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Tariff Policy for urban water supply in the Lao PDR

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The decentralised urban water supply sector in the Lao PDR, regulated by the Water Supply Authority (WASA) suffers from adverse financial conditions many of which are attributable to an absence of a coherent and transparent tariff policy. WASA has developed a National Water Tariff Policy, in accordance with its mandated requirements, based upon the concepts of social fairness, protection of the environment and cost recovery recognising the need for returns on capital and affordability. This Tariff Policy was officially established by the Minister for the Ministry of Communication, Transport, Post and Construction on 26 April 2004, and approved by the Prime Minister on 7 May 2004. The Policy strives to balance the needs of the stakeholders in the sector especially the operators and their customers. The adoption of a Tariff Policy provides confidence for investors, customers and operators that will provide, in the longer term, a sustainable water supply service for all.

Background and introduction

Urban water supply services in the Lao PDR are provided by 18 provincial utilities known as Nam Papa State Owned Enterprises (NPSEs). These enterprises are expected to operate as self-sustaining commercial entities but in reality this is often not the case for several reasons:

- As state owned enterprises efficiency incentives are weak.
- Financial management is constrained by restrictive government financial regulations.
- Investment is provided by government through loans and grants.
- Income is controlled through political agencies (the provincial governors) that have the final say in tariffs.

It is this last item, tariffs, that is considered by many (but not all) to be the biggest obstacle to self-sustainability. This paper examines the problems and how they are intended to be resolved through the introduction of a National Water Tariff Policy from the Water Supply Authority (WASA) Regulatory Board.

Tariff policy before WASA

Policy framework

Effectively, the Lao PDR did not have a tariff policy before the introduction of the WASA approach. Tariffs were very often determined on an annual ad-hoc basis with the NPSE presenting the Provincial Governor's office with basic financial statements (balance sheet and income statement) for the previous year and suggesting what tariff structure would be required for the following year. All too often the approved

tariff would ignore basic financial rules, e.g. depreciation would be ignored and the utility may find itself encouraged to default on debt service to government, etc., all at the behest of the local administrative authorities to keep the tariff low. There was little recognition of the need for revenues for capital maintenance. Nor was there any interest in setting tariffs to levels that would be attractive for investment. In extreme cases the tariffs were determined assuming default by government customers placing additional financial burdens on those that do pay.

On the positive side, the tariffs are generally set to levels that in most cases, but not all, maintain positive cash flows, although this is often achieved by defaults on loan and other payment obligations.

Development agencies often express their concerns regarding tariffs and the failure to achieve full cost recovery. In some cases these concerns are reflected in loan covenants requiring the NPSEs to raise tariffs to specified levels. Unfortunately, there is little or no clear guidance from these institutions as to how they arrive at their recommended tariffs; in many cases they are often derived as a result of simple discounted cash flow calculations drawn from sub-project feasibility studies. Although noble in intent such responses are little more than 'knee-jerk' reactions without a clear understanding of the underlying problems of poor efficiency and short-term interests.

Tariff structure and implementation

Tariffs structures and rates are set by the NPSEs in the manner that was inherited from Nam Papa Lao prior to decentralisation, i.e.

- Domestic tariffs are based upon a rising block system (rates increasing as consumption rises, with the first 10 m³ being charged at the lowest rate). Sometimes the first 10m³ is charged as a minimum monthly charge whether or not it is used.
- Non-domestic tariffs are charged at significantly higher rates depending upon the nature of the institution.
- Foreigners and embassies pay exorbitantly high tariffs (nearly twenty times the local domestic rate).
- Connection charges are imposed for new connections (although sometimes these are provided for free through capital investment programmes)
- Occasionally new customers have to contribute to capital investment in order to get the community connected to the system.

New tariffs are presented to the general public as a fait accompli with little or no justification for any increases other than to cite inflationary pressures.

