



THE WORLD BANK

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**The Coal Sector and
Mining Communities of Ukraine:
Advancing Restructuring to the Benefit
of All**

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Introduction

1. Since the adoption by the Government of Ukraine of a comprehensive coal sector restructuring program in 1996, the World Bank has provided policy advice and, for the first four years, financial support to the implementation of this program. World Bank loans in support of coal sector restructuring were closed in December 2000; the Government continues to finance the multi-year restructuring program with general budget resources. The Government's restructuring program has undergone revision during its implementation, reflecting developments in the sector as well as the different priorities of the various governments that have led Ukraine in recent years. The last formal revision of the restructuring program, "Ukrainian Coal", was adopted by the Government in September 2001. This program, which calls for increased levels of subsidization of the industry, has not been implemented as envisioned as a result of budget financing limitations, creating a situation of ambiguity as far as the overarching coal sector restructuring policy is concerned. Given the scope of the challenge of restructuring, it is expected that budget support in one form or another will be provided to the coal sector for the foreseeable future.

2. Recognizing the dynamic nature of developments in the coal sector since restructuring was initiated and in particular, the long-term nature of the impact of mine closure on impacted communities, the Government and the Bank agreed on the need for a comprehensive analysis of the present state of the industry and the socio-economic situation of the communities in which the coal industry serves or served as the economic base. Accordingly, the World Bank commissioned a study of the Ukrainian coal sector and the regional development problems of the Donbass that was completed by independent Ukrainian experts in Spring 2003. This comprehensive review of the sector and mining communities, which was widely circulated among the Ukrainian Government and other interested stakeholders, complements Bank research on the long-term impact of mine closure on mining communities in the Donbass that was completed in 2002.

3. The report prepared by the Ukrainian experts represented the beginning of a thorough stock-taking of the coal sector and coal communities that culminated over Summer 2003 in a series of consultations with representatives of ministries and agencies of the Ukrainian Government, the Verkhovna Rada, the regional administrations of Donetsk and Lugansk Oblasts, mayors and the communities of mining towns in the Donbass, NGOs, managers of State-owned and private coal companies and energy sector experts in Ukraine. This approach has made possible a multi-faceted understanding of the issues facing the coal sector and coal communities today, and has confirmed the findings of the recent analytical work conducted on the sector and mining communities.

4. As for the sector itself, an important general conclusion is that Ukraine possesses a coal resource base of significant value that is capable, under the condition of an effective completion of the sector restructuring program, of providing a considerable share of the coal required by the Ukrainian economy and contributing to the country's energy security. At the same time, it is clear that, historically, this resource base has been mismanaged and misused, leading to a degradation of the coal industry and fostering an image of an

industry which cannot be commercially viable and should be permanently subsidized. To reap the full benefits of the sector's potential and ensure its sustained viability, and also to relieve the large burden of the coal sector on the Ukrainian budget so that resources may be freed up for other national priorities, a number of issues now need to be addressed as a matter of urgency. It is hoped that this note will help the Government to identify key revisions to its formal coal sector restructuring program that are consistent with the possibilities of the budget, and serve as a vehicle for stimulating public discussion of the current status and future directions of coal sector restructuring in Ukraine, including possibly with the support of the World Bank.

5. The four key problem areas that face the coal industry and mining communities in Ukraine today are:

- Governance in the coal sector;
- Coal pricing;
- State support for the coal industry; and
- The social and environmental impact of sector restructuring.

6. This note is structured around these issues. Following their discussion are options for solutions for the Government and other stakeholders to consider and suggestions for possible World Bank support to coal sector restructuring. Before the discussion of these issues, however, some words on the Government's latest reform initiative to improve coal sector organization are in order.

7. Since December 2002 the Government has been carrying out a reform of the organization of the Ukrainian coal sector. The three-stage process envisions: (i) the establishment of approximately 25 State enterprises (SEs) to replace the ca. 250 legal entities that have constituted the coal sector organizational structure, primarily by reorganizing the state holdings (largely completed by July 2003); (ii) corporatization of the SEs (commenced in summer 2003); and (iii) eventual privatization of the corporatized SEs (to be implemented starting in 2004).

