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BUILDING CREDIBLE REGULATORS FOR LIBERALIZED UTILITY SECTORS

Scott Jacobs, Managing Director
Jacobs and Associates
www.regulatoryreform.com

Presented At the First Workshop of
The APEC-OECD Co-operative Initiative on Regulatory Reform
19–20 September 2001, Beijing, China

Summary: *The independent sectoral regulator is an important step forward from the traditional approach of regulation of utility sectors by line ministries who are also responsible for policy, industry promotion, and even management of service producers. But new problems are emerging in the design, implementation and concept of the independent regulator. A wider governance view focusing on "checks and balances" between competing institutions in the regulatory regime could be a more flexible and effective guiding principle than "independence" in producing a credible regulatory framework.*

1. In recent years, the Asia Pacific region has received considerable private sector investment into infrastructure development from domestic and foreign investors. Much more investment in these services is needed in the next decade to meet the needs of current and projected populations. Investment has stimulated the creation of many new regulatory regimes and institutions, which are, in turn, intended to further stimulate investment by establishing confidence in government commitments to stable policy. The financial crisis of 1997 further increased the value of sound regulatory frameworks because post-crisis investors are warier and more risk conscious. Hence, efforts to build good regulatory regimes are likely to have even higher payoffs in future. Yet the difficulties of building a stable and credible regulatory regime are considerable, involving a complex mix of market, policy, institutional, and legal reforms. OECD countries are struggling to build sound regulatory regimes -- the difficulties are much greater in developing economies, where experience with markets is shorter, political stability is weaker, levels of poverty are higher, and the rule of law and protection of property rights are still being consolidated.

2. This paper focuses on the so-called "independent regulator", one of the most highly regarded institutions of modern regulatory governance. The performance of these bodies substantially affects the development of the vital infrastructure sectors, whose quality and accessibility is central to the quality of life for citizens, and whose efficiency is critical to economic development. Particularly in developing economies where fundamental institution-building is underway, it is important that we better understand the performance of these "independent" bodies, their links to other aspects of the legal and policy environment, and design options related to their performance.

There is widespread support for independent regulators, and many have been created in the past decade.

3. Independent regulators are widely used in liberalizing utility sectors with network characteristics such as energy, telecommunications, and transport, and in other sectors where sector-specific prudential oversight is needed such as financial services. Dozens of these bodies have been set up in OECD countries in the last few years alone (Table 1). This trend is fueled by WTO market access agreements, by reforms in Europe from the Single Market, by policy advice by the OECD, the World Bank, the IMF, and other international institutions, and by the expectations of investors. Increasingly, the "independent regulator" is becoming a potent symbol of a government's commitment to genuine reform and competition. In few other areas of regulatory practice is there such widespread agreement of the need for a particular regulatory model.

4. The reasons for setting-up these bodies are well known. Independent regulators are meant to regulate more efficiently and build confidence among market actors by:

- clarifying confusion among multiple roles of government. In sectors characterized by a mix of competitive and natural monopoly activities, independent regulators are meant as an alternative to the traditional mix of policy, regulation, ownership, and promotion tasks inside line ministries:
- shielding market interventions from political and commercial interference, and so appropriately allocate risks and establish market incentives;
- improving transparency for market actors and consumers;
- deepening expertise and technical skills in these complex areas; and
- enhancing stability and commitment to optimal long-run policy based on competition and consumer welfare.

Independent regulators seem to have indeed improved the regulatory environment compared to previous regulatory arrangements...

5. Given the magnitude and cost of government failures in the past that have resulted in low quality and high-cost infrastructure services, it is easy to understand why these improvements in regulatory regimes are so attractive to reformers. There is little doubt that, compared to regulatory functions embedded in line ministries without clear mandates for consumer welfare, independent regulators are a sound improvement. They have accompanied the achievement of major gains for consumers through investment, innovation, and choice. It is telling that market-opening and competition have emerged most quickly in precisely those sectors -- financial services and telecommunications -- where independent regulators are most prevalent, although the causality is not clear (globalization and competition may have stimulated the creation of independent regulators, rather than the other way around). Some empirical work has suggested that independent regulators in the telecommunication industry are associated with more cost-oriented pricing and faster investment and innovation, compared to regulation by a line ministry.[1]

