector. They are also charged with overseeing content and ensuring diversity, protecting minors, the right of reply, and so forth. Furthermore, if there is a Public Service Broadcaster (PSB), the regulator performs some form of oversight of it and private channels.

The proliferation of broadband and the digitalization of content are bringing about a profound and rapid transformation of the media/content landscape, which may change regulatory functions. Russia, for instance, has issued several Internet Protocol Television (IPTV) licenses. It is quite common for a radio “chat show” to take a call from someone living overseas and listening to the program on the internet. Both the Russian TV and the chat show channels are licensed but many service providers are not. The aggregate audience for the unlicensed, self-produced content exceeds that of traditional broadcasters in some countries. For example, in July 2009 alone, YouTube’s audience exceeded 120 million people in the United States — or approximately one third of U.S. population. The explosion in content provision is a huge challenge to content regulation; it is made even more difficult because a large proportion of the content may originate in other jurisdictions. As “mass markets” retreat, it will be necessary to reconsider the regulation of national broadcasting institutions and thereby the functions of the regulator. Where PSBs, cable and satellite channels remain in a strong position, the regulator(s) will have a role to play in the application of competition policy, including merger control. This competition policy issue centers on the relationship between dominant/non-dominant access providers and dominant/non-dominant content providers.

In light of the recent global economic crisis, regulators can also play a key role in increasing confidence, reducing risk, and encouraging investment in the ICT sector overall. In particular, regulators are able to play a role in investment by: (i) lending financial support through “stimulus packages” and public private partnerships; and (ii) lowering the costs of doing business by deferring license fees and taxes, as well as implementing rules that enhance efficiency.

**Measures to ensure an independent regulatory authority.** According to the Association of African Communications Lawyers (AACL), in a liberalized environment the concept of regulatory independence is paramount for a country that desires to realize key socioeconomic objectives. The AACL define an independent regulator as one that is: (i) independent from those it regulates; (ii) protected from political pressure; (iii) given full ability to regulate the market by making policy and enforcement decisions; and (iv) adequately funded from reliable and predictable sources.

The UN Task Force on Financing ICT supports the introduction of independent ICT regulators, linking such independence to growth in the market. It observed that: “The introduction and strengthening of independent, neutral sector regulation has helped to reinforce investor confidence and market performance, while enhancing consumer benefits.”

The rationale for establishing independent, often sector-specific, regulatory institutions is based on ensuring nondiscriminatory treatment of all players in the liberalized market. At the outset of the transformation process the pre-existing monopoly structure allows for discriminatory behavior. The emphasis on nondiscrimination

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arose from four sources which, in part, reflect different constituencies in the market. These four broad imperatives are to ensure that:

- Cooperation is enabled in a competitive environment to ensure that a level playing field exists between unequal entities in the marketplace.
- All equipment suppliers are treated equally where the market is dominated by a single buyer with strong pre-existing relationships with suppliers.
- All new entrants and investors in the telecommunications service sector are treated equally by the dominant competitor, who will be a supplier of inputs (e.g., interconnection) to the businesses of the new entrants.
- All customers have a “voice” and their complaints and interests receive an adequate response.

Independent regulators are expected to be subject to government oversight and a system of checks and balances. Effective regulation that supports sustainable investment requires some independence from political influences, especially on a day-to-day or decision-by-decision basis. The regulatory body must be an impartial, transparent, objective, and non-partisan enforcer of government-determined policies by means set out in controlling statutes of the regulator, free of transitory political influences. The regulator should also be independent from the industry that supplies ICT services.