8. It is unclear what percentage of coal sector assets is actually covered by the current restructuring program (so far, only 19 SEs are reported to have been created. Moreover, at least 10 mines have been blocked from consolidation into SE by creditors' insolvency claims, and apparently a significant number of mines and even holdings are being privatized without conversion into SEs), and it is too early at this stage to give a comprehensive assessment of this reform initiative, which has the potential for improving the efficiency of the coal sector but also contains certain potential pitfalls that should be guarded against. The table below summarizes the potential opportunities and threats of the Government's coal sector organizational reform (based on the Bank's analysis of the information provided on this reform program at consultations carried out in the summer of 2003):

Opportunities	Threats
<ul style="list-style-type: none"> the 10-fold reduction in the number of legal entities gives the Government the opportunity to re-assert control over the sector and to demand accountability and responsibility from the general directors and senior management of the SEs. 	<ul style="list-style-type: none"> consolidating loss-making mines into SEs with viable or potentially viable mines will likely have a negative impact on the sector's performance.
<ul style="list-style-type: none"> increased efficiency and cost-savings from centralized services (administration, procurement, etc.), and reduced risk through greater control over interdependent enterprises in the value-added chain. 	<ul style="list-style-type: none"> the attempt to corporatize the industry before resolution of its fundamental financial problems (accounts payable far exceed accounts receivable, wage arrears are high) could undermine the reform process through complicated dealings with creditors, bankruptcy proceedings, etc.
<ul style="list-style-type: none"> pooled financial resources (state subsidies and internal finance) provide flexibility in investment decision-making. 	<ul style="list-style-type: none"> inconsistent application of the reform to particular enterprises could undermine the integrity of the new policy and strengthen the tendency to "special negotiations".
<ul style="list-style-type: none"> improved procedures for decision-making in relation to mine closure (particularly important in light of reorganization of UDKR currently underway), and increased efficiency in implementation of mine closure 	<ul style="list-style-type: none"> mine closure takes place as a "hidden" process within SEs, established procedures are violated at the expense of the workers and the mining communities
<ul style="list-style-type: none"> a reduction in the number of agents on the coal market, contributing to greater transparency in sales contracts, preventing manipulation of the market and squeezing the "shadow" market for coal 	<ul style="list-style-type: none"> partial privatization (which is the common expectation of those familiar with the industry) whereby the State retains an interest in coal enterprises could serve as a justification for the perpetuation of State support to the industry for years to come.

9. As concerns the first stage of the Government's reform program that is presently underway (the consolidation of the industry's entities in the form of State enterprises), a particular concern is that a return to cross-subsidization could weaken the performance of the viable part of the industry without redeeming that part of the industry for which mine closure, accompanied by the appropriate processes of social protection and environmental mitigation, is the only realistic option. Also, the mixing of viable mines with loss-making mines and the offering of the resulting holding company for sale to the private sector would reduce the value of the holding company.

The Issues

Governance in the coal sector

10. Deficiencies of governance permeate the Ukrainian coal sector and constitute the overarching problem that will require resolution if restructuring is to succeed and the industry set firmly on the path to recovery. Several inter-related attributes of the governance problem can be identified. Among the most important are the murky ownership structure of the industry and a poor mine safety record. Other governance deficiencies include non-transparent pricing and marketing arrangements as well as opacity in the allocation of subsidies. The latter issues are treated in the sections on coal pricing and state support for the coal industry.

11. While the coal sector is overwhelmingly state-owned in a formal sense, the *de facto* control of large parts of the industry, including the quasi-totality of coking coal mines and a growing number of steam coal mines, lies with certain groups of major industrial consumers of coal. In recent years, the chronic financial distress of the mines has led them to enter into arrangements with entities that are able to provide liquidity in return for a degree of management control at the mine, or preferential (below cost) prices, or some other benefit. The existing structure thus represents an inappropriate mixture of commercial and public interests, and introduces a basic conflict of interest in the management of the industry.

