

City of Richmond, Virginia  
Department of Public Utilities Rules and Regulations

Gas Main Extensions  
Adopted Effective September 29, 2017

**1. Purpose.**

Section 28-110(a) of the Code of the City of Richmond, Virginia ("City Code") requires the Director (the "Director") of the Department of Public Utilities (the "Department") to "determine when gas mains or services are to be constructed or extended within or without the corporate City limits." These regulations effective \_\_\_\_\_, 2017 also are authorized by City Code Section 28-26 which authorizes the Director of Public Utilities to make reasonable rules and regulations as deemed necessary to ensure the proper management, conduct, operation and control of the City of Richmond (the "City") gas utility.

**2. Definitions.**

- a. **Contribution in Aid of Construction (CIA):** Capital required and contributed by the customer or developer to satisfy the Department's prescribed IROR on a specific project.
- b. **Net Present Value (NPV):** Method used in evaluating the capital projects. A project is acceptable if the NPV is zero or positive. NPV equals the present value of the cash inflow minus the present value of the cash outflow (usually the initial investment plus variable costs associated with the revenue creating the cash inflow) with the required rate of return as the discount rate.
- c. **Internal Rate of Return (IROR):** An 8% rate of return shall be used as the level at which the NPV must be zero or positive to recover costs and maintain profit. The IROR is designed to ensure payback using an NPV project life revenue of 15 years. For good cause shown, the Director may approve a longer NPV project life.

**3. Requirements.**

- a. The Department may extend gas mains and make other investments to serve additional customers and retain existing customers as authorized in City Code Section 28-110. Such investments may be approved for construction if:
  - i. At the request of an owner or occupant, a financial analysis indicates that such an extension or project will provide an adequate rate of return and payback to the City

gas utility. Under certain circumstances, an owner or occupant may be required to contribute financially to the project for it to be approved; or,

- ii. In the opinion of the Director, a financial analysis of projected gas usage in an area indicates that the investment required to serve the projected development will provide an adequate rate of return and payback to the City gas utility to justify the investment.
- b. To determine whether the Department should undertake any gas main extension project or other investment, the Department's Division of Energy Services ("Energy Services") shall calculate the NPV of the project using the current NPV criteria and NPV model. In addition, Energy Services shall analyze the financial risk associated with the project. Project approval shall depend on whether the project provides the required IROR.
- c. A shortfall may be made-up through a CIA by the owner, occupant or developer. The Director may approve projects that are not projected to provide at least the required 8% IROR if recommended by Energy Services and approved by Energy Services' Manager, based on a written business case.
- d. The NPV model shall be based on the following assumptions:
  - i. Committed revenues shall be calculated using the average MCF (one thousand cubic feet) of gas consumed by a typical class of users over the prior three years and the average net revenues per MCF of sales. These committed revenues, as evidenced by signed contracts, commitment letters, permit applications, etc., shall be documented by Energy Services.
  - ii. The estimated costs used in the NPV analysis must include all out of pocket construction costs. The construction costs generally will include:
    - a) Design costs.
    - b) Mains, services and meters including labor, material, and overhead for installation.
    - c) Site restoration costs (e.g., paving).
- e. Energy Services provides the Department's Division of Technical Services ("Technical Services") with specification information detailing where gas is requested together with the expected gas load and the contract period. If a project includes a new subdivision, a map or a CAD file detailing the layout of the subdivision shall be provided. Technical Services may have to conduct a network analysis to ensure that requested gas pressure can be maintained.

- f. All gas main extension projects must include an evaluation of the risks to the Department. Risks such as project size, financial strength of the builder, general economic conditions and any other relevant conditions must be considered. To compensate for higher risk projects, Energy Services shall increase the required rate of return. Projects that do not meet the required payback period or rate of return, or projects that present risk to the City gas utility above that which is acceptable, may require the customer to provide some form of security that is acceptable to the Department.
- g. Alternate methods, such as a CIA equal to any negative NPV amounts, performance bonds, letters of credit and contract commitments, may also be considered to make a marginal project acceptable.
- h. For a CIA, the customer shall pay the CIA upfront prior to any design or construction work by the Department. With the Director's approval, the Department may offer as part of the contract terms under which the contributing customer may receive a refund of the CIA [City Code Sections 28-111 & 28-112]. This refund shall be based on the NPV contribution of subsequent customers that utilize the initial main during a 3-5 year period as specified in the contract between the City and the owner, occupant, or developer. Some type of adequate security is required for the following projects:
  - i. Single customer projects over \$500,000;
  - ii. Projects by developers new to the area and without references;
  - iii. Residential conversion projects;
  - iv. Where the NPV financial analysis is negative.
- i. The customer shall submit the CIA check with either the gas permit application or the Main Extension Contract. The check is given to Energy Services' New Services Team and is deposited into an account designated by the New Services Team.
- j. The Department's Financial Operations Division will determine the type, amount and term of the required security, subject to review by the Director or Director's designee. Exceptions or waivers on the required security are subject to the Director's approval.
- k. For new gas services (excluding those new gas services that require a main extension) an NPV of each service is required. If the NPV indicates that the gas service will require a CIA from the applicant, staff will notify the applicant of the amount of required CIA or that additional gas equipment will be required. The CIA will be paid by a check or money order at the time of the gas permit application. A copy of the NPV will be retained with the gas permit application for auditing purposes. Exceptions to this procedure include:

