

Private sector

Note No. 207

April 2000

The Costs of Corruption for the Poor— The Energy Sector

*Laszlo Lovel
and Alastair
McKechnie*

In recent years the fight against corruption has assumed a key place in development policy, as a way of strengthening economic growth and helping civil society and democracy to function. Corruption not only stifles growth. It also perpetuates or deepens inequality, as the few amass power and wealth at the expense of the many. The energy sector lends itself to corrupt practices. This is a result both of its traditional institutional arrangements—dominated by state monopolies controlling oil, gas, or electricity—and of the sheer amount of cash it can generate. Corruption in energy takes many forms, from petty corruption in meter reading and billing to grand corruption in the allocation of lucrative monopolies. These practices differ in scale but contribute to the same results—weak operational and financial performance and, for the poor in particular, declining service quality or reduced chances of ever accessing network services. The answer to corruption is continuing reform, to reduce the incentive and potential to capture monopoly rents and to increase the transparency of public and private transactions, regulatory structures, and decisionmaking processes.

The energy sector, with its complex mix of public and private actors and often enshrined centers of monopoly power, is prone to corruption. This sector generates substantial cash transactions compared with other infrastructure sectors, not only in both small and large capital-intensive investments but also in revenues, which tend to be higher than those for such services as water and sanitation or use of roads. With considerable monopoly rents at stake (from meter reading up to project award) and, in many countries, long histories of weak monitoring, low transparency, and inadequate civil service pay, opportunities and incentives for illicit gain are rife.

While there is little hard evidence on the incidence and costs of corruption within or across countries or sectors, there is little disagreement that these costs can be high. For example, evi-

dence from case studies suggests that illegal payoffs can lower the quality of public works projects, and increase their costs by as much as 30–50 percent (Rose-Ackerman 1996). And there is reason to believe that the costs of corruption are disproportionately borne by the poor—that corruption is not only inefficient, but also inequitable. Understanding how corruption manifests itself in the energy sector—and how this affects the poor—can thus make a valuable contribution to the identification and design of sector programs aimed at improving the well-being of the poor.

This Note looks at some common manifestations of corruption in developing country energy sectors, drawing examples from Europe and Central Asia and from South Asia. (The choice of these regions as sources of examples is not intended



to imply that corruption of these forms is unique to these regions or more prevalent there than elsewhere.) It looks at why the presence of corruption should matter to policymakers concerned with improving the lot of the poor—and then discusses steps that governments might take to reduce the incidence of corruption and its costs to the poor.

Common forms of corruption

For ease of discussion, some common forms of corruption can be grouped into categories according to the level of the public officials involved:

- Petty corruption, such as bribes paid to or demanded by meter readers or safety inspectors.
- Corruption by company managers and mid-level bureaucrats, such as side payments associated with energy purchase or sale contracts or debt instruments.
- Grand corruption, such as lucrative monopolies granted in return for political campaign contributions and the personal enrichment of political leaders.

Corruption characterizes both traditional and modern society and governance. Traditional society in some regions is characterized by patron-client relationships, complex interrelations of patronage and protection that require financial resources for the exercise of power and impose financial burdens for protection. In South Asia, for example, these relationships are reinforced by the vestiges of traditional social stratification, hierarchy, and deference.

This is not to suggest that certain cultures are inherently corrupt, but that the old social organization provides incentives for rent seeking. Development involves the transformation of such societies so as to empower the poor and provide legal constraints on the exercise of power. In countries where governments change through elections, the political ideologies of parties have converged since the end of the cold war and government is being seen more as acquisition of the spoils of office. If government

brings rewards, elections have become costlier as information channels proliferate through new technologies (satellite television). These trends have resulted in election finance scandals in industrial countries, and anecdotal evidence suggests that politicians in new democracies are also pressed to acquire illicit sources of campaign funding.