12. These conflicts do not allow the Government to introduce financial discipline in the coal sector, depriving it of accountability. Examples of why such a situation is not beneficial to the industry and Ukraine as a whole include the non-transparent allocation of the significant levels of public funds that are given to the industry, and unclear assignment of responsibility for the provision of safe working conditions and an acceptable environmental impact of mine operations.

13. The long-term threat to the industry posed by its fundamental governance problem is that the present alignment of incentives favor short-term exploitation practices (“asset stripping”) and will have a detrimental effect on the long-term viability of the sector. Efficiency and equity concerns alike demand an alignment of both rights and responsibilities in the person of the owner or operator, which is lacking at present in the Ukrainian coal industry.

14. The pressure for production and profit-making, in particular at coking coal mines, where the output of some mines is pushed to more than 200% of the original design capacity, has contributed significantly to the growing accident rate that now puts Ukraine at par with China in holding the sad record of operating the world’s most unsafe mines. While economically desirable, the increased coal output can have deadly consequences in an environment that is characterized by a lack of safety culture at the mines and an inadequate safety enforcement capacity of the State. Poor governance that blurs the responsibilities of mine operators and the State frustrates efforts to improve the industry’s deplorable safety record.

Coal pricing

15. A core problem of the Ukrainian coal industry is that coal prices reflect neither the costs of production nor the costs of alternative energy sources that are available or potentially available to the country. The costs of production determine the viability of the Ukrainian coal sector and its competitiveness. The coal sector's average current production cost is about 29 \$/t, or 15% higher than the sector's current average price of about 25 \$/t. At the same time, however, current production costs are significantly lower than the costs of alternative energy sources. Data from the consultants' report indicate that the costs of imported coal from overseas would be about 40% higher than the current production costs of Ukrainian coal. The present fuel oil costs in Ukraine are about twice as high as the costs of Ukrainian coal and even natural gas in Ukraine with its present unsustainably low price is more costly than Ukrainian coal. This suggests that a large part of Ukraine's coal output could be cost-effective in comparison with alternative energy sources, even if the mines had to cover additional expenses for environmental protection and improved mine safety. It can therefore be reasonably expected that a fair market price for Ukrainian coal in a competitive and efficient future Ukrainian energy market would be somewhere between the present costs of production and the costs of alternative energy sources and, in any case, significantly higher than the present Ukrainian coal price.

16. An essential finding of the consultants' study is that prices for coal in Ukraine have been kept artificially low for a variety of reasons and through various non-market mechanisms. This view found widespread support among coal sector stakeholders in the Donbass. The existence of below-cost coal prices is a strong indication that mines are being exploited by dealers and downstream industrial consumers. Below-cost coal prices also challenge the view frequently encountered among certain groups in Ukraine that the coal sector is by its nature loss-making and requires support from the State: if the coal market were working properly, more coal mines would be able to work profitably and would not require support from the budget. The recent experience of Russia, which eliminated state support to loss-making mines at the end of 2001, dramatically illustrates the positive potential for restoring viability in the coal sector while simultaneously introducing competition and reducing the heavy burden imposed on the budget by the subsidization of the coal industry. The view that the coal sector was "hopelessly loss-making" was also deeply entrenched in Russia until recently.

17. It is important to stress that the analysis of the coal sector's prospects is of a medium-term nature and assumes that, in line with the adoption of economic coal prices, the Government will reduce and eventually eliminate the high levels of state support that have been used to support the coal industry over the last decade at the expense of other critical expenditure areas supported by the budget, such as education and health. It is also important to note that increased coal prices which go along with subsidy reductions would support a strategic emphasis on improving energy efficiency, a particularly relevant goal for the Ukrainian economy, which is highly inefficient in its use of energy compared to other industrialized economies. An important implication of the determination of the scope of economic coal production in Ukraine is the scale of mine closure that will be

necessary to optimize the industry's performance while reducing and eventually eliminating the use of state support.

