

Introduction

We all need water to live, and a reliable water supply service is essential to every development project. Every development plan has to answer the critical questions of “How will the development be supplied with water?” and “How will the wastes generated by the developers and the development be treated and disposed of?”

Although the National Water Commission (NWC) is the premier provider of water and sewerage services in Jamaica, a number of private entities have been licensed by the Office of Utilities Regulation (OUR) to provide services in specific areas; and the various Parish Councils are also involved in water services island wide.

With treatment of about 190 million gallons per day, NWC produces more than 90% of Jamaica’s total potable water supply - using over 9,000 kilometres of water pipes connected to more than 400 different sources and more than 500 kilometres of sewer mains across the island - most development projects can take place by mutual agreement to connect to existing NWC facilities. Some new development projects however, cannot be served from the existing networks. These would need either new facilities (constructed either by NWC or by the developer) or the expansion of the existing facilities.

Like in many other countries, Impact Fees or System Development Charges (SDC’s) negotiated by the NWC are designed to recover a proportion of the capital costs required to improve, expand or create the required water and/or sewerage facilities in order to meet the needs of new development projects.

Impact Fees are neither new nor limited to the NWC as according to the American Water and Waste-water Association (AWWA),

“A growing number of water utilities employ system development charges to assign to future customers the capital cost responsibility of system capacity that is or will be available for future customers...Throughout the United States, SDC’s (also referred to as Impact Fees or plant investment fees) are used to finance some capital improvements. These charges are designed specifically to pay for the capacity costs associated with growth. Special charges for new developments date back to the 1930’s. System Development Charges are more frequently used as a source of capital financing in large- and medium-sized urban areas, in high-growth locations, and in areas of scarce water supply. Existing customers in regions with extensive growth or potential growth may benefit greatly from these charges. SDC’s assign the capacity cost of growth, at least in part, to those causing the growth rather than to existing customers.”

The Need for Impact Fees

The need to set Impact Fees arise where the NWC has either recently done, or would need to do, major infrastructure development in order to provide water and/or wastewater services to a development. These infrastructure projects often have to be funded by loans borrowed by the NWC on the basis that there will at least be a partial recovery of these capital costs to pay back these loans.

Areas in which the NWC has recently borrowed to undertake new or expanded systems include:

- Logwood Water Supply Project (Westmoreland/Hanover)-involved the development of a 7.5 mgd water treatment plant as well as the expansion and refurbishing of the water distribution network to benefit the areas from Negril Lucea. Project cost: J\$1.9B.
- Great River/Lucea Water Supply Project (St. James/Hanover)-involved expansion of the Great River Treatment Plant from 10 million gallons per day (mgd) to 15 mgd and the construction of a 22-mile trunk main from this plant to Lucea. Project cost: US\$40M.
- Martha Brae to Braco Water Supply (Trelawny) – involved the comprehensive refurbishing of the Martha Brae Water Treatment Plant to restore its production capacity from 3 mgd to 6 mgd, construction of a trunk main (with 2 water storage tanks) to Braco as well as system improvement works throughout Trelawny, St. James, Hanover and sections of Westmoreland. Project cost: US\$53M.
- Braco to Runaway Bay (Trelawny/St. Ann) – involves extension of a 23-mile trunk main and storage tank from Braco in Trelawny to Runaway Bay in St. Ann at a cost of US\$17M.

Given that the rates charged for the delivery of water do not recover capital costs, the NWC would not be in a position to effectively develop or expand its systems on a timely basis to meet the needs of new developers without the use of Impact Fees. In other words, Impact Fees or SDC's enable the NWC to put the required infrastructure in place to facilitate developers and their development plans.

Benefits of Impact Fees

Charging impact fees is a structured approach to financing water supply and sewerage projects to meet development needs and provides benefits for existing customers, the utility, developers as well as the country. Some of these benefits include:

- Protecting existing customers from the additional costs of specific new developments having little or nothing to do with their service.
- Helping to keep general tax burden and utility rates down;
- Helping to coincide development with the installation of needed new infrastructure (concurrency);
- Helping development to proceed even when the utility cannot pay for the required infrastructure from regular rates;
- Revenue generated can be exclusively earmarked for infrastructure projects

constructed in a systematic manner;

- Protecting existing infrastructure from overburden and customers from deteriorating service levels due to over-extension of unimproved or inadequate facilities.

Principles Governing Impact Fees

The calculation of Impact Fees is guided by the following principles:

- There must be a reasonable connection between the need for the additional facilities and the growth resulting from new development – (Rational Nexus)
- There must be a reasonable connection between the expenditure of the fees collected and the benefits received by the development paying the fees (Rational Nexus);
- The fees charged must reflect a proportionate-share of the cost incurred or to be incurred in providing for the development paying the fee. Fees will therefore vary based on consideration of the service demands, the cost to provide the needed infrastructure, the economics of providing the infrastructure, and the type of development – commercial, residential, etc. (Rough Proportionality).

How Impact Fees are Calculated and Applied

The basis for calculating Impact Fees is simple and transparent. They include:

1. Determine the least cost solution for providing required infrastructure to provide reliable service to meet the expected demand;
2. Taking into account the capital cost, O&M costs and expected revenues, determine the additional capital required to make the project viable. Based on international experience and practice, an IRR of 12% is considered reasonable to be used to establish the viability of water supply projects.
3. Divide this additional capital that is determined among all beneficiaries of the project in proportion to their respective demands.
4. Where Impact Fees for a particular development exceeds \$100M, NWC may consider a discount which will not exceed 15%.
5. Payment arrangements may be negotiated with NWC to minimize the upfront effects of impact fees.

Conclusion

The System Development Charges (SDC's) or Impact Fees applied by the NWC on new developments provide an equitable and structured mechanism to recover or offset a proportionate share of the capital costs associated with building new or expanded facilities in order serve new developments. With the funds from these fees, the NWC commits to put in place the required infrastructure to provide an adequate water and/or wastewater service, thereby facilitating planned developments across Jamaica.