Petty corruption

Petty corruption is most prevalent at the interface with customers and is one of the reasons for the low payment collection rates reported by many gas, electricity, and district heating companies in developing countries. For example, the state-owned Baku Electricity Company in Azerbaijan reported a household payment collection rate of 12 percent in the second half of 1999, despite employing 1,000 meter readers and payment collectors. Only part of the payments collected were officially recorded, but consumers did not seem to mind, since the meter readers in return reduced their reported consumption by 50 percent. The indifference of the consumers was replaced by anger, however, when the low payment collection rate repeatedly led to electricity blackouts due to the lack of fuel at power stations.

In Bangladesh revenues are collected for only 55 percent of the power generated. By one estimate, about half the total system losses of the Bangladesh Power Development Board (BPDB) and Dhaka Electricity Supply Authority (DESA) are accounted for by mismanagement and petty corruption surrounding electricity metering. Hard facts are difficult to come by, but anecdotal evidence from electricity consumers and articles in the local press suggest pervasive corruption by some power sector employees. A recent survey by the Bangladesh chapter of Transparency International revealed that public utility employees were regarded as the most corrupt officials after the police and lower judiciary. Meter readers frequently delegate the actual task of meter reading to informal operators and focus their own efforts on developing a business in illegal connections.

In Pakistan nontechnical losses arising from electricity theft were reduced significantly when the army took over electricity distribution in 1999. While there were many illegal connections by low-income households, the Pakistani army found that significant quantities of electricity were stolen by high-income households, industry, and large commercial establishments such as shopping malls. In India surveys sponsored by the World Bank as part of load management and agricultural electricity studies have shown that 20–30 percent of electricity attributed to unmetered agricultural consumption is stolen by users in other sectors.

The aggregate impact of “petty corruption” may be far from petty. In Bangladesh the losses of the BPDB and DESA amount to more than US\$100 million each year. Petty corruption in South Asia is often well organized. Trade unions protect corrupt workers, politicians protect the unions, and accompanying this protection is a stream of stolen revenues from the meter readers to unions to politicians.

Corrupt management practices

Corrupt management practices may involve both cash and noncash transactions. Noncash transactions, a key feature of the Soviet economic system, have remained widespread and provide fertile ground for such practices in the former Soviet Union. Exchanging electricity (for fuel) and gas and coal (for electricity and industrial production) at artificially inflated rates is one method of generating private gains.

Another practice is the issuance of promissory notes by electricity companies with restrictions on circulation, duration, and eligibility. These notes are immediately discounted heavily on the market and can be purchased for a fraction of their face value. The electricity company officials who certify that the circulation of the note followed a permissible path and that the holder of the note is entitled to redeem it in full for electricity or fuel are able to use their position to extract bribes.

A third example is from the coal industry in Russia and Ukraine. Anecdotal evidence suggests that unrecorded coal production illegally sold for the benefit of individual mine managers is a widespread phenomenon, involving local industrial customers, the rail transport system, and port authorities.

All these practices may result in an increase of 20–30 percent in costs and a reduction of similar size in revenues for gas, coal, and electricity companies, aggravating their already precarious financial positions.

Certain government regulations in the former Soviet Union create particularly strong incentives for collusion between public officials and private company managers. The allocation of oil export pipeline capacity in Russia, where part of the capacity is reserved to be allocated on a discretionary basis, seems to be a typical example. The difference between the domestic and export prices of crude oil is US\$80 a ton, so access to export capacity translates into large economic benefits. Therefore, the limits imposed on petroleum product exports—ostensibly to ensure adequate domestic supplies—coupled with the discretionary exemptions, provide an opportunity to generate significant private (and personal) gains.

In the South Asian power sector cash transactions, some paid overseas in foreign currency, appear to be a more common manifestation of corruption at the managerial level than noncash transactions. Corruption appears more common in unsolicited bids, supplier’s credits, and crash program-type procurement initiatives where there is little or no competition among suppliers, the definition of what is being procured is negotiable, and reputable firms may be reluctant to participate. Even where competitive bidding processes are used, side payments may be made to ensure favorable bid specifications, terms, and conditions, and favorable bid evaluations or endorsements. Side payments may also facilitate the issuance of work orders, the opening of letters of credit, and all stages of project

implementation carried out by contractors and consultants, such as processing payments and obtaining permits.

