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## Motivation for NRW control

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THE BENEFITS OF controlling non-revenue water (NRW), and especially the reduction of distribution system leakage, to improve service levels and water utility performance have been widely acknowledged for many years. However, despite the real financial benefits that accrue when such activities are undertaken as part of routine operation and maintenance (O&M) work, NRW levels in many water utilities are still unacceptably high, some even exceeding 50 per cent of water produced (Asian Development Bank, 1993).

Many initiatives have been implemented throughout the world by utilities, government water departments, etc., encouraged by the international lending agencies, to tackle high NRW levels through specific projects and programmes that frequently include the key elements of institutional development and training. There should therefore be no lack of technical comprehension of the problem and its solution within most utilities, even though internal resources and capabilities may be constrained. NRW control programmes must be economically justifiable (i.e. self financing) as it is pointless spending more on the control measures than the financial value of the benefits accruing from the implementation of those measures. Lack of the necessary resources internally to implement an NRW control programme, therefore, is no excuse for not utilising the services of the numerous consultants, specialist contractors and even individual specialists, capable of undertaking the work on a period or maintenance contract basis. Based on the author's extensive worldwide experience gained through implementing NRW programmes with utilities, it is postulated that probably the prime reason for the widespread failure to control NRW effectively is the inadequate, or even the total absence of, motivation within the utility itself to tackle the problem effectively.

### Motivating factors

Before developing strategies to improve the level of motivation it will be helpful to consider some of the factors that influence motivation. The following is not an exhaustive list, but covers areas that are considered likely to have a major influence on attitudes:

- Performance criteria (set by senior management).
- Definition and monitoring of responsibilities.
- Recognition of good performance.
- Financial remuneration of staff (salary, bonus, performance related pay, allowances, benefits, etc).

- Work satisfaction (professional pride/ethics, patriotism, etc).
- Team spirit.
- Career development (promotion, improved remuneration conditions).
- Status.
- Media profile (senior managers).
- Company/share value (mainly senior managers).
- Attitudes of superiors and colleagues.
- Fear (criticism, disciplinary action, reduced remuneration, demotion, job loss, etc).

Different factors will motivate each level of staffing to various degrees. For instance, senior managers are more likely to be concerned with media profile and share values than technicians, the latter being motivated by remuneration and career development.

It is postulated that the whole ethos of the water utility, and in particular the attitudes of senior management, will heavily influence the motivation of staff. If senior management appear to be remote and uninterested in NRW control then other staff will similarly place little emphasis on it. The process of motivating staff must therefore adopt a top down approach for successful NRW control. Furthermore, each individual staff member must have a clear understanding of what constitutes his duties and responsibilities, and know that he is being monitored and will be called to task if he fails to fulfil them. This process should not be one of oppression, but of active support and encouragement designed to assist staff in using their full potential to achieve their responsibility targets. It is suggested that the failure of senior managers to take a keen interest in and to become involved with the activities of subordinate staff is a major cause of poor motivation in some utilities. For instance, how many senior managers job shadow their staff (such as during night tests) to experience the conditions their staff operate under, to show interest in their work, or to encourage them?

In public utilities there may be considerable pressure on senior staff to respond to political pressure and implement high profile capital schemes for short-term expediency. Such an approach can have exactly the opposite effect in the longer term than that desired. For example, the construction of a new treatment plant, pipeline, or booster pumping station may be adopted to improve an inadequate supply to consumers caused by high leakage levels or other system deficiencies. The provision of additional water or an increase in pressure, however, will

only serve to increase the leakage. In fact, funds expended on the initial capital works scheme would have been better spent controlling the leakage, followed by determining the reduced need for capital works prior to commissioning them. This action, though, might not be sufficiently obvious to consumers to deflect on-going criticism of the utility for inaction to resolve the situation, encouraging it to adopt the most expedient course of action. Capital works may be perceived as an 'easy' or 'instant' solution to the problem, whereas leakage control calls for long-term commitment, perseverance and dedication.

### **Motivation strategy guidelines**

Although motivation is associated with individual personalities, there are two main categories under which motivation needs to be considered. These are:

- Motivation of the corporate body (water utility, government department, etc).
- Motivation of individual staff.

#### ***Corporate motivation***

Corporate motivation is dependent upon the motivation of individuals within senior management of the organisation. Financial and professional/ethical aspects are clearly important at all staffing levels, but at this senior managerial level motivation is likely to be heavily influenced by perceptions of the public image of the utility. This is primarily because senior management see themselves as figureheads of the company who will be called to account by their Board for poor performance or lack of achievement. For some, it will literally mean exposure in the media and promotion of their face as the personal image of the water utility. Few people welcome negative press coverage or criticism from the boardroom.

It can be argued that this type of motivation is political, as it is concerned with public image, social responsibility, obligations to shareholders (government or private), etc. Motivation factors therefore have to be controlled and specified by the political or corporate masters of the senior management. This is generally achieved by setting targets for management to attain. These targets will typically be concerned with the following:

- Technical goals such as NRW level (overall or in specific areas).
- Financial performance (cost reductions, improved billing/collection, gearing ratio, etc).
- Share value performance.
- Staffing ratios (number of staff per consumer).
- Media coverage (ratio of positive/negative reporting).
- Customer relations (number of complaints, response period, etc).