18. While we understand the Government's concerns about the impact of higher coal prices on the metallurgy industry and the power industry, the economic rationale for the coal sector calls for cost-recovery and market-based prices in the long term. What is needed are measures to allow prices to appreciate to levels that fully cover the production costs of viable mines and that approach economic values set by alternatives to domestic coal.

State support for the coal industry

19. In Ukraine, state support for the coal sector is granted to cover production costs and investments, as well as expenses for sector restructuring and mitigation of its social and environmental impact. We do not regard the latter expenses as a subsidy, but as government obligations. For the provision of operating and investment subsidies we see two major problems: (i) the overall level of subsidies, and (ii) the administration of subsidies.

The overall level of subsidies

20. The existence of the system of state support exercises a powerful influence on the economic behavior of the various economic agents, and generally not in a way that benefits the coal industry and the country at large. Because coal producers and major consumers of coal know that the State stands ready to compensate the producers for any losses, neither the producers nor the consumers have an interest in establishing market-based relations. Producers lack the all-important incentive to increase efficiency and reduce their costs.

21. In Ukraine, the future overall level of subsidies will greatly depend on the pricing policies adopted and the status of sector restructuring. When a mine produces coal at a cost that is above the current price, but at or below the parity price of energy alternatives, then there is an economic justification for the subsidization of the difference, at least for a period of time. The subsidies could be targeted to cover the costs of operation as well as selected investments, as long as the future competitiveness of the mine is assured and the sum of current price and total subsidies does not exceed the parity price of energy alternatives for the particular mine. For coking coal, that price would likely be the costs of coal imports, while for other steam coal an import parity threshold could be calculated as the cost of fuel mix import, comprising coal, gas and fuel oil. Mines that produce coal at a higher cost than the parity price of energy alternatives should be closed, as their output is an unjustified burden on the Ukrainian economy, and their contribution to the economy can be replaced at a lower cost through alternatives.

22. Further analytical work is required to calculate the economically justified level of subsidization for the total coal industry more accurately and to determine the price level that should serve as the threshold for classifying the industry's mines into those for which an economic rationale for subsidization could exist and those for which such rationale definitely does not exist and which should be closed. This analysis should be based on the

latest data available to the Ministry of Fuel and Energy and including a mine-by-mine assessment of the industry. Given the nature of the problem, such analysis would need to be repeated on a regular basis, to reflect changes in energy prices and to ensure the steady reduction and eventual elimination of the state support provided to loss-making producers.

23. What is needed at this time is (a) the Government's determination to adopt and to enforce a subsidization policy aimed at reducing and eventually eliminating subsidies linked with economic coal pricing and continued sector restructuring, and (b) a screening of the mines to classify them into viable and non-viable mines.

The administration of subsidies

24. There is a lack of a systematic approach to the allocation of subsidies among the various subsidy categories and recipients, and a tendency to engage in political lobbying for increases in subsidies. As subsidies are always insufficient to meet the demand for them, there are perpetual shortfalls in the levels of financing provided, with a "spiraling-down" effect that puts the sector's long-term survival at risk. The long-term crisis that continues to characterize the Ukrainian coal industry demonstrates that the high levels of subsidization have not been effectively used in resolving the industry's basic problems.

25. World experience with subsidization of industry shows that the most effective subsidy systems share two key attributes: (i) they are provided for clearly defined purposes under transparent rules of the game, and (ii) they are provided for a limited period of time. Policy goals are most effectively achieved when Governments make public their specific programs of subsidization of industry, including their intentions to eliminate subsidies over time, and when there is widespread belief that the Government intends to carry out its stated policies. In the opposite case, subsidies are provided in a poorly defined, *ad hoc* fashion where instead of rules of the game individual negotiations determine who receives the subsidies. Also, protracted provision of subsidies perverts the economic incentives that would normally ensure the efficient management of an industry and its ability to attract investment financing. Protracted subsidization can end up damaging the industry, leading to job loss and carrying a high social cost while absorbing huge amounts of budget financing.