Jobs where rents can be collected are themselves subject to corrupt processes. Patrons in government or management award such jobs to their clients, who are expected to transfer back some of their illicit gains. Such jobs may even require up-front payments by the new employee. Being able to “transfer” employees from low-paid jobs without potential for illicit gain to low-paid jobs that benefit from corruption bestows power on the manager or politician. It is also common for politicians to reward their supporters or cronies by using their influence to award rent-collecting jobs in public enterprises.

Grand corruption

Grand corruption is seldom as visible as its two lesser cousins. A notable exception occurred in Ukraine, where a former prime minister personally granted exclusive rights to a gas trader that was reportedly controlled by him and his associates. The trader imported gas from Russia at a price of US\$50 per thousand cubic meters and sold it to captive industrial consumers for US\$80. When the prime minister, who used the financial wealth generated by this lucrative monopoly to establish a political party, was fired, the wholesale gas market was liberalized.

The gas trader quickly lost most of its customers, but remained the holder of several hundred million dollars of debt to the Russian gas company RAO Gazprom for gas received but not paid for. RAO Gazprom, arguing that the private trader’s privileges were granted by a cabinet resolution, has reportedly succeeded in transferring the liability for unpaid gas bills to the Ukraine government. Following the temporary liberalization of the gas market, the owner of another private gas trading company was appointed to head a newly created vertically integrated national oil and gas company (Naftogaz) and given exclusive rights to sell gas imported from Russia to the 300 largest industrial companies in Ukraine.

An example of an environment that creates opportunity for the abuse of high office comes from the Russian coal sector. One of the most heavily subsidized industries in Russia, coal mining continues to command a particularly high degree of political influence. As recently as 1994 the drain of coal subsidies on the federal budget was enormous. In that year almost US\$2.8 billion was spent on direct subsidies to the sector, representing more than 1 percent of GDP. Until late 1997 control of these subsidies was the prerogative of RosUgol, the national coal monopoly (in fact, operating as a ministry of coal mining). Allocation, distribution, and use of these budget funds were highly nontransparent, with no effective monitoring arrangements. Audits of 1996–97 coal subsidies ordered by the first deputy prime minister and the Duma found that significant sums of money had either been disbursed to the wrong recipients or used for the wrong purposes. The Russian government responded with a series of far-reaching measures to improve the transparency of and accountability for subsidies to the coal sector.

Corruption and the poor

The kinds of corrupt activity described above differ in the nature and magnitude of their implications for the poor.

In petty corruption in electricity or gas systems, both parties (the meter reader and the household) may benefit from striking a “deal.” In the short run—especially in the countries of the former Soviet Union, where almost all households are connected—there is nothing particularly antipoor in this. But in countries in South Asia the poor may be too vulnerable to resist the rapacity of the coalition of corrupt utility employees and their protectors, who may use physical force to enforce their regime. In such countries poor consumers may not benefit much from the diversion of utility revenues.

In the long run, however, inadequate revenue collection and other corrupt practices tend to lead to deteriorating service. This hurts the poor

more than others since less politically influential (typically less affluent) neighborhoods suffer more blackouts and supply interruptions. In Azerbaijan, for example, gas supply has been permanently suspended except on the peninsula where Baku, the capital city, is located. Many households and district heating systems in the country, dependent on gas, found themselves (literally) in the cold. The recent residential electricity blackouts have been scheduled for the peak morning and evening hours outside the capital city, while curtailments in Baku have been scheduled for the hours when people are typically at work or asleep.

