V

Performance Contracts in Bangladesh: A Case Study

A Brief History of Public Enterprises in Bangladesh

The history of public enterprises in Bangladesh dates back to colonial days when the country inherited some of its public enterprises(PEs). During the Pakistan regime, the East Pakistan Industrial Development Corporation (EPIDC) was the main vehicle of industrial development in the then East Pakistan, and the country inherited most of its undertakings from that period. In the post-liberation period of 1971, private sector industries faced a major setback due to the mass exodus of non-Bengali owners and managers. In order to fill this vacuum, the President's Order No. 1 of 1972, The Bangladesh (Taking Over of Control and Management of Industrial and Commercial Concerns) Order, 1972 was promulgated and all abandoned properties, including 725 industrial and commercial units, were brought under government control and management.

The nationalisation policy immediately changed the nature and scope of public enterprises. The expanded participation of the state in economic development envisaged in the First Five-Year Plan (FFYP) of Bangladesh implied a greater role for PEs and was used as a tool for rapid economic development. Due to a number of contradictions, the nationalisation policy adopted by the Government faced opposition right from the beginning. First, due to lack of political commitment from the ruling party, the policy did not yield the desired results. Secondly, the planners entrusted with the policy-making had little belief in and commitment to the programmes as they themselves were motivated towards the capitalistic environment.[1]

Policy conflict, poor management of the nationalisation process and poor enterprise management brought public enterprises under serious attack by the opponents. In the initial years, the Government's announced priority to make abandoned public enterprises subject to public operation and accountability, did not receive due consideration. Priority was given to the introduction of management systems in an environment where public enterprises were faced with resource constraints. Most of the public enterprises also suffered from a lack of accounting, stores, purchasing and other basic functional systems. The people entrusted with the management of

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[1] Rashid, M. H. "Public Enterprises in Bangladesh: A Survey", Bangladesh Journal of Public Administration Vol-I No. 1, January, 1988.

public enterprises, with little industrial and business experience, were confronted with great problems of management of the nationalised industries. Moreover, these industries were used for patronage of party workers, resulting in excess employment, wastage and other inefficiencies. The move towards disinvestment of public enterprises began in 1982 and a number of steps were also taken to boost the private sector. The measures included gradual disinvestment of smaller public sector enterprises; initiation of a capital market; simplification of investment and loan sanction procedures; concessionery import duties and protection through tariff structures, etc.

In order to enlarge the scope of private investment, the New Industrial Policy (NIP) of June, 1982 was issued and it limited the scope of the public sector to six basic heavy and strategic industries: defence; atomic energy; air transport; telecommunication; electricity generation and distribution and mechanised extraction of forests. Subsequently, in the Industrial Policy of 1986, security printing and minting was added to the reserved list. In the Industrial Policy of 1991, these seven sectors continued to be reserved to the public sector, while the rest were opened to private investment. The policy airmed to improve the efficiency of the public sector corporations.

Over the last few years, there has been a complete reversal of the development strategy from an overwhelming reliance on the public sector to a supportive role for private sector investments. However, despite all efforts towards denationalisation, public sector enterprises have maintained their importance in the economic development of the country.

Economic Significance of Public Enterprises in Bangladesh

In Bangladesh public enterprises play a vital role in the national economy. The public enterprises sector is small compared with many other countries, and in the last few years has become smaller. A recent estimate shows that it employed less than 1 per cent of the labour force and accounted for 3.6 per cent of Gross Domestic Product (GDP) in 1992-93. However, the sector is rather more important to the investment account and to the balance of payments account. Non-financial PEs absorbed 22 per cent of national investment in 1992-93. Though much slimmed down by disinvestment, public corporations remain dominant. As at December 1993, there were a total of 223 enterprises under the government control.

The performance of public enterprises has generally been poor and, except for a few, most of them have incurred losses over the past years. Until the end of the 1992-93 financial year, the cumulative losses of non-financial public enterprises were US$443 million. In 1992-93, the non-financial public enterprises generated revenue of US$3.3 billion by employing US$10.8 billion worth of fixed assets.

This implied that a mere 5 per cent increase in efficiency can generate additional revenue of US$170 million (Tk.6.8 billion) which is 10 per cent of the annual development budget of the country. The reasons for poor performance were traced to the multiple objectives, the lack of operational autonomy and multiple principals to whom they are accountable.

The PE Mission and Objectives

There is no well-defined corporate mission for the public enterprises in Bangladesh. However, the Bangladesh Industrial Enterprises (Nationalisation) Order 1972 that brought all enterprises under government ownership and control, has laid down the objectives as: "control, co-ordination and supervision of the enterprises placed under them and establishment and development of new industrial enterprises". Although there was no separate mission for each public enterprise, these objectives can indicate the PE mission in general. The objectives of the enterprises were, however, defined by the Government in the guidelines issued in 1976 at section 3 (3) as follows:

- to operate on commercial consideration, having due regard to national interests, in the most efficient and economic manner within the policy framework and guidelines prescribed in the rules and regulations;
- to strive continuously to improve its performance and attain better results;
- to earn additional revenue for government;
- to earn more foreign exchange at minimum sacrifice (for export-oriented enterprises);

Since the above guidelines did not define 'commercial consideration', 'national interest', and 'performance', the above objectives were interpreted variously by different agencies and bodies of government. The objective behind the creation of public enterprises was to run them efficiently and effectively for the greater interest of the state. Although social benefit is the main objective behind the creation of public enterprises, in order to yield social benefit, the enterprise has to survive commercially. Hence, running the public enterprises commercially to earn profit has become the primary objective.

The Performance Contract and its Evolution in Bangladesh

In Bangladesh, the Performance Contract system was initiated for a limited number of PEs on an experimental basis, with the expectation that after it proved to be

effective, it would be applied to all public enterprises. They are drawn up annually on the basis of negotiation between the enterprise and government (Ministry of Finance) and in collaboration with the corporation head office and the administrative ministry.

Realising the significance of the public enterprise performance on the economy, the Ministry of Finance sought ways to improve the performance of the public enterprises. At the request of the Government, UNDP sent an expert in 1982 to look into the problem, and he suggested the setting up of a Cell for financial MIS of public enterprises. The Ministry of Finance felt that this alone could not solve the problems because they were deeper than that. The problems were more to do with management and ways of improving the management of public enterprises should therfore be sought. In 1984, the Government of Bangladesh, through the Ministry of Finance, launched a UNDP-supported project named "Development of Performance Evaluation and Financial Management Information Systems for Autonomous Bodies" with the following terms of reference:

(i) to develop an MIS for financial management, budgetary control and macro-economic policy formulation by the Ministry of Finance, the Ministry of Industries, the Planning Commission and others; and

(ii) to conduct an overview study to identify the constraints on public enterprise performance and make the necessary recommendations.

The basic objectives behind the overview study were to identify the weaknesses of public enterprise performance and make recommendations for their resolution. The study team of senior officials of the project visited Pakistan, India and South Korea to look into the problems of PE management and how they are resolved in those countries. Encouragement by the Performance Contract system implemented by Korea and the Signalling System in Pakistan, it was felt that merely copying the systems of other countries would not help, as the solution to the problems commonly faced by most countries may not necessarily be common, due to the diversity in corporate culture, style of management and socio-economic background.