Implications

The past policies and procedures for tariffs have effectively starved the NPSEs of much needed operational finances and investment capital. All that is maintained is cash flow, although often at the expense of depreciation, investment and, in several cases, debt default. Several of them can be considered as technically insolvent.

Consequently, most of the NPSEs have falling levels of service, are unable to meet increasing demand, and are unattractive to investors. Several multilateral and bilateral development agencies recognised this and thus encouraged and supported the development of a Tariff Policy.

Market failure and the need for a water tariff policy

Water supply services do not operate in a perfect market: they are local monopolies and water is a single quality product at a single price. Regulation, as an alternative to market failure, must therefore include a significant input into price control. Without any competition on prices, e.g. concession bidding, WASA has little option to be actively involved in the tariff determination process.

The development of WASA included the adoption of a legal instrument known as the 'WASA Charter' (prepared in 2002/3 but not yet enacted at the time of writing this paper) setting out the regulatory remit of WASA in detail together with the rights and obligations of the principal stakeholders in the sector, namely the NPSEs and their customers. One of the provisions specified in this WASA Charter is an obligation for the WASA Regulatory Board to prepare and approve a Tariff Policy based upon:

- Consumer interest and affordability
- Supplier costs of service provision
- The environment

- National economic policy

The Regulatory Board, however, was not as effective as intended and the responsibility for the preparation of the Tariff Policy fell to WASA. By May 2004, after a prolonged period of discussion and consultation, the Tariff Policy was approved by the Prime Minister.

Water Tariff Policy objectives

The primary objective of the Water Tariff Policy is to best meet the needs of the major stakeholders, namely:

Customers: to provide the best value level of service that can be afforded by promoting maximum efficiency

Operators: To ensure that the financial integrity of the operating utility is maintained

The environment: To ensure that water resources are exploited at sustainable levels by promoting efficiency in the use of water

National and local treasuries: To reduce or remove the economic and financial burden of subsidies

Society: To promote social fairness

International development agencies: To promote economic development and poverty alleviation in a sustainable and affordable manner.

These needs provide a foundation upon which detailed tariff policy can be formulated. It is important to recognise that no single tariff policy will satisfy all stakeholders entirely, e.g. customers would like lower tariffs whereas higher tariffs may be necessary to reduce or remove government subsidies. In trying to meet the demands of these forces, not all pulling in the same direction, the Tariff Policy is structured into several categories:

1. Social fairness
2. The environment
3. Cost recovery
4. Capital structure and return on capital
5. Constraints

The Tariff Policy does not specify in every case exactly how tariffs should be determined but simply sets the foundations for such determinations in the form of guidelines and recommendations. WASA, as the regulator, is free to interpret this policy with a degree of flexibility and discretion to suit each individual operator's circumstances.

Principal components of the policy

Social fairness

Social fairness immediately presents a moral dilemma. Is it the role of the water supply operators to be a mechanism of wealth re-distribution or is it a government responsibility? The policy concludes that in the medium to longer term re-distribution of wealth should be a government responsibility but in the short term the water operators have a role to play.

The policy suggests several mechanisms to introduce social fairness into the tariff structure:

Uniform tariffs: A primary mechanism available to the PNEs is covered in law (PM Decision 37 of 30 September 1999) in that the NPSEs must employ a uniform tariff throughout their areas of supply (see Box 1).

User types: The affordability constraints for commercial customers are not as high as they may be for domestic

Box 1. The case for uniform tariffs

- The economy of scale factor normally provides for the communities where incomes are generally higher. A uniform tariff automatically ensures a degree of cross-subsidy from the wealthier, larger communities to the poorer, smaller communities
- It protects those communities who, by accident of geography, find themselves in the position where the unit cost of water supply is very high.
- It dilutes the effects of disproportionately high and low tariffs in the same geographical area with adverse inter-community effects.
- It offers a degree of price stability.
- The administration of a uniform tariff structure throughout the operating entity is simpler and therefore more efficient.
- It is far easier to present costs to potential customers when the tariff is known.

customers even though the unit cost of supply may very well be cheaper for commercial users. The policy suggests, purely for social reasons, that it may be appropriate for these commercial customers to pay a higher water tariff than that enjoyed by domestic customers.

