

## GAS EXPANSION AND MAIN EXTENSIONS

### I. PURPOSE:

- A. Section 106-126 of the Code of the City of Richmond, Virginia requires the Director (the "Director") of the Department of Public Utilities ("DPU") to "determine when gas mains or services are to be constructed or extended within or without the corporate city limits." This regulation also is authorized by City Code Section 106-32 which authorizes the Director to make reasonable rules and regulations as deemed necessary to ensure the proper management, conduct, operation and control of the City of Richmond gas utility.

### II. DEFINITIONS:

- A. **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.
- B. **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.
- C. **Contribution In Aid (CIA):** Capital required and contributed by the Customer or Developer to make DPU's prescribed IROR on a specific project.

### III. POLICY:

- A. DPU may extend gas mains and make other investments to serve additional customers and retain existing customers as authorized in Section 106-126 of the Richmond City Code. 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 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 DPU 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 utility to justify the investment.
- B. To determine whether DPU should undertake any gas main extension project or other investment, the Division of Energy Services will calculate the NPV of the project using the current NPV criteria and NPV model. In addition, the division 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%

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IROR if recommended by the Division of Energy Services and approved by the Division of Energy Services signing authority Administrator 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 (a 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 the Division of Energy Services.
- ii) Energy Services sends Technical Services a cover sheet detailing where gas is requested with the expected gas load and contract period. If this is a new subdivision, a map or 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.
- iii) 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 (paving).

E. 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, the Division of Energy Services shall increase the required rate of return. Projects which do not meet the required payback period or rate of return, or projects which present risk to the utility above that which is acceptable, may require the customer to provide some form of security that is acceptable to the Department.

F. Alternate methods, such as a CIA equal to any negative net present value amounts, performance bonds, letters of credit and contract commitments, may also be considered to make a marginal project acceptable.

G. For a CIA, the customer shall pay the CIA up front prior to any design or construction work by DPU. With the Director's approval, DPU may offer as part of the contract terms under which the contributing customer may receive a refund of the CIA (City Code Sections 106-127 & 106-128). This refund shall be based on the net present value contribution of subsequent customers who utilize the initial main in a 3- to 5-year period as specified in the contract. For the following projects, some type of adequate security is required:

- i) Single customer projects over \$500,000;

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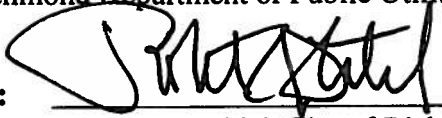
- ii) Developers new to the area without references;
  - iii) Residential conversion projects;
  - iv) Where the NPV financial analysis is negative.
- H. The customer shall submit the CIA check with either the gas permit application or the Main Extension Contract. The check is given to Energy Services – New Services Team and is deposited into an account designated by the New Services Team.
- I. The Financial Operations Division will determine the type, amount and term of the required security, subject to review by the DPU Director or designee. Exceptions or waivers on the required security are subject to the Director’s approval.
- J. New Gas Services – A net present value evaluation (NPV) of each service is required. If the NPV indicates that the gas service will require Aid in Construction from the applicant, staff will notify the applicant of the amount of Aid in Construction required or that additional gas equipment will be required. The Aid in Construction 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.
- K. 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.
- L. The project analysis and approval package shall be handled in the following manner:
- i) Division of Energy Services will prepare an analysis and approval package for each gas main extension project that includes:
    - a) A description of the project;
    - b) The NPV calculation and supporting details, including the complete estimated cost of the actual mains that will be used in the project; and,
    - c) Technical Services prepares preliminary maps that show present and proposed mains, locations of proposed connections to existing system and required infrastructure improvements and models entire project based on projected gas loads.
- M. Each project must be approved in the following manner:
- i) All projects must be reviewed and approved by the Division of Energy Services Manager.
  - ii) Projects costing more than \$50,000 (or current signing authority level) must be approved by the Energy Services Manager and the Controller, and countersigned by the Director of DPU.

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- iii) The Financial Operations Division shall review each project and report to the DPU Director on compliance with this policy on a monthly basis.
- N. 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 which may include increased CIA to cover the cost of completed work that is not generating revenue and provisions to abandon unused mains.
- O. No construction work on extending a gas main will be started until all approvals and the proper commitment from customers/developers required under this policy have been obtained. The approved project package (containing either the signed contract or the required homeowner permits) is forwarded to Technical Services with a release to design the main extension project.
- P. 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 two to five 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 Gas & Water Distribution for approval by the Controller and Director during the budget process.
- Q. The Division of 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 DPU Director must approve any modifications to this policy, to be executed in writing.
- R. Customers that have agreed to pay the shortfall to have a gas main extended to their property and who wish to have the monies returned if additional customers along the main extension come on-line, must sign a contract with DPU. 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 aid to construction.
- S. 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.

This regulation shall be effective July 1, 2012, and at that time shall supersede all conflicting City of Richmond Department of Public Utilities rules, regulations, and policies.

Approved: \_\_\_\_\_

  
Robert C. Steidel, City of Richmond Director of Public Utilities

Date: \_\_\_\_\_

22. August . 2012