Characterisitics of Performance Contracts in Bangladesh

Why Performance Contract?

Public enterprises in Bangladesh, as in most other countries, are hybrid organisations created to serve social and commercial goals. The expectation was that they, as a separate legal entity, would perform efficiently like private organisations, the benefits of which would be utilised to achieve the social goals. This has resulted in a policy conflict as to the operation of PEs. Private

organisations are believed to do things, but not always the right things. The Government, on the other hand, do the right things but do not always always do them right. PEs were expected to do the 'right things' and to do 'things right'. Managerial accountability and autonomy were the pre-requisites to getting 'things right' and doing the 'right things' respectively. Government's reliance on legal devices – by making them a separate legal entity – was supposed to be the solution to the problem of autonomy and accountability. Although there were legal provisions to ensure that PEs promote 'public interest', this has proved to be difficult in practice. Politicians and bureaucrats retained control even on day-to-day operational matters. This has often resulted in incongruent action in the name of public interest. PE managers could cover up some of their inefficiencies in the name of such interference. Such a situation has necessitated the search for improved methods of PE management that can take these deficiencies into account.

As is the practice in PEs, autonomy was not given to the degree it should have been, and yet efforts were being made to establish accountability. This resulted in more 'quantity' of control by the government by interfering in each stage of its operation rather than waiting for the results (i.e. 'quality'). In other words, government should try to control by results than by process. Governments trying to improve the performance of PEs often look at the reforms involving reduction of quantity of control, hoping that these alone can solve the problem. Although it is necessary to reduce the quantity of control by allowing autonomy, it is not easy to raise the quality unless due accountability is established. Hence autonomy and accountability should be increased simultaneously.

In trying to raise the quality of control, governments find two kinds of barriers: technical and organisational. Technical barriers include:

(i) finding the ideal performance criteria for PEs – as profitability, which has reasonably been the measure of performance of private firms, is not regarded as the desired criterion in the case of PEs;

(ii) distinguishing the management performance from PE performance;

(iii) balancing short-term goals with the long-term results – as it is easier to improve the short-term results at the cost of long-term and there is always the problem of balancing the two.

Organisational barriers that arise in PEs are:

(i) difficulty in setting the right targets as PEs have more expertise and information than government controllers;

(ii) due to conflicting values arising out of three different groups working together, i.e. professional managers, bureaucrats and politicians, it is difficult to provide PEs with a clear set of goals and targets; and

(iii) co-ordinating for controlling PEs by results is a problem as government is one of the loosely coupled organisations.

In view of the above, it is argued that quality of control can be improved by implementing the performance contract system. It has been proved that through performance contracts, accountability and autonomy can be established better by taking these barriers into account.

Institutional Arrangements for Designing, Monitoring & Evaluation of Performance Contracts

Any institutional arrangement for designing the performance contract system is dependent on the environmental conditions in which the contract will operate. As such the control hierarchy of public enterprises in Bangladesh is presented in Figure 1.

The responsibility for overall supervision and management of most public enterprises in Bangladesh is vested in the parent organisation known as the corporation. Corporations are created by statute to look after the management of a number of enterprises placed under them. Depending upon the nature of the operation, each ministry has a number of corporations under its control and each corporation in turn has a number of public enterprises under its supervision. There are fifteen controlling ministries under which there are 39 corporations. Although PEs are directly responsible to the parent ministry, they are also indirectly responsible to at least two or three other ministries for social development purposes. For example, the Planning Ministry, as the national planner, provides all long- and short-term development plans and PEs have to execute their plans in accordance with those. The Ministry of Finance, as the custodian of national exchequer, absorbs the financial surpluses or losses of the PEs. As a result, all the PEs are under the direct budgetary control of the Ministry of Finance. Above all, the President's secretariat may also look after the activities of the ministries. In addition to the hierarchical control shown in Figure 1, PEs are also given instructions from the President's Secretariat[2] and controlling ministries directly.

[2]When the performance contract was planned and designed there was a presidential form of government in the country and the President was the chief executive. Recently, the parliamentary form of government has been adopted and the Prime Minister looks after all the ministries directly.

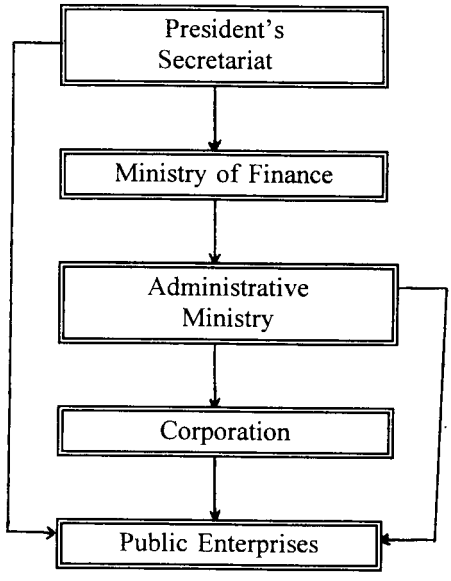


Figure-1 : Control Structure of PEs

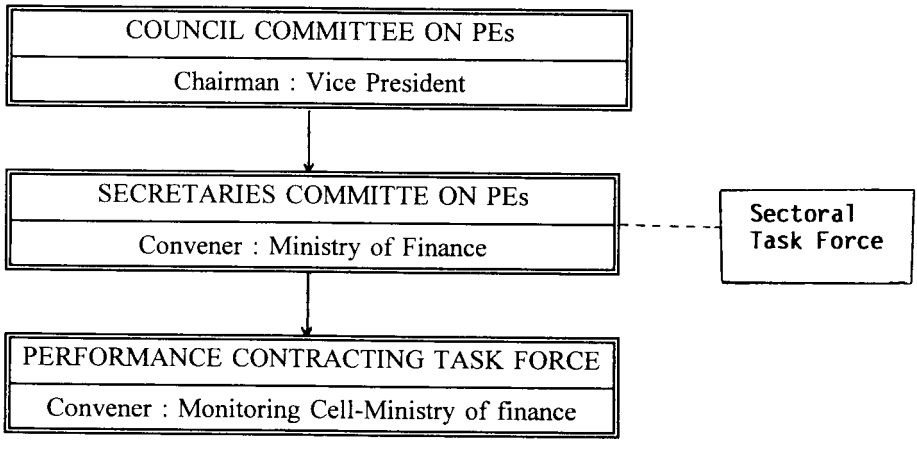


Figure-2 : Institutional Arrangement for Performance Contract

In view of the above control structure of PEs, the institutional structure planned for the implementation of performance contracts is shown in Figure 2. It was felt that, as in South Korea, the involvement of high-powered policy-making bodies might help to make the implementation much more practical and effective. Accordingly, the role of the three principal bodies were incorporated into the whole process. In 1986, the Council for Public Corporations (CPC) was formed to look after PE activities, and although the President was made the chairman of the Council, in view of President's engagements, the Vice-President was made the chairman of the CPC. Although there was provision for a Secretaries Committee under the structure, the committee was virtually non-functional. The CPC secretariat used to forward cases to the CPC. There was also provision for several high-powered technical Task Forces to assist the Secretariat Committee.