Many of these criteria will be covered in an annual business plan or one designed to chart desired progress

over a longer period, typically five years. Outside the privatised water industry, there are few examples of such business plans or target criteria being set. In public utilities it is the responsibility of the government, council, or whoever is politically responsible for the utility to set such criteria and hold individuals responsible for failure to achieve them. All staff must be made aware that they are accountable to their superiors for failure to achieve set targets or for poor performance. There may, of course, be good reasons or contributory factors towards such failures, and these must be taken into account. Performance reviews of all staff should be held regularly, typically annually, at which time individual performances are reviewed (both good and bad aspects!), aspirations and problems aired, revised targets and career progression reassessed, etc. The aim of the review must be to encourage the person to realise his full potential within the organisation and to provide constructive criticism and remedial actions where performance is poor.

Probably the major factor contributing to high NRW levels in many utilities is the failure of senior management and Board members to set clear targets and performance criteria for the utility, as well as staff incentives to achieve them. Some suggested initiatives that should improve NRW performance are as follows:

#### ***Board members***

- Set (in conjunction with senior management) and regularly review performance targets.
- Publish performance (actual and target) in regular reports to government, shareholders, etc., or whoever has ultimate responsibility for or interest in the utility.
- Make continued membership on the Board conditional upon achievement of realistic performance targets.
- Link Board member remuneration directly to utility performance.
- Monitor and review senior management performance (collectively and corporately).

#### ***Senior management***

- Advise Board on performance targets.
- Regularly report to and discuss performance achievements with the Board.
- Link remuneration to utility performance.
- Monitor performance of NRW section and staff, resource requirements and availability.
- Keep abreast of technological and other developments that could improve performance.
- Set high personal standards as an example to other staff through direct involvement in their activities.

#### ***Staff motivation***

The motivation of staff directly implementing NRW activities on a daily basis will be heavily influenced by the attitudes of senior management and the Board itself. If staff are aware that a keen interest is taken in NRW

control at the top levels of the utility, that senior management are available and open to the discussion of problems and suggestions to improve performance, and that action will be taken if performance is not satisfactory, then a conducive atmosphere will be developed within which a corporate spirit will flourish and staff will respond positively to challenges made. This will be further consolidated through the implementation of financial reward or incentives for good performance or the achievement of targets. The aim should be that all involved persons benefit from improvements achieved within the utility.

Such improvements will automatically be passed on to consumers or shareholders through improved service levels or profitability.

Technician level staff are not generally motivated by corporate image, but primarily by job satisfaction and its associated rewards, as well as job security. Satisfaction of these criteria will usually develop a strong commitment to the utility and its goals.

A feature of some utilities who give a low priority to NRW control is that poor quality staff or even misfits are allocated to NRW activities to keep them occupied and 'out of the way'. Even where capable staff have been allocated to NRW work and trained in the application of relevant techniques, it is not uncommon for them to be subsequently reallocated to tasks deemed to have a higher priority, either because the task has a higher profile and more attractive image or due to staff shortages. Little thought appears to have been given to the impact this will have on the NRW Section performance. In at least one utility known to the author, promotion is based solely on the number of years service, with an apparent total disregard of the abilities of the person promoted and his replacement to maintain and improve Section performances. Although not wishing to deny a technically competent person a well-merited promotion, such an approach does not generally make the best use of staff capabilities. Some suggestions to improve NRW performance at the technical staff level are as follows:

- Establish clearly defined staff responsibilities and task descriptions.
- Regularly monitor and review performance (personal and Divisional).
- Link remuneration with performance achievements.
- Run regular staff training sessions by senior management or outside organisations and individuals to update technical competence and provide refresher training.
- Encourage self-improvement through evening classes, self-learning and distance learning courses, etc.
- Establish career structure within the Division.
- Encourage high calibre staff to join the Division.
- Emphasise the high-tech. aspects of NRW activities.
- Encourage senior staff to demonstrate interest in the NRW control performance of technical staff.

### Conclusions

The performance of many water utilities, especially in the developing world, to control NRW is far from satisfactory. Many utilities appear to pay lip service to NRW programmes, possibly because they feel coerced into them by lending agencies who make implementation of a suitable NRW programme one element of a large capital works scheme, or the undertaking of a suitable programme is made a covenant of the loan to fund the scheme. It is postulated that poor NRW performance is not generally as a result of lack of technical expertise or resources, but is due to lack of motivation and accountability for NRW performance from the highest levels of management within the utility.

It is recommended that all involved in NRW control programmes should be motivated through the setting of targets, clear definition of individual responsibilities, monitoring and review of performance at the corporate and personal levels, individual accountability, and the linking of remuneration with overall performance and the achievement of set targets. These actions will encourage the development of team spirit, a commitment to the goals of the utility and enhanced NRW performance.

### References

'Water Utilities Data Book, Asian and Pacific Region', Asian Development Bank, Manila, November 1993.