[1] Hoski, H. (1998) Liberalisation, Regulation, and Universal Service Provision in the European Telecommunications Markets," Helsinki, Research Institute of the Finnish Economy, ETLA. Mimeo (as cited in Cowhey, Peter and Mikhail Klimenko (1999) "The WTO Agreement and Telecommunications Reforms," WTO 2000 Capacity Building Project, Background Papers, http://www1.worldbank.org/wbiep/trade/wto2000_BPs.html

6. In its detailed reviews of regulatory practices in OECD countries,[2] the OECD has also welcomed the move to establish independent bodies, arguing that this trend offers great potential in improving regulatory efficiency. The OECD's view is that specialised and more autonomous regulators have created important "checks and balances" to match the powers of ministries and interest groups and increase the speed and quality of regulatory decisions. It should be noted that the OECD view – emphasizing consumer welfare and regulatory quality through better governance arrangements – is slightly different than that of the development community, which emphasizes investor confidence and protection by separating regulatory decisions from other political and administrative institutions. The OECD approach seems to take a longer-term view and is market-oriented, while the development approach seems transitional and investment-oriented.

…but in reality almost all independent regulators in OECD and other countries are too new to enable us to evaluate their design and performance over time.

7. Despite the near-universal recommendations for independent regulators, these institutions are too untested to permit us to be very confident about their effectiveness over time. Although the first independent regulators were created over a century ago in the United States as an anti-corruption (not a competition-promoting) measure, it is surprising how little we actually know about the performance over time of independent regulators, both in OECD countries and in developing economies. Liberalization of the utility sectors only began in the pioneering OECD countries (US and UK) in the 1980s, and in most countries only since the mid-1990s. In developing countries, there is much less experience.

8. Table 1 shows how rapid has been the emergence of independent regulators in 14 OECD countries. In the telecommunications sector, 11 countries have set up new bodies in the 1990s, most since 1995. In the energy sector, nine out of 14 countries have set up independent regulators since 1990, with another country anticipating one. Even competition authorities, which have substantial roles in regulating the network industries, are relatively new independent bodies. Eight of these 14 OECD countries have created or substantially strengthened independent competition authorities only in the 1990s. It is interesting to note that independent regulators are also expanding into other sectors and policy areas, including transport (Ireland, many other countries), data protection (Italy), and tobacco regulation (Mexico).

Table 4.1. **Creation of independent regulators and competition authorities in 12 OECD countries since 1990**

	Telecommunication	**Energy**	**Financial services**	**Competition authority**
Czech Republic	Czech Telecommunication Office (2000)	No independent regulator	Commission of Securities (1998)	Czech Office for Economic Competition (1991)
Denmark	National Telecom Agency (1991)	Energy Supervisory Board (2000)		Pre-1990
Greece	National Telecommunications and Postal Services Commission (1998)	Energy Regulatory Authority (1999)	Capital Markets Commission (1996)	Competition Committee (1991, strengthening an existing body)
Hungary	Communications Authority, HIF (1997, building on earlier institutions)	Hungarian Energy Office, MEH (1995)		Office of Economic Competition, HCO (1990)

[2] See OECD website at http://www1.oecd.org/subject/regreform/

Ireland	Director of Telecommunications Regulation, DTR (1997) (assigned regulation of postal services in 2000)	Commission for Electricity Regulation, CER (1999)		Competition Authority (1991)
Italy	Communications Authority (for telecoms, television, and publishing) (1997)	Energy Authority (1995)	Pre-1990	Competition Authority (1990)
Japan	No independent regulator	No independent regulator	Financial Supervisory Agency (1998)	Pre-1990
Korea	2000	Anticipated 2001	Financial Supervisory Commission (1998, unifying several separate bodies)	Korea Fair Trade Commission (1990, building on earlier bodies)
Mexico	Federal Telecommunication Agency, COFETEL (1996)	Regulatory Energy Commission, CRE (1995)		Federal Competition Committee (1993)
Netherlands	Telecommunications Authority, OPTA (1997)	Network Regulator, DTE (1998)		Netherlands Competition Authority, NMa (1998)
Poland	Office of Telecommunications Regulation (2001)	Energy Regulatory Authority (1997).		Office of Competition and Consumer Protection (1996, successor to Antimonopoly Office, 1990)
Spain	Commission for the Telecommunication Market, CMT (1997)	National Commission for Electricity, CSEN (1995)	National Commission of the Securities Market, CNMV (1997, reformed)	Pre-1990
United Kingdom	Office of Telecommunications, OFTEL (1984)	Gas and Electricity Markets Authority, OFGEM (2000), incorporating OFFER (1989) and OFGAS (1986)	Financial Service Authority (1986, strengthened in 1998 and 2001 to integrate multiple authorities)	Competition Commission (1999, replacing the Monopolies and Mergers Commission)
United States	Pre-1990	Pre-1990, at federal and state levels	Pre-1990	Pre-1990

As experience grows, so too are concerns that the proliferation of independent regulators has not resolved important problems, and has created new problems.

