

## **OUR's Revision of National Irrigation Commission's Economic Rate**

### **Introduction**

The OUR received a letter from the National Irrigation Commission (NIC) dated April 30th, 2003, requesting a review of the economic and recovery rate which was determined by the Office November 2001. The NIC indicated that this update was prompted by the continuous increase in its operating costs and the position it subsequently took to approach the Ministry of Finance and Planning for a review of its present budget and subsidy given to its agricultural customers.

The OUR has received the audited financial and operational information for the period ending March 2002 only, but has also received some unaudited information for the year ended March 2003. It has therefore reviewed the economic and recovery rates for the 2002/03 financial year, after making reasonable projections on the 2001/02 company performance and adjusting the 2002/03 financial data submitted.

### **Observations**

The OUR in carrying out its analysis factored in the expected efficiency gains in operational aspects of the NIC's. Specifically, the OUR had stated in its last review (November 2001) that it expected the NIC to have achieved at least 2 percent per year in water efficiencies, from expected improvements in distribution canals and expected electricity charges to have reduced by 4% per annum due to the implementation of energy saving strategies. The OUR had also stated that it expected the employment related costs not to increase more than the current inflation rate.

Table 1 shows that while the water efficiencies has improved by just about 2% per year on average (presently the NIC sells 70.26% of water produced), and electricity charges have been reduced by 21%, employee costs have increased by 20% over OUR's estimated amount of \$119,809,641. Notwithstanding the fact that the NIC has increased its staff complement by 3, the Office is of the view that given the government's policy over the last two fiscal years to cap the increase allowed on public sector salaries to 4%, this percentage is out of line with expectations. For this review, the Office has made adjustments<sup>1</sup> for the increase in the staff complement by 3 and incorporated a 7% change in personnel emoluments, to account for general changes in the inflation rate.

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<sup>1</sup> Given that there is no distinction between the category of workers, the OUR has aggregated the emoluments of all workers and divide it by the total number of employees in 2000/01 (169). This average is then multiplied by 3 (total additional staff) to get the total incremental increase in salary.

**Table1: NIC Statistical Information**

Category	FY2000/01 (\$)	FY2001/02 (\$)	FY2002/03 (\$)	2001/02 %age change	2002/03 %age change
Personnel Emoluments	111,971,628.00	136,776,067.00	148,311,196.00	22.1%	8.4%
Electricity Charges	64,271,394.00	70,352,391.00	59,167,326.00	9.4	-15.8
Water Production (m3)	127,097,660	122,458,123.00	104,998,334.00	-3.6	-14.3
Water Sold (m3)	85,157,705.00	83,716,665.00	73,769,572.00	-1.7	-11.9
Water efficiency	67%	68%	70.26%		

**Rates**

The OUR populated the model used in the last rate review with the current information and also applied the same procedure to arrive at a revised economic and recovery rate for non-agricultural and agricultural users respectively. Due to the flood rains in the 2002/03 financial year, the reported figures for electricity charges and the volume of water sold was lower than expected (see Table 1). The OUR has treated the 2002/03 year as an aberration and as such normalized the values for these two variables to be in line with what would be expected if there was no unexpected increase in rainfall. Overall, the OUR has reduced the total amount of operating costs as reported by the NIC. The NIC in its submission estimated that its total operating costs for the 2002/03 is \$335,502,642, an increase of 4.5% over its previous financial year expenditure of \$320,944,118<sup>2</sup>. The OUR has, however, adjusted downwards the company's personnel emoluments (see explanation above) and has increased electricity cost by 3%<sup>3</sup> and other expenses by the inflation rate of 7%. This resulted in total operating costs of \$322,387,919. This amount is 4% less than the NIC stated total operating costs of \$335,502,642. Table 2 summarizes the expense of the major cost items over the last six (6) financial years.

<sup>2</sup> The Office had determined in its last review that the expected total operating costs was \$315,574,095. This would effect an increase of 6.3%.

<sup>3</sup> In November 2001 determination, the OUR had determined that there should be a cost saving in energy of at least 4% per annum. Given that an inflation rate of 7% was used in the estimations, electricity charges were increased by 3%.

**Table 2: Summary of Major Expenses from 1997/98-2002/03**

Expense Categories	1997/1998 (\$)	1998/1999 (\$)	1999/2000 (\$)	2000/2001 (\$)	2001/2002 (\$)	2002/03** (\$)	Per unaudited NIC accounts 2002/03
Personnel Emoluments	115,383,295	98,251,044	99,048,252	111,971,628	121,936,440	130,471,991	148,311,196
Depreciation	41,605,525	42,705,389	44,396,552	40,498,652	40,361,940	40,361,940	39,679,588
Electricity	69,996,086	49,217,353	49,245,309	64,271,394	70,833,503	72,958,508	59,167,326
Other	59,374,142	75,537,071	66,346,183	78,187,387	73,453,720	78,595,480	88,344,532
<b>Total Expenses</b>	<b>286,359,048</b>	<b>263,710,857</b>	<b>259,126,296</b>	<b>294,929,061</b>	<b>306,585,603</b>	<b>322,387,919</b>	<b>335,502,642</b>

\*\* - OUR budgeted

With the economic rates for the non-agricultural customers and the recovery rate for agricultural customers outlined below, and the expectation that the government will accept liability for the difference between the revenues required from farmers and the revenues received, the NIC is expected to make an economic profit of \$10,844,542.