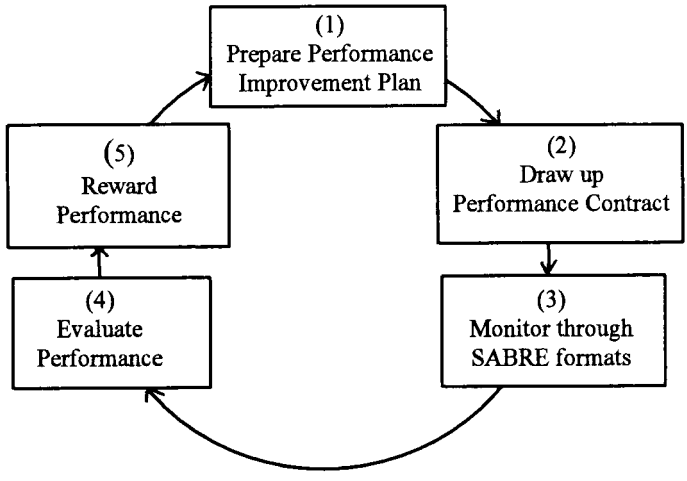
By notification, five sectoral task forces were also formed for Civil Aviation; Industries; Transport; Energy; and Utility sectors to formulate sectoral goals and objectives and to look after the technical aspects of the performance of PEs under the respective sectors. The task force included representatives from public enterprise, controlling ministries, the Finance Ministry, the Planning Ministry, the Establishment Ministry, other related ministries whose involvement would affect the performance of the PEs under the Contract, and other experts in the field. The task force was to formulate clearer objectives for PEs, prepare guidelines for achieving the objectives through performance contracts, and provide expert services for monitoring and evaluation of PEs. Before the arrangements could be made fully operational, CPC was rendered inactive as a result of the change of government in 1990. No decision has yet been taken for overseeing the performance of PEs. The Ministry of Finance as an initiator of the contracts is still continuing with them. The Monitoring Cell remains the nucleus of all performance contracting and monitoring activities.

The Performance Contracting Process

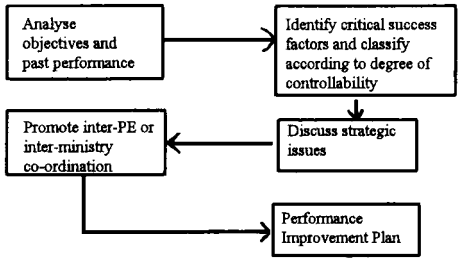
Five stages are involved in the performance contracting process as per the cycle shown in Figure 3. The first two steps of the cycle – preparing a Performance Improvement Plan and drawing up the Performance Contract – are the planning activities which are carried out prior to the start of the financial year. They are the most difficult steps in the process, taking up most of the total effort expended by all parties in the entire cycle. Once they are carried out, the remaining steps are easy to execute. The third step – Monitoring Performance – is carried out during the financial year on a quarterly basis through the Monitoring Cell of Finance Ministry. The fourth step – Evaluating Performance – commences shortly after the end of the financial year and requires more technical expertise. The last step – Rewarding Performance – is quite straightforward if the evaluation has been completed and the reward system is well defined. Each of these steps also involves

Figure - 3

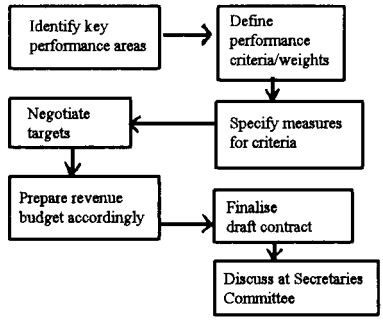
PERFORMANCE CONTRACTING CYCLE



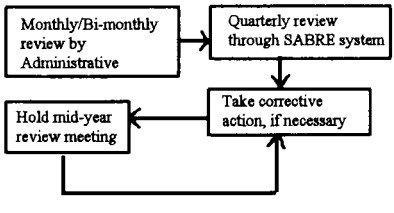
Step 1: Prepare Performance Improvement Plan



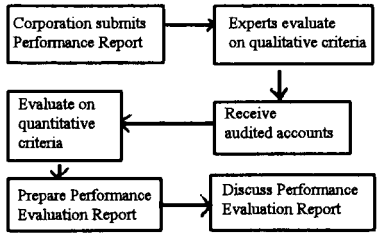
Step 2: Draw Up Performance Contracts



Step 3: Monitor through SABRE formats



Step 4: Evaluate Performance



Source: Ramamurti's Report

a number of sub-steps, the descriptions of which are furnished in Appendix A. As the PEs are directly controlled by the corporations and the controlling ministry, the parties to the contract are:

(i) enterprise;
(ii) corporation;
(iii) controlling ministry; and
(iv) monitoring cell, Ministry of Finance.

As mentioned above, the sectoral task force was supposed to do the first stage of the contracting cycle. Since the it is not operational, a team of experts from the Monitoring Cell of the Finance Ministry visits the enterprise, studies its objectives and past performance and involves key enterprise personnel in identifying the critical success factors and classifying them according to degree of controllability and their contribution in the overall performance of the enterprise. After the initial work is done, the performance criteria, weights and targets are negotiated with the enterprise personnel, including the corporation, and the controlling ministry officials who also remain present and provide their input. Thereafter, the contract is finalised and is put before the Secretaries Committee. As the Secretaries Committee is not functional, the Finance Ministry and controlling ministry approve them for implementation. In the absence of requisite support from the highest authority, no formal signing of the contract takes place.

According to the plan, the contracting cycle should take two and half years from initiation to final evaluation. The following activities are involved. The first year is the preparatory year. Issuing guidelines, constitution of the task force, in-depth review and analysis of past performance by the technical team, preparation of draft Performance Improvement Plan, discussion of Performance Improvement Plan and deriving the performance critera and weights, and finalising targets and budgets etc. are done during the first year. During the contract year, the progress of the contracts is monitored and during the last half-year preparation, submission, evaluation and approval of the performance evaluation reports are required.

Performance Criteria and Targets

The criteria and targets are mutually negotiated with the enterprise management and Monitoring Cell officials. For example, all the departmental heads are given the assignment to identify the key success factors of the organisation as well as the probable role of the department in achieving success. The departmental head in turn has the opportunity of discussing with his staff, before finally coming up with suggestions for the achievement of relevant success levels. In the joint meeting of the PE, the corporation, the controlling ministry and the Finance Ministry, the identified critical success factors or performance criteria are discussed at length. It

requires a series of meetings to reach agreement on the criteria and targets for the contract. After the contract is finalised, all who were involved in the target setting process have a mutual obligation to co-ordinate and co-operate to achieve the targets.