9. With the global proliferation of independent regulators, concerns are emerging about the operation and performance of independent regulators, including potential problems with political feasibility, capture, complexity, rigidity, cost, accountability, and fragmentation of competition policy.[3] These problems, if borne out, could reduce longer-term regulatory quality in vital infrastructure sectors. A wider discussion of the benefits and costs of independent regulators, and better information about optimal design of such regulatory bodies, is needed, in light of these concerns.

3 Jacobs, Scott (2000) Regulatory Governance: Improving the Institutional Basis for Sectoral Regulation, December. Available at http://www.oecd.org/subject/regreform/ind_regulators.htm

10. The emphasis on "independence" as the critical characteristic of good regulation has engendered considerable confusion and misunderstandings in countries that are asked to create what seems to be an institution that is awkward, outside of normal governance processes, democratically dangerous, and perhaps unconstitutional (as it was in the Netherlands). In practice, "independence" is a fuzzy concept that is not well defined. For example, the WTO Telecommunications Agreement interprets the term as a regulator who makes decisions on his own, without any outside interference. In the European Union, the regulator is supposed to be independent from the licensees and from the government. The regulator may receive a policy direction from, for example, a government minister but may still be considered independent when it comes to regulatory decisions and enforcement. (The European Commission has followed this with a useful checklist of good design characteristics for national regulators.[4]) These are not operational definitions of independence, since everyone agrees that "independent" regulators operate under the authority of laws that are adopted and can be revised by legislators, on the basis of annual budgets that must be approved, under the leadership of commissioners who must be appointed, under judicial review, and under a policy framework established by ministers. The precise construction of these relationships will define the nature of independence of the regulator.

11. The OECD work revealed other problems with independent regulators -- related to the search for the right level of independence -- that have undermined their performance and legitimacy. The OECD reviews suggest, in fact, that governments tend to rely too much on under-equipped and unsupported independent regulators to carry out tasks that are beyond their capacities. Important concerns include:

- Few countries have a co-ordinated institutional framework for creating and operating sectoral regulators. They tend rather to be established in an *ad hoc* manner, often responding to an international obligation or commitment to establish an "independent" body. In many cases, the respective roles of the principal regulatory authorities are not clearly defined, and accountability is unclear. Legal authorities are too weak in some cases, and too wide in others. In some cases, regulators are subservient to ministers, and in others regulators have too much discretion to direct market players.

- The tendency to establish too many sectoral regulators, rather than multi-sector regulators, is becoming clear. Co-ordination and harmonisation mechanisms are lacking, even when much of the theoretical foundations are similar. For example, essential issues like controlling prices or managing access arrangements for "essential (or network) facilities" or interconnection prices differ between agencies for reasons unrelated to structural differences in the industries.

- In addition to a less than optimal use of scarce human resources and duplication between bodies, the risk of costly institutional rigidities increases as regulators proliferate, as does the risk of capture by powerful interests. Appropriate regulatory structures change over time as sectors change. Independent regulators should be seen as transitional bodies that should evolve as competition emerges -- focussing more on network issues than asymmetrical regulation, for example -- and disappear when the competition authority can take over regulation of the sector, that is, when the regulatory issues become general competition issues. How long should independent regulators exist? It depends on the nature of the issues at stake -- in transport and telecoms, where natural monopolies are eroding and may not exist as serious problems in a few years -- independent regulators are unlikely to be needed for as long as expected. In energy, where transmission will pose network problems for a long time,

[4] European Commission (1998) Fourth Report on the Implementation of the Telecommunications Regulatory Package, Bruxelles.

sector-specific regulation will be needed to ensure interconnection and maintenance and reliability in the grid, and perhaps oversight of pool and futures markets, but this may not justify the existence of a separate regulatory institution.[5] If past experience is a guide to future behavior, independent regulators will regulate too much for too long, and so hamper rather than aid the development of competition. Regulated competition that slows structural change in the sector can be seen as a politically attractive alternative to aggressive protection of competition that forces real change, and it is in the regulator's interest to maintain the need for regulation rather than to do its job too well. The risk of over-regulation by static institutions that do not want to go out of business is even greater when interventionist attitudes by the regulators have not changed from the predecessor institutions. People don't change just because they move from a ministry to an independent regulator.