26. What is needed is a temporary subsidization system that abandons cost-based subsidies and instead moves to market-based subsidies that do not distort the market and are based on transparent, rational criteria.

Social and environmental impact of coal sector restructuring

27. For regional development issues, the World Bank generally supports the shift in focus from sectoral to regional policies as a natural progression that will become increasingly relevant as coal sector restructuring advances. We believe that the emphasis should be on helping regions become more competitive by strengthening the foundations for economic growth and entrepreneurship and creating a more attractive environment for investment and technology, which will lead to new jobs. The experience of many countries shows that

providing subsidies or other perquisites to regions usually results in the familiar problems of unsustainable policies that benefit a few at the expense of many. For these reasons, the World Bank does not share the endorsement of free economic zones (FEZ) and priority development areas (PDA) that is encountered in the Donbass and among others in Ukraine (and also given in the consultants' report). In our view, the most important areas of the social impact of coal sector restructuring which require immediate treatment through policy are: (i) assistance in finding new employment to laid-off workers and others who are adversely affected by restructuring, (ii) transfer of housing and social assets in mining municipalities, and (iii) mitigation of environmental damage caused by mining and mine closure that has a direct detrimental impact on human health and safety. Following are observations on these priority areas.

28. Assistance in finding new employment. While the impact of mine closure has an obviously very negative localized impact on employment in the mining towns, the Donbass as a whole still enjoys indicators of social and economic development that are better than the national average. For this reason a significant discrepancy has emerged between the projected need for job placements in the mine closure plans and the considerably smaller actual demand for official assistance in employment placement as experienced during the last several years. This is consistent with the experience of several countries that have undergone coal sector restructuring: many workers find jobs through means other than the official systems and programs that have been established to facilitate the redeployment of labor. Consultations carried out in July 2003 in Donbass confirmed that labor migration, while borne of a difficult reality, has helped to relieve the pressure on local labor markets. A more comprehensive approach needs to be taken in the response to the unemployment that follows mine closure. While some ex-miners will require specialized assistance owing to their particular problems of adaptation, in the long term, the impact of mine closure on the community is often felt more severely by more vulnerable groups, such as women, young people, older workers who are not competitive on tight labor markets, and workers from auxiliary enterprises that are often forced to close when the mines are closed. All these facts have important implications for the design of feasible, cost-efficient and comprehensive social mitigation and labor redeployment programs that should ensure social stability in the mining areas of the Donbass to stem processes of long-term decline in the mining communities.

29. Transfer of housing and social assets. The process of effecting the transfer of social assets from mining enterprises to municipalities has been complicated and protracted. Consultations carried out in July 2003 confirmed the critical nature of this problem for mining communities. The process, which is far from complete, has been protracted as the result of a combination of factors, including an overly complex legislative framework, weak local municipal technical and financial capacity, and the poor condition of the social assets under question. The circumstances of an aging population that is contracting through natural diminution as well as out-migration suggest the need for rationalization of the social assets and housing stock in certain mining communities. Certain categories of social assets such as community centers (*doma kultury*) are expensive to maintain and not generally much in demand in mining settlements where out-migration has been high. Recognizing that such assets potentially play an important positive role in maintaining a

sense of community cohesiveness, which suffers in the wake of mine closure, there is an urgent need to establish an alternative revenue base for these assets or to face the difficult decision of the need to close them. This is a challenging task for which mining communities require assistance and for which an emphasis on ensuring transparency and public consultation is essential.

30. The problem of housing and communal services in mining settlements merits special attention. Due to the high level of labor migration, apartment buildings in settlements typically have a low level of occupancy (in some cases reported in July 2003, as low as 40%). The technical configuration of the centralized heating system is such that these empty apartments are “consuming” heat for which there is no one to pay. At the same time, because these apartments are largely privatized, officials do not have the right to enter them without the permission of the owner, whose location is often unknown. The scale of the problem places a severe burden on municipal authorities, utilities and those consumers who pay their bills.