Non-discrimination against foreign customers: The NPSEs often employ a highly discriminatory practice of charging disproportionately high tariffs for foreign customers (including embassies). Although efficient in raising much needed revenue, this policy is not supported for several reasons: it gives Vientiane an unfair advantage due to the high number of foreigners there, it allows wealthy Lao citizens to benefit from low tariffs, it is unfair on low income foreign customers and it discourages foreign investment. The Tariff Policy recommends that this practice be phased out over time.

Elimination of rising block tariffs: The rising block tariff structure is not supported, largely as a result of its inefficiency as a social re-distribution of wealth mechanism (see Box 2). The Tariff Policy, however, does allow its use to be continued in the short term pending further investigations into its appropriateness.

Elimination of fixed charges and connection fees: The practices of fixed charges and connection fees are not supported. They are contrary to the interest of the poor. The

Box 2. The case against rising block tariff structures

The Tariff Policy discourages the use of the rising block tariff structure as being an inefficient mechanism for the re-distribution of wealth:

- All customers, irrespective of income, receive the benefit of the reduced tariff. In fact the wealthier customers whose consumption exceeds the lifeline threshold receive the maximum benefit whereas poorer customers may receive less benefit.
- Shared water supply facilities, generally by the poor, receive substantially less benefit per family than individually owned facilities.
- The administration costs of rising block tariffs add to overall inefficiency.
- It discourages investment in those areas where demand is low (poorer communities) and therefore less profitable.
- The generally recognised low level of price elasticity of demand for water suggests that this practice has only limited impact on demand.

Tariff Policy recommends that fixed charges should not be applied and connection fees should be subsidised by a higher volumetric unit tariff.

Fairness with capital contributions from customers: Demanding capital contributions for investment from some consumers whereas others are not obliged to is considered unfair. Such contributions should not be demanded unless those that contribute towards capital investment are rewarded with a reduced tariff.

Tariffs to reflect levels of service: If a group of customers elect to have a lower level of service than others, e.g. standpipes, this should be reflected in a lower tariff, irrespective of the costs of service provision

The environment

The Tariff Policy does not support the employment of tariffs as a mechanism to reduce water consumption as the environmental impact of water abstraction in the Lao PDR is small.

Similarly leakage control has virtually no measurable environmental benefit and as such any activities in this area need to be justified on financial viability only.

Cost recovery

Cost recovery is a major consideration when determining tariffs and is essential if the NPSEs are to maintain a sustainable service in the long term. Cost recovery is more than simply meeting basic operational costs but covers a wide range of factors.

Long term approach: The Tariff Policy considers cost recovery to be achieved in the longer-term as opposed to seeking full cost recovery each year. This ensures that consumers are not burdened with high depreciation and other non-consumption related costs in the early years when the

customer base is small. The tariff calculation method is recommended to be based upon a discounted long run average cost (LRAC) technique.

Efficiency expectations: Although direct operating costs should be recovered in full the Tariff Policy suggests that allowances for expected efficiency improvements should be incorporated in the calculation process. Where appropriate the employment of comparative competition should be used to help set efficiency targets.

Capital investment cost recovery: The capital investment profiles incorporated in the Tariff Policy should reflect the long-term asset management plans. Capital investment cost recovery is through depreciation carried through to the tariff (adjusted for the long-term approach). However, in order to ensure sufficient funds for the replacement of assets (capital maintenance), these allowances need to be regularly (annually) adjusted for inflation. This requires depreciation to be calculated on a current cost basis for the purposes of pricing, but still retaining the official rules for tax and government auditing purposes.