- A related and extremely important problem is that independent regulators can slow the larger adjustment of the sector, and lose potential gains to economic growth and consumer welfare. National economies are very fluid and plastic now. Traditional sectors are changing and merging with other sectors or new sectors as technologies change. Electricity and gas sectors are converging into a single integrated sector as gas turbines become a competitive generation technology. Traditional telecommunications sectors are merging into broadcasting as technologies become intertwined. Yet independent regulators are often designed around obsolete ideas of the sector: telecommunications regulators rather than communications regulators, or electricity regulators rather than energy regulators. In these cases, regulators can inhibit sectoral convergence, and consumers lose the potentially huge benefits of convergence. That is, independent regulators can "lock in" for many years a rigid and outdated institutional structure not consistent with the natural evolution of the economy. This damages rather than supports economic development. A hidden cost of a proliferation of narrow regulators is that it becomes harder to take coordinated reforms that cut across jurisdictions to exploit synergies. Hence, the benefits of comprehensive and multi-sectoral reforms can be lost.

- Accountability to ministers and to the parliament is a continuing concern that no country has addressed to its satisfaction. Good regulation is not just about finding the right technical solution, but about placing that solution within a larger supportive policy, economic, and social environment in which it can function. Replacing direct political accountability based on ministerial responsibility with managerial/technical accountability between regulators and ministries as well as parliament can create new potential problems. There is both the risk that such parliamentary overview will either be too loose, allowing the regulator too much or inappropriate discretion, or too tight, forcing the regulator into specific market decisions not linked to the regulatory mission. It is important that the accountability requirements are balanced with the necessary operational independence of the regulators. Independence cannot become lack of accountability for performance. If this happens, the regulatory institution will not survive. Majone has argued that a mix of approaches is necessary: "[A] highly complex and specialized activity like regulation can be monitored and kept politically accountable only by a combination of control instruments: legislative and executive oversight, strict procedural requirements, public participation, and, most importantly, substantive judicial

[5] In fact, even in pure monopoly conditions, it has been argued that simulating competition through strategies such as periodically auctioning off rights to bidders competing on the basis of price and quality can be more efficient than direct regulation.

review."[6] Regulation in Europe, he says, does not live up to these standards. In OECD countries generally, these dimensions have been neglected in the rush to independence. One of the few countries to launch a wide debate on the accountability of the new regulatory bodies is Ireland. In March 2000, the Minister for Public Enterprise published a policy paper entitled *Governance and Accountability in the Regulatory Process: Policy Proposals*. The document attempts to resolve concerns about a 'democratic deficit' which could have an impact on the credibility and legitimacy of the new regulatory institutions.[7]

- Human resource policies are not aligned with the needs of the new regulators to hire experts from competitive private labour markets. Resources are insufficient to carry out their missions. Training is insufficient. Important regulatory failures can be blamed upon lack of expertise among the personnel.

- A common problem in OECD countries is that the relationship with the competition authority is confused. That is, sectoral regulators are responsible for dealing with classical competition problems, under their own statutes rather than under the competition law. The result of this is to fragment competition principles so that different principles apply to different parts of the economy. This is risky, and has produced conflict and confusion in some sectors in some countries. Sectoral regulators are usually not competent to apply competition law - this has been shown by mistakes made in many countries. For example, the US rail freight system has been substantially deregulated since 1980. The Surface Transportation Board, which retains authority over mergers, approved in 1996 the largest merger in US rail history against recommendations from antitrust authorities. Within a year, severe and persistent operating problems and capacity limitations developed in the merged system, and the STB's regulatory interventions could not remedy the market power problems. The OECD is of the view that there should be a single, economy-wide framework of sound competition policy principles that is applied equally everywhere. Sector-specific regulatory regime and independent regulators should not be able to establish sector-specific competition policies.