31. *Mitigation of environmental damage.* The environmental impact of mining and mine closure is significant. Consultations carried out in Donbass in July 2003 confirmed that the problems caused by rising mine waters after mine closure are among the most severe environmental impacts of mine closure. These rising waters can contaminate local supplies of drinking water and flood basements of homes and other buildings, complicating the already difficult situation with water supply in Donbass. The waste piles that have accumulated over years of mining were also frequently mentioned as a major environmental concern, particularly if they are still burning, or have not been covered with grass and other vegetation to reduce the hazard of dust. It is of note, however, that there was a sharp difference of opinion on the nature of the threat posed by the waste piles, with several interlocutors asserting that they were largely inert and should not be treated as a priority problem.

32. Throughout the Donbass, participants in consultations noted that the financing that has been provided for the mitigation of environmental damage as called for under the mine closure plans has been inadequate. The increase in the number of mines under closure has forced the responsible officials to devote the limited available financing to the immediate priorities, which are mostly the immediate social expenditures and physical works associated with the first stage of mine closure. Financing for environmental mitigation has been provided on a residual basis.

33. At the same time, the experience of many countries, including Ukraine, demonstrates that when a mine is being closed, claims for environmental mitigation are raised disproportionately, and official mine closure plans often call for expensive mitigation measures that are based on standard bureaucratic procedures not always adapted to individual local situations. Because financing in the large volumes called for is not available, the additional confounding elements of poor management and constantly disappointed expectations are introduced in the process of environmental mitigation. Priority measures to mitigate the detrimental impact on the safety and health of the local population often do not find the immediate attention they deserve. In other countries

standard procedures are in use for risk assessment that identify priorities and ensure that they are being dealt with promptly and efficiently.

34. What is needed is acceptable, sustained mitigation of the social and environmental impact of coal sector restructuring, commensurate with central and local budgets. To achieve this, it is important that mining municipalities be involved early in the decision-making processes. The active role of the administrations and populations of the mining communities are necessary to mitigate the risk that assistance intended for the mining towns is diverted to other priorities as identified by higher local authorities.

Options for solutions

Governance in the coal sector

35. To improve governance in the coal sector, actions that would restore Government authority and accountability of mine operators are needed. While the State should guard over the public interests of safe and environmentally acceptable mining, mine operators should be fully accountable for safe and efficient mine operations, governed by clear rules that are backed up with effective enforcement by the State. Mine managers should be fully responsible for applying safety regulations, and managers and workers alike must be held accountable in cases of violation of the safety regime. It is also important that for any future transactions of operating and property rights, a maximum value must be secured by the State.

36. A reversal of the *de facto* control of state-owned mines by commercial interests is a necessary first step in re-establishing appropriate levels of governance in the sector. Managers who have been entrusted with State assets have to be accountable for their use, and full Government control over sales and financial transactions of coal mines and companies must be re-established. This would also facilitate the transparent privatization of the sector, which is a critical element in ensuring its long term efficiency and sustained viability. In the longer run, keeping the coal sector under full or predominantly Government ownership is an undesirable solution because of the conflicting double role of the Government as operator and regulator and because of difficulties in establishing competition between mines. However, as a short-term temporary measure this action can restore accountability and protection of public interests by placing both under the Government.

37. By deviating from the proven principles of private participation in public enterprises, Ukraine risks ending up with sub-optimal results in the implementation of the two main options for the future management of the country's coal sector: (i) full privatization of the cost-effective mines; or (ii) the use of contractual arrangements which would allow separation of ownership and management functions. In either case, the principles to be adhered to are: (i) re-establishment of State control before assets are sold or transferred; (ii) transparency; (iii) the introduction of competition; and (iv) securing the maximum net present value from privatizations and public/private arrangements. Privatization

transactions must aim at enhancing the net present value of assets and should not be preceded by state-funded investments which may inflate the assets' selling price, but reduce the net present value of what the Government receives. In Ukraine, it has proven difficult to re-establish State control over some of the most attractive mines and coal washing plants. Circumstances have forced the Government to recognize the insolvency claims of the *de facto* owners or to give its consent to the uncompetitive leasing of attractive assets with a significant loss of value.