The assumptions made while fixing performance targets are:

- the enterprise, after affecting the contract, would be left free of all interference from bureaucrats and politicians, other than the periodic monitoring of performance;
- the enterprise performance and management performance would be evaluated on the basis of annual targets, and management would be made accountable for their performance;
- the performance would be linked to reward and punishment so that is adequate motivation;
- for the factors beyond the control of management, the corporation, ministry or other involved agency would co-ordinate and co-operate to achieve the targets; and
- while evaluating, appropriate allowance should be given to any deviation of performance arising out of unforeseen factors or due to factors beyond the control of management.

There is no expressed provision for dispute handling or arbitration in the contract. While experimenting with the contracts, no remarkable dispute has so far arisen. As the contracts were implemented on an experimental basis and since the performance results were not linked to incentives, no such dispute has yet been mentioned . However, possible disputes may arise:

- in finalising the criteria and fixing weight to it; and
- in evaluating the performance when the targets could not be achieved due to certain government decision/interference.

The former could be resolved through mutual discussion with the finalising authority, i.e. the Monitoring Cell. In the case of the latter, the disputes may be resolved by giving due allowance while evaluating the relevant criteria. In any of the situations, the highest authority's approval must be treated as final.

Evaluation Criteria

The criteria are fixed well in advance. They are quite elaborate and are based on various dimensions of performance. Each criterion is evaluated on a five-point scale or grades (A to E). The entitlement to the grades is dependent on the achievement of the target set against the criteria. In other words, for each criterion, five target ranges are fixed and at the end of the year, the actual performance data are fitted into the corresponding target grade. As mentioned before, each performance criterion has some weight, depending on its importance in the overall performance of the enterprise. Based on the grades of individual criterion and weight composite, this grade is computed. The points awarded for each of the grades is shown below. For example, if increase of sales is one of the evaluation criteria and its weightage is fixed at 4 per cent, the points for actual sales performance of 1.5 million tonnes would be calculated as below:

Sales Targets (M. Ton)	Target Grades	Achieved Grade	Points
2.00 - 1.76	A		1.00
1.75 - 1.51	B		0.95
1.50 - 1.26	C	C	0.90
1.25 - 1.01	D		0.85
1.00 - 0.75	E		0.80

(Points for composite index = 4 x 0.90 - 3.6)

The points calculated for each of the criteria, as shown above, are added together to calculate the composite index. Normally, each contract contains 10 to 15 criteria based on which the composite index is computed. The key criteria, along with weights of a textile mill, are shown below:

Evaluation Criteria	**Weight**
1. Production	20%
2. Sales	17%
3. Profitability	15%
4. Labour Productivity	7%
5. Labour Absenteeism	4%
6. Reduction of Idle Time	4%
7. Reduction of Inventory	10%
8. Reduction of Wastage	7%
9. Promote Production of domestic Cotton	5%
10. Use of Domestic Spares	7%
11. Training and Human Resource Development	4%
Total	**100%**

An Overview of the Contracts in Force

Performance contracting, though tried in different countries of the world, did not yield the desired results. The effectiveness of the system depends on the country's socio-cultural background, its importance to the government, its structure and process, management background and a host of other factors. In Bangladesh, a number of attempts have been undertaken in the past to improve the performance of PEs but most of them failed either due to implementation problems or due to lack of proper support from the top to implement it. The consultants prepared high-quality reports but no action was taken on most of them.

Although the contracts are designed to be developed by the corporations, in view of the technical know-how required in developing the contract it was felt that a number of PEs would be used as experiments from different sectors and thereafter, the corporations would be able to develop them by themselves. Accordingly, it was decided to extend the contract to fertiliser, paper, cement, heavy engineering, light engineering, textiles, jute, road transport, water transport, public utilities and gas sectors. The first contract was developed and tried in 1986. Subsequently, each year a number of contracts were added to extend the coverage, and by 1992, a total of 21 contracts were developed and implemented on an experimental basis. Consequent upon the government decision to liquidate one of the PEs, the contract for that PE was dropped. The enterprises that are brought under the contract and their performance grade since initiation are shown in Annex A.

The recent wave of privatisation has also made some inroads into Bangladesh. As part of recent economic reform measures which were requested by donors, emphasis is now more on privatisation of PEs than any other reform measures. As such, the Government's attention on improvement of PEs is no longer there. For the time being, the status quo is being maintained with the 20 contracts that have been introduced so far and they are renewed annually.

Review of a Contract in Force – Zia Fertilizer Co. Ltd. (ZFCL)

Background

The Zia Fertiliser Co. Ltd. produces ammonia and urea. The decision to set up a petro-chemical complex with the financial assistance of the World Bank was first taken in 1969/70 but consequent upon political disturbance in the period pre- and post-liberation, the construction work began in 1976 and was scheduled to be completed in December 1978. Due to installation problems, it could not be completed until October 1980. The plant started trial production in December 1981 and commercial production in June 1983. Until 1 December 1983, the factory was

an independent company, after which it was brought under the control of the Bangladesh Chemical Industries Corporation (BCIC).

The plant has the capacity for producing 930m. tons of ammonia and 1600m. tons of urea per day (528,000m.tons urea per annum) by using natural gas as the feed stock collected through a 12" transmission line from the gas field situated at 20 km distance. The plant has its own power plant run by steam. The requirement for water is met up by refining river water from the adjacent Meghna river. The plant had a total of 1,238 employees as at 31 January 1990, out of which 380,415 and 443 were officers, staff and workers respectively. There were also about 180 daily casual workers.

The plant has a board of directors consisting of seven part-time members and the chairman of the corporation is head of the board. There are two government-nominated directors on the board, one from the controlling ministry and the other from the finance ministry. Other directors are nominated from the other units of the corporation. The managing director is the chief executive of the factory. The factory is one of the five fertiliser factories that BCIC is currently managing.

The past performance of the factory was not satisfactory. Due to a delay in the implementation of the project, the cost overshot by about 70 per cent. Moreover, there were some technical problems which affected capacity utilisation adversely. Over the last six years the factory's average capacity utilisation was 79 per cent (see Annex B). From the experience gained in other urea fertiliser factories, capacity utilisation of such a factory is expected to be well above 95 per cent.

Constraints on Improved Performance

(i) ***Factors within the control of management***

The factory needs preventive maintenance once a year. The time required for such maintenance is around 60 days and the shut-down affects production considerably during the period.

Earlier, the factory used to sell the fertiliser to the government central distribution agency, the Bangladesh Agricultural Development Corporation (BADC). Consequent upon privatisation of all the fertiliser marketing operations, individual factories now have the responsibility for marketing and distribution. During lean seasons (monsoon), fertiliser sales are sluggish and at times excessive stock would force the factory to cut down production.

The factory needs a substantial quantity of various imported chemicals and spares, and because of poor inventory management, production was interrupted due to non-

availability of the desired chemicals and spares. On the other hand, a huge quantity of spares and chemicals is also lying in stock, some of which are obsolete, causing financial loss to the factory.

The selling price for fertiliser in the country is controlled by government – in order to ensure supply at a reasonable price to the farmers. Increase of input cost, spares price, inefficient use of raw materials, and excessive manpower have all caused production costs to rise year after year.