#### *Economic rate*

The Office has determined that the new economic rate for non-agricultural customers is \$5.43/ m<sup>3</sup>. This is determined by dividing the total budgeted operating costs of \$322,387,919 plus a return on capital of \$142,650,488 by 85,720,686 cubic metres (m<sup>3</sup>) volume of water sold. This represents a 1.1% increase over the last determined economic rate of \$5.37/m<sup>3</sup> in November 2001. The movement in the rates on government's fixed income instruments, which affected the required rate of return, and the increase in staff costs are two of the factors that accounted for this increase. Given that the primary mandate of the NIC is to provide irrigation water to agricultural customers, any other individuals who use the services of the NIC will be required to pay the economic cost (which includes a return on capital). The Local Registered Stock (LRS) rates were deemed to be the appropriate return to be applied to the capital employed in the company. As at year end March 2003, 10-year<sup>4</sup> LRS rates were on average 14.39%. Because of the lack of equity investment in the NIC, total assets were used as a proxy for capital employed. Total assets have increased by 0.2%. The LRS rate of 14.39% was applied to the total assets of the company, to obtain the expected return on assets.

Furthermore, non-agricultural customers are required to pay a rate that covers the total operating and capital costs of the NIC. Although, the government provides the NIC with capital grants, which is then amortized over the useful lives of the assets, only agricultural customers are the beneficiaries. Consequently, depreciation charges are included in the operating cost, which is used to determine the economic rate for the non-agricultural customers.

<sup>4</sup> LRS issued thus far is for a maximum 15-year period. However, there has been a more consistent offering of 10 year LRS than other time periods, as such a 10-year LRS rates are used.

Presently the NIC charges various rates to several categories of non-agricultural customers. The domestic rate is \$5.37/m<sup>3</sup>, industrial rate is \$10.56/m<sup>3</sup> and all others are charged at \$6.39/m<sup>3</sup>. The Office is aware that these categories of customers can choose their providers of irrigation water, and as such will not seek to place an upper limit on the rates charged to these customers. However the minimum that should be charged to any category of non-agricultural customers is \$5.43/m<sup>3</sup>.

**Table 3: Present and Economic Rate for Non-agricultural customers**

Category	Present (/m <sup>3</sup> )	New Economic (/m <sup>3</sup> )	Previous Economic Rate (/m <sup>3</sup> )	%age change in economic rate
Domestic	\$5.37	\$5.43	\$5.37	1.1%
Industrial	\$10.56	\$5.43	\$5.37	1.1%
Other	\$6.39	\$5.43	\$5.37	1.1%

#### *Recovery rate*

The rate calculated for farmers is based on operating costs of the NIC, excluding the depreciation charges and the return on assets. As indicated earlier, capital investments are deemed as grants to the NIC and are amortized over the useful lives of the assets. The amortized value then offsets the depreciation charges included in the income statements. Given that the NIC's primary role is to provide irrigation water to farmers and that it does not incur any capital expenditure, agricultural customers are not required to pay a return on assets. Consequently, the Office has determined that the revised recovery rate for agricultural customers is \$3.19/ m<sup>3</sup>. This is an increase of 3.6% over the previously determined rate of \$3.08/ m<sup>3</sup> in November 2001. This was derived from dividing operating costs of \$282,025,980 by 85,720,686 cubic metres (m<sup>3</sup>) of water sold. The increase in the recovery rate is primarily due to the increase in personnel emoluments resulting from the addition in NIC's staff complement in 2001/02 period.

**Table 4: Present and Recovery Rate for Agricultural Customers**

Category	Present (/m <sup>3</sup> )	New Recovery rate (/m <sup>3</sup> )	Previous Recovery Rate (/m <sup>3</sup> )	%age change
<=5,508 m <sup>3</sup>	\$0.6267	\$3.19	\$3.08	3.6%
>5,508 m <sup>3</sup>	\$0.8175	\$3.19	\$3.08	3.6%

With the economic rates for the non-agricultural customers and the recovery rate for agricultural customers outlined above, and the expectation that the government will accept liability for the difference between the revenues required from the farmers and the revenues received, the NIC is expected to make an economic profit of \$10,844,542.

#### **Government Subsidy**

Although the OUR is required to calculate the recovery rate for agricultural customers, the government has taken a decision to make farmers pay a rate ("the agricultural rate") that is significantly less than the recovery rate. Presently farmers pay \$0.6267/m<sup>3</sup> for the

first 5,508m<sup>3</sup> of water consumed and \$0.8175/m<sup>3</sup> thereafter. This results in a shortfall in the revenues of the NIC. In order to preserve the financial viability of the company, the government subsidises the true cost of providing waters to the farmers. The level of subsidy that the government provides is not within the purview of the OUR.

However, in the last rate review, the OUR determined that the NIC should invoice the government for the difference between the costs and revenues received for provision of services to the farmers. In November 2001, the OUR had determined that the government subsidy required to secure the financial viability of the NIC was \$219,545,877. The NIC reported that for the year ended March 2002, it received \$170,994,839. The OUR in the present review is recommending that the government subsidy should be \$199,932,156. The Office still maintains the position that the NIC should treat the government as a customer and submit an invoice on a monthly basis for the monies owed. How much of the cost the government is willing to absorb is strictly a matter of government policy.

**Table 5: OUR Determined Government Subsidy**

Category	FY 2001/02	FY2002/03
OUR determined subsidy	219,545,877	199,932,156
Actual subsidy received	170,994,839	To be determined
%age of total	78%	na

### Decision

1. Office has determined that the economic rate for non-agricultural customers is \$5.43/m<sup>3</sup>. This represents a 1.1% increase over the previously determined economic rate of \$5.37/m<sup>3</sup>. This should be the minimum rate charged to this category of customers.
2. The Office has determined that the recovery rate for agricultural customers is \$3.19/m<sup>3</sup>. This is an increase of 3.6% over the November 2001 rate of \$3.08/m<sup>3</sup>.
3. The Office remained convinced that the government should be invoiced for the shortfall between the rates charged to agricultural customers and the recovery rate.