38. Full privatization of the mines would be the optimum long-term solution with the best prospects for sustainable economic efficiency. However, this option is open only to viable or potentially viable mines and requires political will and the enforcement capacity to implement privatizations. It is also important to note that there is no single optimal approach to privatization that applies equally to all industries in all countries, although one common feature of most cases of privatization is the search for a good strategic owner who would transform firms into commercially sound entities with social corporate responsibility. The unique circumstances of the Ukrainian coal industry and the Government's goals for the socio-economic development of Ukraine would be central factors in determining an appropriate approach to transferring the ownership of the coal industry to the private sector.

39. Alternatives to privatization include contractual arrangements to separate the commercial and public roles and risks could be made in the form of: (a) management contracts or leases with qualified private mine operators engaging them to manage the state enterprise for a fee; or (b) concessions which, besides operator fees, envisage a degree of investment responsibility on the part of the contractor who assumes higher risks compared to management contracts and leases. Any contractual forms of private participation would need to have a comprehensive legal base, spelling out clearly the rights and obligations of both the owner (in this case, the State) and the private operator, as well as the performance targets the operator should achieve within the contract period. Procurement of the management/leasing contracts and concessions would have to be transparent and competitive. In order to make these contractual arrangements effective, as demonstrated by international experience, the Government should allocate resources (sometimes significant) to monitor the contractor's performance against the agreed targets and be ready to use incentives, both positive and negative, specified in the contract to motivate the contractor to meet the targets. Very few countries have been successful in putting such monitoring and incentive systems in place when making contractual forms of private participation in competitive sectors, and those who achieved success did so mostly in the infrastructure industries that are more difficult to privatize. For competitive sectors like coal, privatization is easier to implement and the prospect of success is greater, and this is the option recommended by the Bank for the Ukrainian coal sector.

Coal pricing

40. To achieve coal prices that fully cover the production costs of viable mines and that reflect economic alternatives to domestic coal, the following two options appear feasible: (i) temporary price regulation, and (ii) accelerated market development.

41. Temporary price regulation appears to be a straightforward answer to achieve required price increases fast. For steam coal, a regulated price could be calculated based on a fuel mix for thermal power plants (including coal, gas, fuel oil) that takes into account existing constraints as well as feasible strategies for security and economy. For coking coal, a price could be calculated based on a blend of coal imported from Russia, Poland and overseas, taking into account Black Sea port capacities. However, enforcement and protection against misuse may be difficult. Also, price regulation would risk slowing down the creation of a true market environment.

42. Accelerated market development is an option that would eventually be wanted in any case, even if temporary price regulation were adopted. The most important step the Government would have to take is to disallow the sale of coal below cost and to accompany this stricture with punitive actions for violations. Other actions would be a crackdown on remaining barter trade and predatory practices. It appears that such actions could only be successful in an environment of good governance.

State support for the coal industry

43. To achieve a market-based coal subsidization system, the Government has the choice of a system based on either producer subsidies or consumer subsidies. In either case, the subsidies would have to be transparent, well targeted and non-distorting to the market.

44. Producer subsidies to coal mines have been and will likely continue to be the subsidization scheme used by the Government. Optimization of the use of coal subsidies – both from the perspective of the coal industry itself and from the broad national perspective – will be possible only in an environment of a clearly defined limitation to the time period during which the Government will provide subsidies to the coal industry for restructuring (we exclude from this category those budget funds that are used to finance mine closure and the related social and environmental mitigation work.)