Urea being the chemical fertiliser has standard quality requirements. Any deviation from the quality standard would affect the agricultural production badly. The maintenance of the standard quality with Nitrogen 46.1 per cent, moisture 0.3 per cent and Biorate 0.9 per cent is of prime importance.

Industry recycling of wasted feed stock and utilities like steam and water can help reduce the energy cost considerably. As the plant is on the bank of river, it disposes of most of its waste chemicals in the river, which is dangerous to the environment. Adequate treatment is essential before disposal of toxic wastes.

ii) ***Factors beyond the control of management***

The factory sometimes suffered from an inadequate supply of gas from the gas field, causing the pressure in the pipeline to drop. As a result, the production level had to be reduced and this seriously affected productivity.

The price of the gas consumed by the factory, both as the feed stock and as utilities, is controlled by government. The selling price of urea is also controlled by government. In a situation where both the input and output are controlled, the management has limited option for increasing profitability.

In view of the increase in the costs of gas, imported chemicals, spares and manpower, the operating cost of the factory is increasing year after year. Though efficient use of inputs and the utilisation of capacity has direct influence on cost of the product, there is a certain limit for improvement in those areas.

Performance Criteria, Targets & Weights

In view of ZFCL's constraints discussed above, fifteen performance areas were identified; ten are commercial and these were considered to be essential for the survival and growth of the enterprise. Of these, reduction of due time for repair and maintenance, utilisation of capacity, sales, efficient uses of inputs, reduction of inventory and profitability are the key ones and they constitute 87 per cent of the total criteria in terms of weight.

The non-commercial criteria constitute 13 per cent of the total criteria and include maintenance of quality standard (so that the agricultural production is not affected), increased use of locally produced spares, human resource development and utilisation of the technical assistance programme etc. Six out of the fifteen criteria are dynamic efficiency indicators and these are: quality control; use of locally manufactured spares; training programme; utilisation of technical assistance programme; expansion of capacity and use of computer.

Out of the fifteen criteria, only three are qualitative and the rest are quantitative. In the case of qualitative criteria, no target is fixed. A short write-up explaining the progress of the activities is provided on all such qualitative criteria, based on which the evaluation grades are awarded. The detailed criteria, weights and actual performance data against the criteria for last five years is shown in Table 1. The details of the range of targets for each of the performance criteria and actual results for the last three performance contract years (1990-91, 1991-92 and 1992-93) are shown in Annexes C, D and E.

Evaluation of Performance Contracts so far

ZFCL's Performance

As may be seen from the historical performance data of ZFCL (Table 1 and Annexes C to E), overall production performance has increased gradually and capacity utilisation has reached 100 per cent. The turnaround time for maintenance has almost halved. The use of natural gas for the production of a ton of urea has declined from 37.01 MCF in 1989-90 to 30.12 MCF in 1992-93, which is a remarkable improvement over previous years. Labour productivity has increased from 29.61 ton per man-month (in 1989-90) to 36.48 in 1992-93. The manufacture of spare parts in its own workshop and in BCIC workshops has also increased. There are some fluctuations in the case of sales and the manpower development (training) area. The composite grade achieved in 1990-91 was 'C' and it had improved to 'A' in the following two years (details in Annxes D and E). All these indicators reflect the better performance of the company during the performance contracting period.

The performance of other contracts

As already mentioned, a total of twenty contracts were tried in Bangladesh over the last eight years. Out of these, one is for the last eight years two are for the last six years; one is for the last five years; six are for the last four years; and the remaining ten are for the last three years. The performance of PEs under the contract over past years was not satisfactory as a whole as most of them earned 'B'

TABLE 1: PERFORMANCE OF ZIA FERTILISER CO.LTD.

SI No.	PERFORMANCE CRITERIA	UNIT	ACTUAL				
			1988-89	1989-90	1990-91	1991-92	1992-93
1	AVAILABILITY OF RAW MATERIALS	(%)	100	100	100	100	100
2	INCREASE IN PRODUCTIVITY: 2.1 Stream Days 2.2 Capacity Utilisation	 Days (%)	 384.60 85.16	 381.07 84.71	 395.00 90	 398.00 90.37	 337.00 100
3	MAINTENANCE PROGRAMMES: 3.1 Turnaround time (overhauling) 3.2 Preventive Maintenance	 Days	 56	 -	 53 Qualitative	 35	 -
4	INCREASE OF SALES	(%)	106.24	86.36	104.65	103.02	100.00
5	INVENTORY CONTROL: 5.1 Reduction in total inventory 5.2 Sale of Obsolete inventory	 (% of Assets) Gk.Tk	 7.60 65.63	 7.41 32.99	 8.13 146.20	 7.13 115.18	 7.33 60.00
6	PROFIT MAXIMISATION	Gk.Tk	4831	4443	3100	3394	5166
7	ECONOMIC USE OF RAW MATERIALS: 7.1 Natural Gas 7.2 Steam 7.3 Cooling Water 7.4 Electricity 7.5 Chemicals 7.6 Spares & Others	 MCF/Ton Ton/Ton Ton/Ton Kw Hr/Ton Tk/Ton Tk/Ton	 13.99 5 5.36 308.81 61 50	 37.01 5.48 5.74 306 74 67	 37.91 5.93 5.43 314.60 83 63	 33.71 5.67 5.57 194.31 89 63	 30.00 5.83 5.62 190.00 67.73 90.00
8	QUALITY CONTROL: 8.1 Actual Humidity 8.2 Biorate	 (%) (%)	 0.34 0.39	 0.38 0.93	 0.40 0.94	 0.38 0.93	 0.37 0.93
9	LABOUR PRODUCTIVITY	MT/M-month	35.27	39.61	30.50	33.36	36.48
10	MANUFACTURING OF SPARE PARTS: 10.1 In Own Workshop 10.2 Sub-contracting with BCIC	 Gk.Tk Gk.Tk	 5 -	 11.61 3.50	 10.56 6.44	 8.03 30.75	 13.69 33.00
11	TRAINING PROGRAMME	Man-month	131.08	133	61	370.60	397
12	USE OF COMPUTER	(%)			35	45	50
13	UTILISATION OF TECHNICAL ASSISTANCE	Man-month	13.00	9.00	10.00	13.00	8.00
14	30% PLANT CAPACITY INCREASE	"				Qualitative	
15	RE-USE OF WASTE MATERIALS	"				Qualitative	
16	RESEARCH & DEVELOPMENT	"				Qualitative	
17	**COMPOSITE GRADE ACHIEVED**				C	A	A

and 'C' grades (Annex A). With the exception of one PE, no consistent improvement of performance could be observed. In view of certain limitations the contracts are facing, one can not be sure of the success of the contracts. Even if an enterprise performs worse, the result cannot be attributed solely to the management or to the performance contract. It can also be the other way around. What is more important is the trend of performance when the uncontrollable variables remain more or less the same. Most of the PEs performing badly do so for a number of reasons which are beyond the PE and management control. Wide adoption of the system through total commitment of all the government machinery would yield some better results. The limitations which the contracts are facing are discussed in the following section.