- i. New residential customers that are located on an existing gas main, installing gas equipment for space heating and where the length of new service installation is no more than 100 linear feet. For these customers, the service installation shall be at no cost.
  - ii. New residential customers that are located next to a house that is served by gas and are installing gas equipment for space heating and hot water and the length of the main extension is no more than 150 feet and the length of new service is no more than 100 linear feet. For these customers, the main and service installation cost shall be at no cost.
- l. The Director may approve programs for rebates and incentives from time to time as funds are available and in accordance with terms and conditions.
- m. The cost of services and meters to homes in subdivisions in gas main extension projects shall be included in the initial project evaluation. In this situation, an NPV for the new service is not required.
- n. The project analysis and approval package shall be handled in the following manner: Energy Services will prepare an analysis and approval package for each gas main extension project, including:
  - i. A description of the project;
  - ii. The NPV calculation and supporting details, including the complete estimated cost of the actual mains that will be used in the project; and
  - iii. Preliminary maps prepared by Technical Services that show present and proposed mains, locations of proposed connections to the existing system and required infrastructure improvements, and Technical Services' modelling of the entire project based on projected gas loads.
- o. Each project must be approved in the following manner:
  - i. All projects must be reviewed and approved by Energy Services' Manager.
  - ii. Projects costing more than the authorized signing level of Energy Services' Manager must be approved by the Director and the Department's Deputy Director of Finance.
  - iii. The Department's Financial Operations Division shall review each project and report to the Director on compliance with this policy on a monthly basis.

- p. All subdivision contracts shall include a projected time period for full build-out of the subdivision. Consequences for failure to meet the build-out schedule shall be specified. Such specifications may include, but are not limited to, increased CIA to cover the cost of completed work that is not generating revenue and provisions to abandon unused mains.
- q. Energy Services shall forward the approved project package (containing either the signed contract or the required homeowner permits) to Technical Services with a release to design the main extension project. The City will not start construction on extending a gas main until all approvals and the proper commitment from customers/developers required under these regulations have been obtained.
- r. Prior to the capital budget review, Energy Services shall obtain estimates from Technical Services for a list of recommended loop closures/market development lines in potential future growth areas. The recommendations will clearly demonstrate what has been stated by the City, counties, and developers where proposed projects are scheduled for the next 2-5 years. Energy Services will provide input into the prioritization of the projects that offer the most return on investment. A business case will be prepared by the Department's Gas & Water Distribution group for approval by the Director and the Department's Deputy Director of Finance during the budget process.
- s. Energy Services will review all revenue and cost criteria by the first day of September of each year, and, if needed, revise and update the information for use in future project and main extension analyses. The Director must approve in writing any modifications to this requirement.
- t. Customers that have agreed to pay the shortfall to have a gas main extended to their property and that wish to have the monies returned if additional customers along the main extension come on-line, must sign a contract with the Department. The contract will state the time period for any additional customers being added to the main and the amount credited back to the customer. The amount of money credited back will not exceed the original amount paid in the original CIA.
- u. Post-mortem reviews will be conducted through an onsite survey of all new projects constructed since 2000. Consumption history of all homes or businesses in CIS is cross-referenced to the estimated consumption that was used in the project's NPV analysis. Future post-mortem reviews will be conducted through the use of the DPU GIS system and on-site reviews.

#####

These rules and regulations shall become effective September 29, 2017, and at that time shall supersede (i) in their entirety, the Department rules and regulations entitled "Gas Expansion and Main Extensions" as adopted by the Director on August 22, 2012; and (ii) to the extent necessary, any and all other conflicting Department rules, regulations, policies, and guidelines.

Approved:

Name:

Title:

Date:



Robert C. Steidel

Public Utilities Director

September 29, 2017