45. Methodologies for the allocation of each specific category of state support should be developed and used as the basis of the system. In particular, detailed selection criteria for the provision of investment subsidies, including competition and repayment, would have to be elaborated and strictly applied. In order to maximize the benefit of the limited investment subsidies available, the Government may wish to consider using its funds to subsidize the interest rate of coal companies that present credible investment plans.

Social and environmental impact of coal sector restructuring

46. To achieve acceptable, sustained mitigation of the social and environmental impacts of coal sector restructuring, the Government could apply a variety of measures in the key areas of new employment, social assets transfer and environmental damage mitigation. In all areas, continual community involvement will be crucial in the development and implementation of all initiatives that seek to mitigate the social and environmental problems arising from mine closures.

Assistance in finding new employment

47. Beginning in 2003, the oblast state administrations have assumed responsibility for the management of the budget funds for the creation of new jobs that were previously administered by UDKR as part of the mine closure plans. While this approach has the advantage of aligning a regional responsibility (i.e., regional development) with the financing allocated for that purpose, at the time of consultations in mid-2003 the new institutional arrangements were not entirely operable and more time will be needed before the impact of this change can be evaluated. Whatever the final form of the structures that are given responsibility for this issue, it appears advisable that employment assistance be improved and tailored to the needs of each specific location in anticipation of future mine closure, and incorporate such “spontaneous” phenomena as wide-spread labor migration. Given the relatively strong economic position of the Donbass, it would appear to be more appropriate to give priority to relatively low-cost targeted assistance efforts that focus on facilitating the transportation of workers living in the depressed mining towns to jobs in other towns of the Donbass, or facilitating out-migration, rather than attempting to create new jobs in the mining towns with the use of budget financing, which can be very expensive on a per-job basis and take a long time to have an impact.

Transfer of housing and social assets

48. The experience of other countries suggests that a good policy would be to transfer the social assets from the enterprises free-of-charge to the municipalities. Adequate financial assistance should be provided to municipalities in the period immediately following the transfer. Specific technical assistance could be made available to municipalities to enable them to carry out the difficult task of rationalizing the social assets and developing a plan for rapid restoration of financial viability of the remaining assets. Revisions should be made to the cumbersome legal and regulatory framework governing the transfer of social assets to municipalities.

49. As for housing, municipalities and mining settlement residents alike would benefit from a program to consolidate remaining residents in the best available apartment buildings. This would allow the municipalities to save the significant resources that are spent on heating half-empty buildings, and re-create a socially more amenable environment for individuals and families who remain in the mining settlements.

Mitigation of environmental damage

50. Financing needs to be provided for the mitigation of environmental damage arising from mining and mine closure in a volume that is adequate to address the urgent problems in this area, in particular to prevent the danger to humans and property caused by rising mine waters. The efficiency of the use of the limited budget financing can be increased by a clear delineation of the environmental mitigation work into priority works and works of less urgent nature. For this second category of works, the Government may wish to consider whether it would be more appropriate to finance these works outside the context of the mine closure plans through regional environmental management programs.

51. Another option to ensure the availability of scarce funds for priority environmental measures could be to assign the costs for pumping of water from closed mines to the operating costs of the nearby functioning mines for which the water is pumped. Presently, these significant costs are assigned to the mine closure plans, but as they represent costs associated with the general operating environment of the continuing mines, it would be economically justified to assign these costs to the continuing mines.

World Bank Group Support for Coal Sector Restructuring

52. At present, there are no active World Bank Group lending programs in support of coal sector restructuring in Ukraine. Based on the foregoing analysis of the state of the industry today, the following areas of potential support can be identified:

- Support for sector policy reform through the vehicle of the Programmatic Adjustment Loan (potentially including such policy issues as subsidies, sector organizational structure, financial rehabilitation, etc.);
- World Bank guarantees to facilitate the attraction of investments into the sector;
- A special facility to mitigate the environmental and social aspects of mine closure; and
- Cooperation between private (or to-be-privatized) coal companies and the International Finance Corporation, which is a part of the World Bank Group that works with the private sector.