- Regulations produced by the regulators tended to escape the government-wide regulatory quality management system, such as transparency, public consultation, and regulatory impact analysis requirements.

- Relationships with judicial authorities are evolving, but are causing problems in some countries. Judicial authorities, sometimes unfamiliar with the market and consumer welfare analysis used by regulators, have put more emphasis on the property rights of incumbent firms. This has resulted in delays or reversals of many of the most important decisions independent regulators.

12. The risk of capture of independent regulators can be high. Sector-specific independent regulators are vulnerable to capture by the very industry they regulate, because regulators depend on the industry for information and cooperation in order to do their job. The risk of capture does not seem to materially change when regulation is moved from line ministries to independent bodies; in fact, the risk of capture can increase if the regulator is under-equipped and under-financed. The risk of capture is higher when incumbent firms have political power and can

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[6] Majone, G. (1993) "Controlling Regulatory Bureaucracies: Lessons from the American Experience," EUI Working Papers in Political and Social Sciences, European University Institute, Florence, Italy.

7 For a fuller discussion of 'democratic deficit' in the regulatory process, see Ferris, Tom (2000), "Regulation of Public Utilities ", Irish Banking Review, Winter.

intimidate the regulator through the political system. The risk is also higher when the regulatory system allows excessive appeals and layers of decisions, so that the decisions of the regulator become mired in years of controversy before they become effective.

13. These issues have led the OECD call for a comprehensive review of the functioning of the independent regulatory bodies to identify problems and develop consistent solutions. More work by the OECD and other international institutions to monitor and assess best practices in the design of these important regulatory institutions would further assist countries in ensuring that they yield the expected benefits in market performance, while respecting norms of transparency and accountability.

14. The record for independent regulators seems even worse in developing economies in the Asia-Pacific region. A 1998 report prepared for the Asian Development Bank by the National Economic Research Associates found a general trend toward independent regulators in 5 sectors in six ADB countries, but remarked on "*…the absence of any well-established independent regulatory agency with a reputation for fair and effective regulation… There is no clear evidence of convergence to best practice or any other common solution. It remains to be demonstrated whether international "best practice" regulatory frameworks can and do work effectively in Asian DMCs."*[8] Whether because of difficulty in concept, design complexities, or political incapacities, and despite extensive privatisation and reform in the five sectors, none of the six countries had succeeded in establishing an independent regulator that would meet international best practices.

15. In fact, risks of poor performance of independent regulators are higher in developing countries than in OECD countries due to the phase of economic development and to fewer checks and balances on regulatory behaviour:

- Higher poverty rates mean more emphasis on universal service obligations, usually met by former monopolies and used, often reasonably, to justify privileges and special relationships.

- Shortages of expert skills are more acute, which mean that staff are drawn from the regulated industry.

- Public sector pay is lower relative to private sector, combined with poor conflict of interest controls such as revolving-door controls. Research has shown that regulatory leniency is tied to future employment contracts.

- There is less experience with other autonomous agencies such as central banks, competition offices, and auditors.

- Ties are closer between industry and government due to the state-led development phase.

- The newer formation of the nation may require more careful balancing between ethnicities and regions. In South Africa, guidelines state that members of independent regulatory bodies should be appointed for a fixed term, preferably by public nomination and a process of public hearings, according to publicly available criteria which guarantee diversity of political, ethnic, social and professional background.

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[8] "Governance and regulatory regimes for private sector infrastructure development," TA No. 5758-REG, A Report for the ADB Prepared by NERA, March 1998.

- The transparency framework is usually not as well developed, and less robust judicial review functions under a weaker rule of law mean that law enforcement is less reliable. This often leads to more fragmented internal markets. For example, China's internal market is highly fragmented. Regulatory barriers to the movement of goods and services across regional, provincial, county, and even urban jurisdictions create enormous hidden costs by weakening competition, increasing production costs, and reducing quality of products and services. Such problems pose huge difficulties for national regulators.

- Consumer interests are poorly organized, in line with a weaker vigilant civil society in general.

- Parliaments carry out less oversight of performance.

- Competition authorities are weaker or nonexistent.

16. These concerns should cause us to reconsider, if only on purely practical grounds, whether the independence of the regulator is the best or only criterion for an acceptable regulator in either OECD or developing countries.

A more appropriate test for credible regulatory institutions might be "checks and balances" within governance structures.