Strengths and Weaknesses of the Contract

The strengths of the PC developed in Bangladesh are:

- It is the most systematic management control tool for achieving the goals and objectives of PEs. In an environment where responsibility for jobs is shifted and delayed, the PC outlines more clearly the responsibility among the personnel who are involved in the decision-making and implementation process.

- In view of the multiple control hierarchy and multiple objectives of the PEs, the PC can measure performance in quantitative terms; identify the reasons for poor performance, and make owners aware of the performance in a better way.

- The whole process of identifying the critical success factors; formulating performance improvement plan; selecting performance criteria; determining weight, and fixing targets, is participatory and this motivated the management team to achieve the targets.

- Bureaucratic and political interference by politicians and bureaucrats is made much more difficult because any interference is reflected clearly in the evaluation report.

The weaknesses of the system are:

- The system requires granting greater autonomy to the PE management which bureaucrats and policy-makers in the government are not willing to do. They have the inherent tendency of retaining control over PE by process rather than by results which is affecting implementation of contracts.

- The contract is skills-intensive and time-consuming. In a situation where most of the PE management, as well as the ministry personnel, are not educated in business/commercial management, it is difficult to develop and implement the contracts. The time and technical manpower required to develop a contract is substantial and the number of contracts that can be developed by the Monitoring Cell in a year is limited. In view of the technicalities involved, it is also not possible to sub-contract out.

- The institutional set-up designed for implementation of the contracts has also not yet been finally adopted by the government. Well-articulated institutional arrangements are the pre-requisite for the implementation of the system.

- Lack of political commitment is the greatest limitation of the system. Unless the highest authority of government is serious about the PE performance improvement, it would be difficult to reap the benefits as there may always be conflicting interest among different ministry officials.

- The lack of clarity of PE goals and objectives is affecting the development of the performance criteria. The task force designed for the purpose could have formulated well thought-out goals and objectives for each PE, but it is no longer in existence.

- In Bangladesh, the chief executive of the enterprise management and the officials at the controlling ministry and other related ministries are changed frequently. Such frequent transfers allow little opportunity to develop the skills required for understanding and implementing such contracts. Moreover, once the contract is developed and initiated by one set of officers, a new officer may never see the contracts in the same way.

- The most important element of performance contract is the Performance Incentive System. Unless the performance is linked to the performance-based incentive/punishment system, it will not work effectively. The contracts in Bangladesh cannot yet be linked with the incentive system and, as a result, due motivation is being gradually lost.

- Most policy-makers at the top echelon of government are not aware of the outcome of performance contracts. It is difficult to implement such a system where most of the top policy-makers are not convinced about its expected results.

Lessons Learned

In Bangladesh, the experiment of design, development and implementation of performance contracts is the first action-research project of its kind. The main purpose of the experiment was to ascertain whether the methodology that proved most effective in other countries could be implemented in Bangladesh and if so, in what shape. The experimental application of the system in 20 PEs over last eight years has revealed the following:

- In a situation where political linkage of the ruling party flows to the PE managers, staff unions and down to the labour leaders, the implementation of a goal-oriented performance scheme is a difficult task. Especially in a corporate culture where workers, employees and officers all have the tendency to gain more through political linkages rather than by working hard, it is difficult to earn confidence for such systems. As is the practice in most cases, even if the management or corporation refuses to accede to the illogical demands of the unions, they bring them about by the politicians through their linkage – proving that the management function most ineffective.

- The institutional structure planned for implementing contracts could not establish its due footing. In the absence of any clear decision from the controlling ministry, other ministries and corporation officials involved in the process were not sufficiently enthusiastic. The Cell had limited manpower, both in terms of number and skill to handle a large number of contracts. The task force planned for developing the goals, objectives and strategy with the help of technocrats could not function.

- In the absence of appropriate institutional support, the Monitoring Cell of the finance ministry had to take up the role of supreme authority for implementing/applying the contracts. The finance ministry being in a parallel position with other ministries, did not have the full authority to instruct the supervising ministries. Whatever support it had was by virtue of its authority to approve the PE annual budgets. At present there are about 223 non-financial PEs and the quantum of time and resources required to finalise the contracts, within the capacity of limited Monitoring Cell officials, is merely inadequate to bring all the PEs under the coverage of the performance contract within any given time-frame. At the initial stage, the contracts were developed under the direct assistance from qualified consultants and technical body (task force) formed for the purpose. In subsequent contracts, adequate time and technical services could not be provided to the extent needed. This resulted in some cases in relatively poor quality contracts.

- As the contracts are technical in nature, and the personnel implementing them are of limited management qualifications and background, the fewer the number of criteria, the less complicated the exercise will be.

- Trade unions for the labour and clerical employees are one of the major hindrances to the successful implementation of the contract. As was done in Singapore, the labour and staff leaders should be exposed/educated about the benefits of such system. If needed, representatives of those groups should be inducted in the development and implementation phase of the contracts.

- Any reform measure, to be effective, must have the acceptability of those involved in the implementation process. In an environment where the implementors are inadequately educated in the field of modern management techniques and are prone to controlling the PEs, the need for attitudinal change is of the utmost importance.

- The whole process of formulating clear goals and objectives; strategic planning; target setting, and the achievement of targets provided a better appreciation of the problem of PEs. This servesd as a good vehicle for management development by providing effective training to personnel who do not have the appropriate management background. The process of preparing the contract – through analysing, discussing and inter-organisational communication, was as valuable as the end product of the exercise (i.e. the contract).

- If any of the parties involved in the contract is displaying goal-incongruent behaviour, the whole exercise becomes ineffective. To cite an example, one of the contracts handled by the Monitoring Cell was involved in a second PE which was the sole purchaser of its output. Due to the conflicting interests of some of the senior officials in the second PE, the management of both the PEs could not be brought to agree on this criterion and on account of the conflict, the contract was abandoned.

Recommendations and Conclusions

Performance Contract designed and tried out in Bangladesh has a number of positive dimensions. Despite its limitations, it is believed that committed implementation can provide some useful results which might be difficult to achieve through other, alternative arrangements. The following recommendations could improve the present system:

- PEs are currently being run without any clear direction, and this affects their performance badly. There should be a clear policy decision on the future direction of PEs.

- Appropriate institutional structure should be created by activating the CPC under the leadership of the Prime Minister. The sectoral task forces should also be activated to implement the system.

- PEs may be classified for:

  i) immediate privatisation;

  ii) restructuring and privatisation; and

  iii) to be retained under the government control.

  Based on this classification, only the ones to be retained under government control should be brought under Performance Contracts.

- At the initial stage of contracts, the criteria and parameters should be kept as few as possible. Additional criteria may be added if the need arises.

- Appropriate training/exposure programmes are essential to change the attitude of civil servants and corporation officials towards the system, because they will be involved directly and indirectly in the process.

- In order to popularise the system, there may be a formal declaration of the performance results of the PEs by the highest authority, including the award for best performer.

- Frequent transfer of civil servants adversely affects the contracts. Before the performance contract for a PE is introduced, there should be a decision not to transfer the corporation and ministry executives for at least three years.