In Bangladesh, where voltage in distribution networks is unstable, observers in rural villages have noticed lightbulbs lasting only a few days because of voltage surges. A low-income rural household might spend as much on lightbulbs as on electricity. (A Bank-funded survey revealed that power outages in Bangladesh cost about US\$1 billion a year and reduce GDP growth by about half a percentage point.) Diversion of utility revenues had become such a problem in Pakistan that in 1999 the government mobilized the army to supervise meter reading and billing. The scale of theft surprised the authorities, especially the extent to which the affluent benefited; industries, shopping centers, and large residences accounted for a large share of the stolen electricity.

Where the great majority of poor households lack connections—as is the case in most developing countries—the costs of petty corruption are likely to fall disproportionately on the poor. Large power sector losses due to theft have been a major cause of the bankruptcy of Indian state electricity boards—negative equity is not uncommon. These losses mean that little funding is left for expansion of networks to improve access—in South Asia less than half of households have electricity service. Losses also put a strain on state budgets, through major expenditures on subsidies for electricity boards. This fiscal drag lowers the growth of state GDP and crowds out other expenditures, particularly for education and health.

Similarly, in Bangladesh subsidies from the government budget amount to more than US\$100 million a year, more than expenditure on health. The beneficiaries of the subsidies are the relatively affluent 16 percent of households that have electricity service. The poor lose from the budget subsidies to the power sector in two ways: lower rates of economic growth and less social expenditure from which they would benefit directly.

Corrupt management practices typically lead to increases in supply costs, which in turn result in increased tariffs or, alternatively, mounting financial losses leading to reduced service. Increased tariffs badly hurt the less affluent (but still connected) households, since their budgets are tighter and they may have to give up other essentials (such as health care or education), while middle- and high-income families may just sacrifice luxuries. In other words, the problem is not that there is an antipoor bias in the tariff increase, but that the tariff increase may hurt the poor more than others. For the poor who are not connected, the higher tariffs (plus higher connection costs) resulting from corrupt management practices may create a higher barrier to access to the service than for the nonpoor. The alternative scenario—unchanged tariffs but mounting financial losses leading to service reductions—has a clear antipoor bias when service reductions are spread unevenly across the country, as illustrated above.

Grand corruption typically has the least direct impact on the poor. It leads to higher energy costs for industrial entities or reduced budgetary revenues from export and natural resource taxes. Most of the money paid in bribes is in foreign currency that never crosses the border. Excess costs of projects and concessions are funded by the country through electricity tariffs and foreign borrowing, and the illicit funds flow to the foreign accounts of government officials. The diversion of these funds harms economic growth, reducing employment opportunities, and also tends to reduce the resources for social programs, including assistance to the poor. The diversion of coal industry subsidies in Russia could have had a

more direct impact on some poor families, since it might have contributed to the delays in the payment of disability and unemployment benefits.

Reducing the costs of corruption

Governments can take various steps to reduce the scope for corruption—most involving privatization, competition, more transparent rules, and more disclosure.

Petty corruption

In the utility sector an interim solution to petty corruption in bill collection is to hire a private collection agency or to sign a management contract with a private party to run part or all of the distribution company. Contracts of this kind normally include collection targets and stipulate sanctions for failure to meet these targets, including contract termination. The few management contracts implemented so far in Europe and Central Asia have led to noticeable improvements in collection rates, but have still fallen short of producing a cash flow that would ensure the long-term financial viability of the energy companies. Contracting out billing and collections has been less successful in South Asia, where powerful vested interests such as trade unions have undermined private participation that does not give the private sector full control of the utility.

The final solution is to sell the distribution company to strategic investors with a proven track record and a long-term interest in the business. Doing this, however, requires considerable time, technical expertise, and political commitment. Assisting clients with the privatization of their distribution companies is probably the single most important building block of the World Bank's strategy to promote reforms in the energy sector. In Europe and Central Asia the Bank is actively engaged in the privatization process in Armenia, Georgia, Moldova, Poland, and Ukraine and is also promoting privatization and management contracts in Albania, Azerbaijan, Bulgaria, Estonia, Kazakhstan, Latvia, Lithuania, Romania,

and Russia. In South Asia the Bank has supported the privatization of four distribution companies in the Indian state of Orissa, achieved in 1999 after an earlier attempt at a management contract failed. Other Indian states—Andhra Pradesh, Haryana, Karnataka, Rajasthan, and Uttar Pradesh—have sought Bank assistance in utility restructuring and privatization, as have Pakistan and Sri Lanka.