The regulator should implement the policy of the government and only make decisions that are within its legal authority. However, regulators need insulation from political intervention, so that the regulatory process is not politicized, its decisions are not discredited, and the policy of the government is implemented. A balance is needed to ensure that the regulator is both independent and responsive to the broad policies of the government. Several formal safeguards have been employed to achieve such a balance, including:

- Providing the regulator with a distinct statutory authority, free of ministerial control.
- Prescribing well-defined professional criteria for appointments.
- Involving both the executive and the legislative branches of government in the appointment process.
- Appointing regulators (the Director General or Board/Commission members) for a fixed period and prohibiting their removal (subject to formal review), except for clearly defined due cause.
- Where a collegiate (Board/Commission) structure has been chosen, staggering the terms of members so that they can be replaced gradually by successive governments.
- Providing the agency with a reliable and adequate source of funding. Optimally, charges for specific services or levies on the sector can be used to fund the regulator to insulate it from political interference through the budget process.
- Exempting the regulator from civil service salary limits to attract and retain the best qualified staff and to ensure adequate good governance incentives.
- Prohibiting the executive from overturning the agency’s decisions, except through carefully designed channels such as new legislation or appeals to the courts based on existing law.

There are currently far more regulatory authorities independent from ministerial control around the world than dependent regulators. According to the ITU, 153 countries have established regulatory authorities that are separate from the ministries. There has also been a steady rise in the number of separate regulators over the last 20 years; 125 of these countries with separate regulators have also
ensured that the regulator is autonomous — or independent — in the decision-making processes. In the other 28 countries, the separate regulator must get approval from the relevant ministry or other official body prior to issuing decisions.

**Accountability, transparency, and predictability.** The independence of the regulator must be balanced with accountability. In addition to independence, an effective regulator should demonstrate other characteristics, including accountability, transparency, and predictability. These traits should be enhanced by a clear division of responsibilities between the ICT regulator, ministries, and other regulatory agencies, such as the competition authority or radio spectrum management body where relevant.

The regulator’s authority provides it with significant power to redistribute income among different constituents in the economy. Therefore, safeguards are required to ensure that the regulator does not become corrupt or inefficient. Citizens and regulated firms must know who is responsible for a decision and the reasoning behind the decision. Interested parties must be able to provide relevant input to a decision through consultation processes. They must be able to obtain redress easily and quickly when the regulator has acted arbitrarily or incompetently. These types of safeguards produce a balance between independence and accountability. Examples of such safeguards are as follows:

- Publishing the statutes of the regulator that clearly specify the duties, responsibilities, rights, and obligations of the regulator, as well as differentiating between primary and secondary regulatory goals where there are multiple goals.
- Ensuring that the decisions of the regulator are subject to review by the courts or some other non-political entity although some “threshold” should be established to deter frivolous challenges that simply delay the implementation of decisions.
- Requiring the regulator to publish annual reports on its activities and requiring a formal review of its performance by independent auditors or oversight committees of the legislature.
- Establishing rules for the removal of regulators if they show evidence of misconduct or incompetence.
- Allowing all interested parties to make submissions to the regulator on matters under review.
- Mandating that the regulator publishes its reasoned decisions.

Transparency in interconnection, authorization and licensing practices, and universal service obligations is a specific requirement of the World Trade Organization (WTO) and a general requirement of the EU regulatory package. Transparency entails the regulator making available all relevant information in a timely fashion. Transparency enhances the confidence of interested parties in the effectiveness and independence of the regulator and strengthens the legitimacy of the regulator. Consequently, all regulatory rules and policies, the principles for making future regulations and all regulatory decisions and agreements should be a matter of public record. ICT regulation is an important policy issue, and all citizens need information about the policy to evaluate the performance of government.

Transparency is an important contributor to good governance in general. Importantly, transparency reduces the probability that interested parties, especially those adversely affected by a regulatory decision, will believe that decisions are biased, arbitrary, or discriminatory. The reasoning behind regulatory decisions, including the principles and evidence that guided them, will be apparent when they are clearly presented in the public record. Discriminatory or corrupt decisions will become evident and more difficult to substantiate once transparent processes are in place.
A successful market that attracts investors requires a predictable regulatory process. Independent regulators are predictable if they adhere to the rule of law. The most important features of the rule of law are respect for precedent and the principles of *stare decisis*, particularly in common law jurisdictions. Respect for precedent means that regulators do not reverse policy decisions unless there is evidence that those decisions have led to significant problems or that new circumstances warrant a change in the rules. The principles of *stare decisis* require that cases with the same underlying facts be decided in the same way every time. This is of particular relevance in the resolution of disputes. Adherence to these principles enhances confidence in and the credibility of the regulator and reduces regulatory risk, which reverberates positively with investors.