- It is imperative to create a culture where improved performance should be the only basis for performance-rating. Agreed consensus of all concerned and a systematic follow-up of the contracts can help establish the culture gradually.

ANNEX A

NAME OF PEs UNDER PERFORMANCE CONTRACT WITH COMPOSITE GRADES EARNED

	Name of PE	Evaluation Grades Earned						
		1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93
1	NORTH BENGAL PAPER MILLS	C	D	C	B	C	D	C
2	KARNAPHULI PAPER MILLS	-	-	-	-	B	B	C
3	CHATAK CEMENT CO.LTD	-	-	C	A	B	C	D
4	ZIA FERTILISER CO.LTD	-	-	-	-	C	A	A
5	MUBARAKGANJ SUGAR MILLS	-	-	B	C	B	C	C
6	NATIONAL TUBES LTD.	-	-	-	C	C	D	D
7	PROGOTI INDUSTRIES LTD.	-	-	-	-	C	C	C
8	EASTERN TUBES LTD.	-	-	-	-	-	C	B
9	BANGLADESH SHIPPING CORP.	-	-	-	-	-	C	D
10	DKAKA WASA	-	-	-	-	C	B	B
11	SUNDARBAN TEXTILE MILLS	-	-	-	-	C	D	E
12	TITAS GAS TRANSMISSION & DISTRIBUTION CO.	-	-	-	-	-	B	B
13	LATIF BAWANY JUTE MILLS	-	-	-	-	-	C	B
14	BANGLADESH POWER DEVELOPMENT BOARD	-	-	-	-	B	B	B
15	AHMED BAWANY TEXTILE MILLS	-	-	-	-	-	E	E
16	BANGLADESH HANDLOOM BOARD	-	-	-	-	-	B	B
17	BANGLADESH INLAND WATER TRANSPORT CORP.	-	-	-	-	-	C	C
18	BANGLADESH ROAD TRANSPORT CORP.	-	-	-	-	-	B	B
19	KAPTAI LAKE FISH DEVELOPMENT & MARKETING CENTER	-	-	-	-	-	B	B
20	SANGOO-MATAMUHURI PROJECT	-	-	-	-	-	D	C

ANNEX B

Key Performance Data of Zia Fertiliser Co.Ltd

Year	Production (M.Ton)	Capacity Utilisation	Sales (M.Ton)	Net Profit (Million Taka)
1981-82	62,455	11.84	61,009	Loss
1982-83	138,220	26.18	118,590	Loss
1983-84	379,039	71.79	378,792	76.77
1984-85	414,528	78.51	395,823	180.99
1985-86	425,329	80.55	417,677	261.58
1986-87	336,568	63.74	371,677	185.69
1987-88	493,695	93.50	471,618	389.26
1988-89	450,674	85.36	478,810	482.13
1989-90	447,295	84.71	388,500	444.23
1990-91	452,334	85.67	473,371	231.68
1991-92	476,600	90.27	491,000	229.45
1992-93	505,000	100.00	500,000	512.70

Zia Fertiliser Co. Ltd.
Evaluation of Performance for the Year 1990-91

Performance Criteria	Unit	TARGETS					Actual Achieved	Grade Earned	Weight	Points Earned (Weight x Grade)
		A	B	C	D	E				
AVAILABILITY OF RAW MATERIALS	%	100	99.5	99.0	98.5	98.0	100	A	5%	5 X 1 = 5
INCREASE OF PRODUCTIVITY:										
Stream Days	Days	330	320	310	300	290	295	D	10%	10 x 0.8 = 8.5
Capacity Utilisation	%	95%	94%	93%	92%	91%	90%	E	10%	10 x 0.8 = 8
MAINTENANCE PROGRAMME:										
Preventive Repair				Qualitative				E	2.5%	2.5 x 0.8 = 2
Turnaround time (overhauling)	Days	30	35	40	45	50	52	E	5%	5 x 0.8 = 4
INCREASE OF SALES	% of Sales	100	98	95	92	90	105	A	15%	15 x 1 = 15
INVENTORY CONTROL:										
Reduction in inventory	% of assets	7.25	7.35	7.45	7.55	7.65	8.13	E	4%	2.5 x 0.8 = 2
Sale of obsolete inventory	Ml.Tk.	15.0	14.0	12.0	10.0	7.50	14.62	B	2.5%	2.5 x 0.95 = 2.38
PROFIT MAXIMISATION	Ml.Tk.	572	480	389	297	206	210	E	20%	20 x 0.8 = 16
ECONOMIC USE OF RAW MATERIALS:										
Natural Gas	MCF/Ton	34	34.5	35	35.5	36	37.9	E	1.5%	1.5 x 0.8 = 1.2
Steam	Ton/Ton of Urea	6.0	6.25	6.5	6.75	7.0	5.93	A	1%	1 x 1 = 1
Cooling Water	Ton/Ton of Urea	5.25	5.50	5.75	6.0	6.25	5.42	B	1%	1 x 0.95 = 0.95
Electricity	Kw hr/Ton of Urea	215	225	235	245	255	214.6	A	1%	1 x 1 = 1
Chemicals	Tk./Ton of Urea	90	95	100	105	110	83.0	A	1.5%	1.5 x 1 = 1.5
Spares and Others	Tk./Ton of Urea	90	95	100	105	110	63.0	A	1.5%	1.5 x 1 = 1.5
QUALITY CONTROL:										
Actual Humidity	%	0.30	0.35	0.40	0.45	0.50	0.40	C	2.5%	2.5 x 0.9 = 2.25
Biorate	%	0.90	1.00	1.10	1.20	1.30	0.94	B	2.5%	2.5 x 0.95 = 2.38
LABOUR PRODUCTIVITY	MT/Man-month	39	37	35	33	31	30.50	E	5%	5 x 0.8 = 4
SPARE PARTS MANUFACTURING:										
In Own Workshop	Mln.Tk.	0.5	0.4	0.35	0.3	0.25	1.6	A	2%	2 x 1 = 2
Sub-contracting with BCIC	Mln.Tk.	0.3	0.27	0.25	0.23	0.20	6.44	A	2%	2 x 1 = 2
TRAINING PROGRAMME	Man-month	200	175	150	125	100	61	E	1%	1 x 0.8 = 0.8
USE OF COMPUTER	(%)	95	90	85	80	75	25	E	2%	2 X 0.8 = 1.6
USE OF TECHNICAL ASSISTANCE	Man-month	10	12	14	16	18	10	A	1%	1 x 1 = 1
20% PLANT CAPACITY INCREASE				Qualitative				D	1%	1 x 0.8 = 0.8
RE-USE OF WASTE MATERIALS				Qualitative				D	1%	1 x 0.8 = 0.8
COMPOSITE GRADE ACHIEVED								C	100%	87.66