Corrupt management practices

Corrupt practices involving noncash transactions can be targeted through an economywide reduction of the share of barter, offsets, and other noncash payment mechanisms. In addition, they can be reduced by reforms in the energy sector that include:

- Adoption of transparent market rules.
- Reduction in the scope and applicability of emergency provisions.
- Establishment of independent system operators with a multilevel governance structure to reduce the influence of any single individual.
- Establishment of independent regulatory bodies to oversee market operations.

The track record so far is mixed. It appears that these safeguards work less effectively in environments where the bulk of the sector is still publicly owned. The recommended sale of gas and electricity distributors, producers, and generators to strategic investors is expected to further reduce the possibility for “foul play” by public officials and politically motivated employment policies that support corruption.

In the oil sector in Russia the World Bank has proposed transparent procedures for allocating crude oil pipeline capacity that would include a market-based component such as an auction, an audit of Transneft (the pipeline operator), and the elimination of product export restrictions (except for delinquent taxpayers). However, the government has so far resisted these proposals. In the coal sector the Bank made progress in privatizing coal mines a condition for releasing a slice of financing in its sectoral adjustment operation.

To the extent that privatization exposes producers to the incentives and discipline of the market, it serves as a natural counterbalance to corruption among company managers, who for the first time are answerable to private owners with an interest in protecting and increasing the value of their assets. This aspect of the restructuring program tends to encounter resistance at all levels of government and from the labor unions.

Bangladesh has been able to minimize corrupt practices in the rural electrification sector through a combination of public participation from below and financial discipline from above. The sector is organized into cooperatives with boards of directors elected by their customers. A well-managed rural electrification board channels donor funds to the cooperatives conditional upon their performance and has the right to dismiss incompetent or corrupt managers.

Rural cooperatives charge higher tariffs than BPDB and DESA and have succeeded in recovering revenues for about 95 percent of electricity billed, a much higher level than for BPDB and DESA. When rural cooperatives have taken over towns previously supplied by BPDB and replaced BPDB workers with their own staff, they have achieved huge reductions in losses and increases in collections. Cooperatives have developed management practices to reduce theft, such as not allowing staff to be meter readers for more than three years and staffing billing departments with women, who have a better reputation for integrity in these jobs than men do. Empowering the poor to demand better service has seldom been tried in the power sector, yet holds promise for the future.

Grand corruption

As with lesser forms of corruption, grand corruption is likely to be tackled most effectively by highly transparent reform programs that involve disaggregating and divesting former state monopolies and creating independent and reasonably transparent regulatory and monitoring mechanisms.

For the gas sector in Ukraine recommendations have included the following:

- Gas imports and marketing to industrial consumers should be liberalized.
- The government should not guarantee payments to RAO Gazprom.
- Regular gas auctions should be held to produce a transparent (cash) price signal.
- The functions of the electricity regulator should be expanded to include the downstream gas industry as well.
- The operation of gas transmission and dispatch should be transferred to a strategic investor through outright privatization or a concession or management contract.

Progress with the first three items has been mixed, the fourth item has been implemented, but no progress has been made so far in privatizing or concessioning transmission.

In the Russian coal sector several remedial measures have been taken:

- Dissolving RosUgol.
- Transferring all subsidy management functions to the appropriate agencies.
- Establishing earmarked federal treasury accounts for all subsidy categories and recipients.
- Putting in place mechanisms that ensure that individual entitlements go directly to individuals, and not through coal companies, as previously.
- Setting clear priorities for subsidy disbursements to mitigate the social impact of restructuring.