Table 4.4: Illustrative Division of Labor Between Regulator and Government

<table>
<thead>
<tr>
<th>Features</th>
<th>Government</th>
<th>Regulator</th>
<th>Other entities</th>
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<tbody>
<tr>
<td>Legal framework &amp; sectoral policy</td>
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<tr>
<td>Creation of new regulatory authority for ICT</td>
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<td>Subsidies for ICT services to rural communities</td>
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<tr>
<td>Planning &amp; implementation of fiber backbone</td>
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<tr>
<td>Broad band fiber optic links to cities and towns</td>
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<td>Inclusion of ICT curricula in education system</td>
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<tr>
<td>Ensure compliance with international standards</td>
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<tr>
<td>Promote inter-operability &amp; system integration</td>
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<tr>
<td>Accelerate ICT support for SMEs</td>
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<tr>
<td>Establish ICT techno-parks &amp; incubation hubs</td>
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<tr>
<td>Ensure security on the cyber network</td>
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</tbody>
</table>

Source: Estimates by authors.

**Division of labor between regulator and government.** As noted earlier, one of the issues related to regulation of the ICT sector is the lack of clarity about the division of responsibilities among existing regulatory entities and the various government agencies with responsibility for ICT policy and services. Table 4.4 set out an illustrative framework for the division of responsibility between a regulator and the government. As with Table 4.1 for the transport sector, there is a degree of subjectivity in the suggested framework. Adjustments may be needed to reflect specific decisions that are made about the further development of ICT services in Zimbabwe.

**Convergence and regulators.** Platforms fulfilling different functions have traditionally been regulated differently for many reasons. For example, telecommunications has been regulated in a different manner than broadcasting. In the context of convergence, where a single platform is capable of delivering all forms of electronic communications, should separate regulatory bodies merge or remain distinct institutions? Or should there be one regulator for platforms and another for content?
Box 4.3: International Experience with Convergent Regulation

At present, there are many multi-utility regulators, including telecommunications, although the number of “converged” telecommunications regulators has grown over recent years. In Malaysia, the issue of a converged regulator was addressed at an early date when the Communications and Multimedia Act 1998 established the Malaysian Communications and Multimedia Commission (MCMC) as the sole regulator of telecommunications, broadcasting, and computing industries. In 2008, the Korean Government created the Korea Communications Commission (KCC) by consolidating the separate telecommunications regulator and broadcasting regulator, which were the Ministry of Information and Communications (MIC) and Korean Broadcasting Commission (KBC), respectively.

The KCC merged telecommunications, spectrum allocation and broadcasting, including content, under a single regulatory authority in order to adapt to the rise of converged technologies, particularly Internet Protocol Television (IPTV). The introduction of IPTV in Korea had been delayed for several years owing to disputes between the MIC and KBC over jurisdiction.

Within a few months of the KCC’s creation, however, the converged regulator finalized the rules enabling operators to provide IPTV. By the end of 2009, Korea had over one million IPTV subscribers. Establishing converged regulators in the EU has been more challenging. Although EU Member States are implementing a “future-proof” single regulatory framework for electronic communications, only four out of 27 Member States (as of 31 December 2009) have what could be regarded as “converged” regulatory bodies. These are Finland, Italy, Slovenia, and the United Kingdom. It is not just the EU that lacks converged regulators since most OECD Members have not yet implemented laws to consolidate regulators. Only seven of the 30 OECD Members have single bodies dealing with all four regulatory forms of telecommunications, broadcasting carriage, broadcasting spectrum allocation, and content. These countries are Australia, Finland, Iceland, Japan, Korea, the United Kingdom, and the United States. For each of the EU Member States listed above, at least one of the four regulatory functions lies outside the “converged” regulator.