ANNEX D

Zia Fertiliser Co. Ltd.
Evaluation of Performance for the Year 1991-92

Performance Criteria	Unit	TARGETS					Actual Achieved	Grade Earned	Weight	Points Earned (Weight x Grade)
		A	B	C	D	E				
AVAILABILITY OF RAW MATERIALS	%	100	99.5	99.0	98.5	98.0	100	A	2%	2 X 1 = 2
INCREASE OF PRODUCTIVITY:										
Stream Days	Days	315	300	295	290	280	298	C	12.5%	12.5 x 0.9 = 11.25
Capacity Utilisation	%	90%	85%	80%	78%	75%	90%	A	10%	10 x 1 = 10
MAINTENANCE PROGRAMME:										
Preventive Repair				Qualitative				A	4%	4 x 1 = 4
Turnaround time (overhauling)	Days	35	40	42	45	50	35	A	5%	5 x 1 = 5
INCREASE OF SALES	% of Sales	100	95	93	90	85	103	A	15%	15 x 1 = 15
INVENTORY CONTROL:										
Reduction in inventory	% of assets	7.0	7.25	7.50	7.75	7.80	7.12	B	4%	4 x 0.95 = 3.8
Sale of obsolete inventory	Ml.Tk.	12.5	10.0	9.50	9.00	8.50	11.55	B	2.5%	2.5 x 0.95 = 2.38
PROFIT MAXIMISATION	Ml.Tk.	130	110	90	70	50	229.4	A	15%	15 x 1 = 15
ECONOMIC USE OF RAW MATERIALS:										
Natural Gas	MCF/Ton	33	35	36	37	38	32.7	A	3%	3 x 1 = 3
Steam	Ton/Ton of Urea	5.5	6.0	6.25	6.5	7.0	5.67	B	1%	1 x 0.95 = 0.95
Cooling Water	Ton/Ton of Urea	5.0	5.25	5.50	5.75	6.00	5.57	D	1%	1 x 0.85 = 0.85
Electricity	Kw hr/Ton of Urea	206	210	220	225	230	194.3	A	1%	1 x 1 = 1
Chemicals	Tk./Ton of Urea	80	85	90	95	100	89	C	2%	2 x 0.9 = 0.9
Spares and Others	Tk./Ton of Urea	90	95	100	105	110	63	A	2%	2 x 1 = 2
QUALITY CONTROL:										
Actual Humidity	%	0.30	0.35	0.38	0.39	0.40	0.38	C	2.5%	2.5 x 0.9 = 2.25
Biorate	%	0.90	1.00	1.10	1.20	1.30	0.92	A	2.5%	2.5 x 1 = 2.5
LABOUR PRODUCTIVITY	MT/Man-month	38	36	34	32	30	33.26	A	5%	5 x 1 = 5
SPARE PARTS MANUFACTURING:										
In Own Workshop	Mln.Tk.	1.0	0.8	0.7	0.6	0.5	0.8	B	2%	2 x 0.95 = 1.9
Sub-contracting with BCIC	Mln.Tk.	6.0	5.0	4.0	3.5	3.0	2.1	E	2.5%	2 x 0.8 = 1.6
TRAINING PROGRAMME	Man-month	250	225	200	175	150	270	A	1%	1 x 1 = 1
USE OF COMPUTER	(%)	80	75	70	60	50	45	E	2%	2 X 0.8 = 1.6
USE OF TECHNICAL ASSISTANCE	Man-month	14	15	16	17	18	12	A	1%	1 x 1 = 1
20% PLANT CAPACITY INCREASE				Qualitative				C	1%	1 x 0.9 = 0.9
RE-USE OF WASTE MATERIALS				Qualitative				A	1%	1 x 1 = 1
COMPOSITE GRADE ACHIEVED								A	100%	95.38

Zia Fertiliser Co. Ltd.
Evaluation of Performance for the Year 1992-93

Performance Criteria	Unit	TARGETS A	B	C	D	E	Actual Achieved	Grade Earned	Weight	Points Earned (Weight x Grade)
AVAILABILITY OF RAW MATERIALS	%	100	99.5	99.0	98.5	98.0	100	A	4%	4 X 1 = 4
INCREASE OF PRODUCTIVITY:										
Stream Days	Days	312	310	300	295	290	337	A	15%	15 x 1 = 15
Capacity Utilisation	%	94%	92%	90%	88%	86%	100%	A	10%	10 x 1 = 10
MAINTENANCE PROGRAMME:										
Preventive Repair				Qualitative				B	4%	4 x 0.9 = 3.6
INCREASE OF SALES % of Sales	100	100	95	93	90	85	100	A	11%	11 x 1 = 11
INVENTORY CONTROL:										
Reduction in inventory	% of assets	7.0	7.25	7.50	7.75	7.80	7.23	B	7%	7 x 0.95 = 6.65
Sale of obsolete inventory	Ml.Tk.	10	9.5	9.00	8.50	8.00	6.00	E	4%	4 x 0.8 = 3.20
PROFIT MAXIMISATION	Ml.Tk.	250	220	200	180	160	516.6	A	10%	10 x 1 = 10
ECONOMIC USE OF RAW MATERIALS:										
Natural Gas	MCF/Ton	32	34	35	36	37	30.0	A	5%	5 x 1 = 5
Steam	Ton/Ton of Urea	5.5	6.0	6.25	6.5	7.0	5.83	A	2%	2 x 1 = 2
Cooling Water	Ton/Ton of Urea	5.0	5.50	5.75	6.00	6.50	5.62	B	2%	2 x 0.95 = 1.9
Electricity	Kw hr/Ton of Urea	206	210	215	220	225	190	A	2%	2 x 1 = 2
Chemicals	Tk./Ton of Urea	85	90	95	100	105	67.73	A	2.5%	2.5 x 1 = 2.5
Spares and Others	Tk./Ton of Urea	75	80	85	90	95	89.70	D	2.5%	2.5 x 0.8 = 2
QUALITY CONTROL:										
Actual Humidity	%	0.35	0.40	0.45	0.47	0.50	0.37	A	2.5%	2.5 x 1 = 2.5
Biorate	%	0.90	0.95	0.97	1.00	1.20	0.93	B	2.5%	2.5 x 0.95 = 2.38
LABOUR PRODUCTIVITY	MT/Man-month	35	34	33	32	31	36	A	5%	5 x 1 = 5
SPARE PARTS MANUFACTURING:										
In Own Workshop	Mln.Tk.	2.0	1.5	1.2	1.0	0.8	1.4	B	2.5%	2.5 x 0.95 = 2.38
Sub-contracting with BCIC	Mln.Tk.	1.5	1.2	1.0	0.8	0.6	2.2	A	2.5%	2.5 x 1 = 2.5
TRAINING PROGRAMME	Man-month	150	125	100	90	80	297	A	1%	1 x 1 = 1
USE OF COMPUTER	(%)	60	50	45	40	35	3550	B	1%	1 X 0.95 = 0.95
USE OF TECHNICAL ASSISTANCE	Man-month	8	10	11	12	13	8	A	1%	1 x 1 = 1
20% PLANT CAPACITY INCREASE				Qualitative				E	1%	1 x 0.8 = 0.8
RE-USE OF WASTE MATERIALS				Qualitative				A	1%	1 x 1 = 1
COMPOSITE GRADE ACHIEVED								A	100%	98.36