Capital structure and return on capital

Investment in the water sector is normally financed by a combination of government equity (85%) and government debt (15%) (except for Nam Papa Vientiane, 50% debt and 50% equity). However, inflation, depreciation, loan grace periods and long-term repayment periods all work to increase the debt burden relative to equity over time. This is alleviated, slightly by the current practice, supported by the Tariff Policy, of central government absorbing foreign exchange risk by converting hard currency donor funding into local currency grants and loans.

Where the government provides grant finance the Tariff Policy suggests that the short-term nature of grants be converted into a longer-term tariff benefit accepting that access to grant finance will reduce over time as the economy develops (see Figure 1).

Not only does the Tariff Policy accept the need to include the return on debt in the tariff determination process but it also recognises the need for a real positive return on equity (at least in the longer term) to finance debt repayment and

system expansion. The regulator is responsible for determining what a fair return on equity is recognising the variations in the operating environment.

Constraints

The two main constraints to tariffs are affordability (an upper boundary constraint), and cash flow (a lower boundary constraint).

Affordability: Based upon internationally recognised norms the Tariff Policy suggests that tariffs be set to levels not exceeding 3-5% of disposable household income (3% for average and 5% for the poorest sector). These figures can be adjusted in the light of data realised from research such as contingent valuation studies.

Cash flow: The cash flow positions of the various NPSEs are weakened by the failure of government customers to pay their dues on time. The Tariff Policy does not support higher tariffs for domestic customers to counter the inability or unwillingness of government customers to pay. However, even with prompt payment by government customers the suppliers may still suffer from adverse cash flows, especially in the years immediately following major capital investment projects. The Tariff Policy does allow tariff adjustments to ensure adequate cash flow.

Process

The Tariff Policy sets out a framework for implementation based upon a regulatory reporting process, tariff reviews, draft determinations, public consultation, final determinations, approval and adoption by the NPSEs.

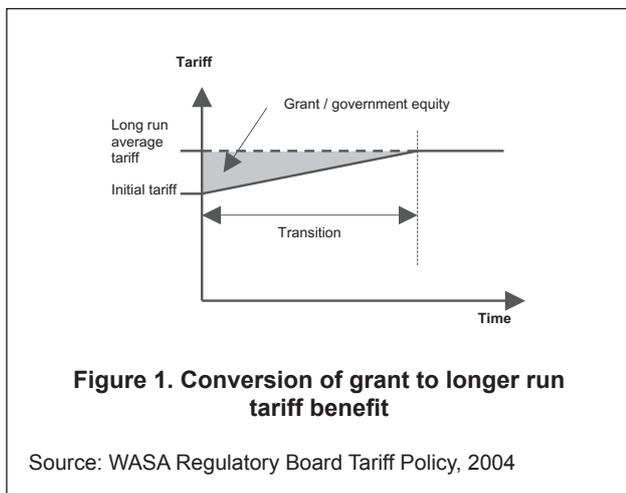
The time between tariff reviews is left to WASA interpretation. WASA has determined that a period of three years is appropriate with interim automatic tariff adjustments in line with inflation plus or minus allowances for other factors such as efficiency expectations.

Lessons learned

The primary lesson learned from the experience of WASA is that the Tariff Policy must be owned by the Regulator (or its supervisory institution). During the consultation process several powerful interest groups, e.g. multilateral lending agencies, attempted to influence specific policy outcomes in order to protect their positions, sometimes contrary to the wider interests of WASA. Although a broad consultation process is encouraged it must not allow specific interest groups to dominate the policy objectives to the detriment of other less powerful groups, e.g. the customers.

The debate, analysis and consultation undertaken during the preparation of the Tariff Policy highlighted the importance of taking a holistic approach. Social, environmental and financial objectives all impact upon each other and it is therefore inappropriate for any single policy decision to be made in isolation of other decisions.

A well structured tariff policy is not only necessary for financial and social stability but it also provides the sector with a foundation that promotes longer term confidence for future development and investment.



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