Converged regulators — with responsibilities for media and content as well as ICT services — face a daunting challenge by taking on extensive, and often complicated, workloads. However, in a converged environment, traditional telecommunications regulators may struggle to resolve certain issues, such as consolidation between media content and telecommunications service providers. Further, the absence of a converged regulator allows for the possibility of unequal regulatory treatment of different platforms delivering overlapping content or unequal regulatory treatment of different content delivered over any platform. Here there is the issue of technology-neutral regulation, meaning that the regulatory treatment of a particular service, regarding authorization, spectrum, interconnection, universal service, and numbering, is the same irrespective of the technology used to deliver it. Convergence poses challenges to both the structure of regulatory bodies and the instruments they use.

4.5.4 Creation of a Single Regulatory Authority

The position taken in this Report is that serious consideration should be given to liberalization of the communications industry, along with restructuring and privatization of parastatals that currently provide ICT services in the domestic market. Once the decision to liberalize the market has been taken, the next step is to provide an appropriate regulatory framework and institution(s) to implement the decision. This Report proposes the creation of a single regulatory authority for the communications sector in Zimbabwe. The convergence of POTRAZ and BAZ is proposed to ensure better coordination of the ICT industry in a rapidly changing ICT environment. International trends point to the benefits of one national body to coordinate ICT related issues at national level, a situation that is in line with convergence of technologies.
The policy should recognize the importance of conceiving a legislative framework that deals with aspects of individual privacy, security, cyber crimes, ethical and moral conduct, encryption, digital signatures, intellectual property rights, and fair trade practices. These issues used to be addressed and administered under several acts of parliament, but now there is a need for one regulator. There appear to be differences within government on how these issues should be addressed in the ICT Bill.

Since legal and regulatory frameworks dictate how people access and use ICTs, they create an environment in which people intersect with ICTs. Where that environment is limiting, the full potential of ICT is not realized and this problem manifests itself in various ways through an inefficient telecommunications sector, poor services offered to consumers, and stifled growth of the ICT sector, among others. The use of ICTs may actually promote existing imbalances in society if the frameworks are not responsive to such imbalances. Certain sectors of society, namely the poor, aged, women, and those living in disadvantaged communities or rural areas (no infrastructure to access ICTs) remain untouched by ICT.

One of the key constraints on the development of the market in backbone network services in Zimbabwe has been difficulty in enforcing contracts and service level agreements owing to lack of an instrument which could be used for the courts to enforce legal actions. To enable legal measures in the market, the regulatory authority to be formed could improve the situation through several measures, such as:

- Establishing clear regulations on interconnection at the backbone level.
- Amending licenses to increase the enforceability of such rules, if necessary.
- Setting out effective quality controls and clear dispute resolutions procedures.
- Collecting accurate quality of service information to facilitate market functionality and dispute resolution.

A competitive regulatory environment needs to be combined with targeted pro-poor policies, clear and enforced legal frameworks, and licenses for operator and service providers, including obligations to contribute to services in disadvantaged areas.

**Possible next steps.** There is no simple sequencing for the drafting and adoption of the proposed regulatory framework since several issues must be addressed simultaneously. Interconnection, universal access and service, regulatory processes, means of dispute resolution, market definition methodologies, licensing/authorization procedures, and tariff-setting principles all need to be resolved in a fairly compressed period. Furthermore, most of these issues interact with, relate to, or rely on the other components of the body of regulations. The body can then be amended in light of market and technological developments. A start may be made with issues related to the regulatory agency, the characteristics that enhance its legitimacy, and the functions performed by the regulator and others, as well as the supporting legal environment. The next step would be to address regulatory issues related to authorization and competition, interconnection, universal access, the radio spectrum, and finally, the impact of new technologies.