17. There is little doubt that the success and sustainability of liberalization in the utility sectors hinges on strong institutions. There is also wide agreement that credibility among market actors (investors, producers and consumers) is the single most important characteristic of an effective regulator, particular as new market actors such as foreign investors and consumers enter. Investment in sectors characterized by long-term investments, high sunk costs, and intricate property rights that change as technology changes is highly influenced by government reputation for fairness and adherence to core principles (because expected returns on assets change as regulator risks change). High credibility boosts market outcomes, while low credibility undermines or blocks the benefits of markets. The design of the regulatory regime should therefore aim at credibility based on a reputation for neutrality, efficiency, and respect for market principles. Independence is a means to achieve credibility, not an end in itself.

18. Yet an over-emphasis in the reform program on the independent regulator itself would be a mistake. There are great difficulties and risks in establishing a single institution outside the governing structure that is flexible, integrated, legitimate, powerful, and resistant to capture, that is, in a word, credible. Examples of successful independent regulators are quite rare, even in the developed countries.

19. Another approach that might be more credible is to take a wider governance view of how interlocking institutions work together, that is, of checks and balances that together reduce the risk of capture, unaccountability, and too-narrow missions. The key question for reformers could be phrased as: "*Are the checks and balances built into the overall system sufficient to prevent capture and bias in decision-making contrary to the core mission of long-run consumer welfare*?"

20. In this approach, credibility is the result of a well-designed mix of incentives, authorities, and procedures involving a range of actors. No single aspect of independence is the litmus test for success. Independent regulators have their place within the larger set of institutions that, together, establish credibility for the regulatory regime. Weaker independence of the sector regulator

might, for example, be offset by stronger judicial review or consumer oversight or transparency provisions.

21. What is needed in most countries is a larger system approach to institutional redesign, since a regulatory regime is an interdependent system. The task of establishing a market-oriented regulatory regime should include all institutions with significant influence on policy design and implementation. This will help avoid unhealthy focus on single components of the system, to the exclusion of others. Institutional design, accountability, and transparency should be designed to work in an integrated fashion in the national context. Keeping in mind that there is no single institutional model to a competitive utility market, most governments should design at least two institutions at the same time, redesign two others, and establish transparent, ethical, and accountable procedures. They should design:

- A regulatory policy body within the line ministry
- An independent regulator that is functionally separate from the regulatory policy body in terms of staffing, budgets, and regulatory decisions
- Other specialized institutions such as an independent system operator for electricity grids might also be needed.

Governments should redesign:

- The role of the competition authority in the sector
- The role of dispute resolution and judicial review institutions

Governments should create procedures that ensure:

- Full consultation with market actors before a decision is taken
- Public disclosure of the rationale for decisions
- Ethical conduct of regulators
- Efficient and rapid appeals
- Accountability and oversight procedures by ministers and parliaments

22. The "checks and balances" approach to the design of the independent regulator requires a more integrated approach to considering relationships with other institutions. To illustrate, eleven relevant design issues and specific strategies used in OECD countries are listed in Table 2. Since there is no model for the right regulatory regime, Table 2 is not a checklist, but a set of options used in other countries that can be combined to create an array of forces acting together in the interest of market functioning and, in the end, of consumer interests.

Table 2. Strategies for a credible independent regulator within a system of checks and balances

1. Efficient and co-ordinated regulatory systems	
	Clear allocation of responsibilities, based in law, among the several bodies responsible for sectoral policy, market regulation, competition policy, and dispute resolution. Overlaps defined and resolution is clear.
	Coordination and referral procedures at the working and policy level between the relevant institutions