Experience with the new system shows a marked improvement in the management of coal sector subsidies. Flows of funds through the earmarked accounts are strictly monitored by the treasury, whose local offices release funds only upon presentation of documentary evidence testifying to the completion of the works for which the funds have been transferred. In addition, social surveys of laidoff miners have confirmed that subsidies disbursed for their social protection have been delivered to the intended recipients. Present efforts to further strengthen the multifaceted subsidy management system focus

on discouraging the widespread practice of non-competitive procurement of goods (such as the expensive equipment needed for environmental mitigation works at and around closed mines), which leads to wasteful use of public funds and is rife with potential for corruption.

Bangladesh has been successful in awarding independent power producer contracts through transparent international competitive bidding based on the price of electricity supplied. This has resulted in prices of less than US\$0.03 a kilowatt-hour, roughly half the price of directly negotiated deals in such countries as Indonesia and Pakistan.

Conclusion

Corruption in the energy sector is antipoor. It slows economic growth and diverts public funds away from social expenditures that would directly benefit the poor. Corrupt utilities are inevitably bankrupt utilities unable to extend service to those without it, usually the poorer segments of society.

Transparency in the energy sector can be improved by first privatizing electricity distribution, where most theft takes place. In some social and political settings other forms of private participation might work, such as contracting out meter reading and billing, leasing distribution utilities, or offering concessions. Encouraging electricity customers and those without supply to find a voice and articulate their frustration with inadequate service merits more attention by reformers. Ideas that could be piloted include surveying public opinion, organizing focus groups, using the mass media, forming partnerships with nongovernmental organizations, and giving customers a say through cooperatives, reconstruction of utility boards, and participation in regulatory hearings.

As countries become more concerned about governance, they are likely to direct attention to reducing corruption in the energy sector, where there is huge potential for diversion of public

revenues, rent collecting by corrupt employees, and large-scale graft related to the award of major contracts. Many industrial countries that today preach against the sins of corruption were themselves noted for corrupt administration during the past two centuries. Better-educated citizens are likely to demand higher standards of governance. It was instructive in January 2000 to see a workers' strike against power reforms in the Indian state of Uttar Pradesh fail after the public, frustrated by poor service and abuse by employees, refused to support the strikers. The social transformation that underlies development will create pressures for better governance. But the imperative of attacking poverty requires that the World Bank Group and others that support energy development assist countries in eliminating corruption in the energy sector.

References

- Lovei, Laszlo. 1998. "Gas Reform in Ukraine." Viewpoint 169. World Bank, Finance, Private Sector, and Infrastructure Network, Washington, D.C.
- Rose-Ackerman, Susan. 1996. "The Political Economy of Corruption—Causes and Consequences." Viewpoint 74. World Bank, Finance, Private Sector, and Infrastructure Network, Washington, D.C.

Laszlo Lovei (llovei@worldbank.org), World Bank, Europe and Central Asia Region, Energy Sector Unit, and Alastair McKechnie (amckechnie@worldbank.org), World Bank, South Asia Region, Energy Sector Unit

This Note originally appeared as a chapter in Energy Sector Management Assistance Programme (ESMAP), Energy and Development Report 2000: Energy Services for the World's Poor (Washington, D.C.: World Bank, 2000). For more information on ESMAP go to www.esmap.org.



Viewpoint is an open forum intended to encourage dissemination of and debate on ideas, innovations, and best practices for expanding the private sector. The views published in this series are those of the authors and should not be attributed to the World Bank or any of its affiliated organizations. Nor do any of the conclusions represent official policy of the World Bank or of its Executive Directors or the countries they represent.

To order additional copies please call 202 458 1111 or contact Suzanne Smith, editor, Room F11K-208, The World Bank, 1818 H Street, NW, Washington, D.C. 20433, or Internet address ssmith7@worldbank.org. The series is also available on-line (www.worldbank.org/html/fpd/notes/).

♻️ Printed on recycled paper.