	Close monitoring by an outside policy or parliamentary body of the fit between regulatory regimes and sectoral needs.
	Convergence between related sectors (such as electricity and gas) is reflected in policy institutional coordination and adaptation.
2. Efficient scope of regulatory bodies	
	Industry-specific, sector-wide, and multi-sector scope is defined by the need for a specialized body vis-à-vis efficiencies from shared activities, treatment of common issues such as valuation of capital, reduced risk of regulatory capture, and avoidance of distortions due to regulatory inconsistencies across related or converging industries. This will depend in part on whether the related industries are liberalizing at the same speed.
3. Stability in market oriented policies (optimal contract commitment versus flexibility to rebalance interests of market actors, consistent adherence to market principles)	
	Clear mission statement set in law to serve consumer interests by encouraging open competition, adherence to competition principles, and customer choice (no general "public interest" mandate)
	Regulator set up before regulatory reform is carried out
	Stability in underlying legislation, with few major revisions in transition phase
	Adequate tenure for regulators (5-8 years?)
4. Accountability for results	
	Regular public reports showing progress against mission statement.
	Periodic parliamentary oversight, assisted by expert parliamentary staff to correct information disadvantages.
	Establishment of consumer advisory body or other consultative committees with formal powers to advise, question, and publish reports.
	Independent review of market results and regulator's performance (by independent advisory body or the competition authority?)
5. Effective autonomy: Low risk of influence of market decisions by political interests, low risk of capture by incumbent and dominant firms	
	Clear mission statement oriented to maximising consumer welfare and consumer choice.
	Generalised agencies (multi-sector) are less susceptible to capture than are specialised agencies.
	Appointments of agency heads are made for defined periods, non-renewable, with clear and limited removal criteria such as corruption.
	Appointments are made by the prime minister and approved by the parliament[9]
	Ex ante review of regulatory decisions by ministries should be highly limited or non-existent; *ex post* review should be limited to procedural issues.
	Budgets are earmarked, or set outside of the ministry, or financed through levies on end-users, network users, or license holders (normal government auditing procedures apply)
	Clear accountability for defined market results

[9] Estache, Antonio and David Martimort (1999) "Politics, Transaction Costs, and the Design of Regulatory Institutions," World Bank Policy Research Working Papers #2073. The paper is at http://www.worldbank.org/html/dec/Publications/Workpapers/wps2000series/wps2073/wps2073-abstract.html

	Transparency in explaining the reasons for decisions and their relation to consumer welfare
	Staffing is independent of ministry (secondments are clearly transitional in nature)
	Oversight by competition authority reduces risk of capture.
6. Clear authority of the regulators	
	Procedures for amending licenses and concessions must be clearly defined in advance.
	The powers of the regulator and its room for discretion must be defined clearly by specifying decision criteria, factors, and goals.
	Information collection authority is needed vis-à-vis market actors
	Inspections, sanctions and other quasi-judicial functions must be clear, convincing and efficiently wielded, either by the regulator or by a third party
	Criteria for awarding licenses, concessions and other forms of regulation by contract must be clearly defined in advance.
7. Efficient governance of the regulator	
	Efficient decision and dispute resolution procedures within the autonomous regulator (If a commission is appropriate, how should it be structured for credible and rapid decision-making? One or multiple commissioners? Odd or even numbers? Staggered terms or not?[10] In the OECD, only the UK and Finland have single-commissioner models, and the UK will soon switch to multiple commissioners)
	Clear lines of decision with minimal pre-decision reviews by separate bodies.
8. Professional credibility of regulators	
	Professional competence and integrity are key to choice of regulators
	Vigorous conflict of interest provisions are in place
	Oversight by ethics body against clear ethical standards
	Revolving door policies are established
	Pre-set period of appointment, with no re-appointment
9. Impartiality and transparency in procedures, instruments, and reasoning for decisions	
	Explicit public consultation procedures at the policy development phase to which all interested parties have equal access. No lobbying behind closed doors.
	Defined role of advisory bodies with sunshine provisions for their operation
	Clearly defined communications with the incumbent firms
	A defined set of instruments for decisions is necessary, with clear procedures for each. A range of options should be available so that the regulator can respond to changing economic situations, but in taking any actions the regulator must be held accountable.
	Licenses and concessions must be used only in non-competitive markets; in competitive markets, general regulations are preferred.
	Regulatory impact analysis should be used and made public to assess market impacts of decisions.
	Publication of all decisions and full rationales for decisions
	Vigorous oversight of industry self-regulation
10. Adequate technical capacities of the regulator	
	Sufficient human expertise on generation and transportation in areas such as technology, accounting, economics, and law
	Number of employees proportional to tasks and market

[10] See IEA (2001) Regulatory Institutions in Liberalised Electricity Markets, Paris, p. 20.

	Recruitment and pay uses market practices rather than civil service rules
	Ability to hire external expertise
11. Efficient dispute resolution	
	Appeals rights are structured to avoid paralysis or costly delays by litigation (restricted to undue process or to substantive issues?)
	Dispute resolution is functionally separate from ministry and regulatory body (independent appeals body?)