

# Rochester Gas and Electric Corporation

## 2013 Five-Year Plan Electric Research and Development Report



### **Pursuant to State of New York Public Service Commission Orders Related to the Reporting of Research and Development Activities**

**April 1, 2013**

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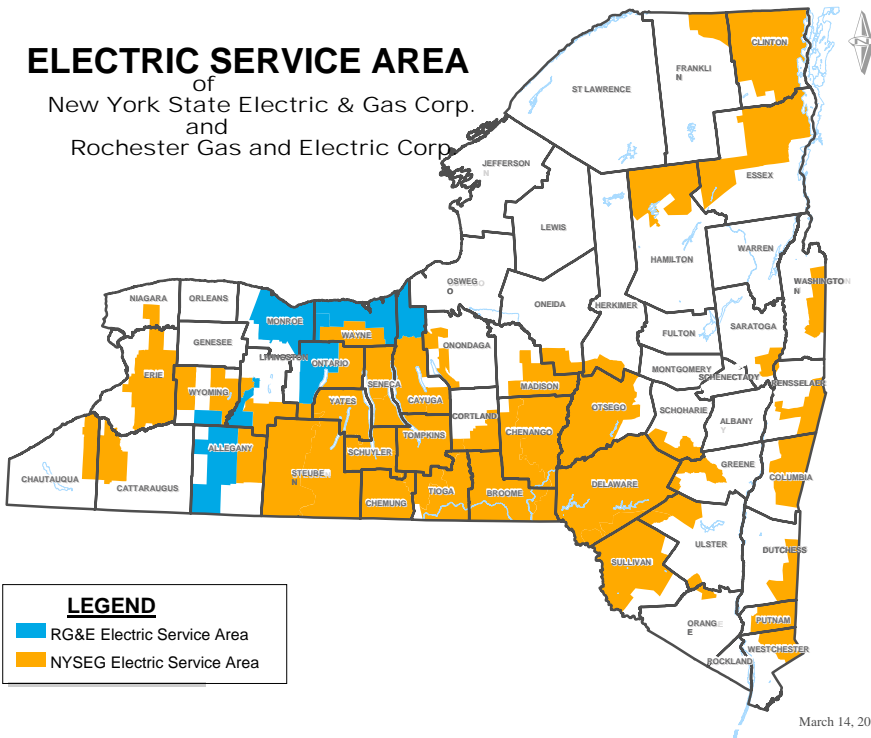
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## Foreword

RG&E, a Rochester-based subsidiary of Iberdrola USA, serves 360,000 electricity customers and 301,000 natural gas customers in a nine-county region centered on the City of Rochester. Providing outstanding customer service and meeting our customers' energy requirements in an environmentally-responsible manner, RG&E is a valuable asset to the communities we serve. For more information about RG&E, visit [rge.com](http://rge.com).

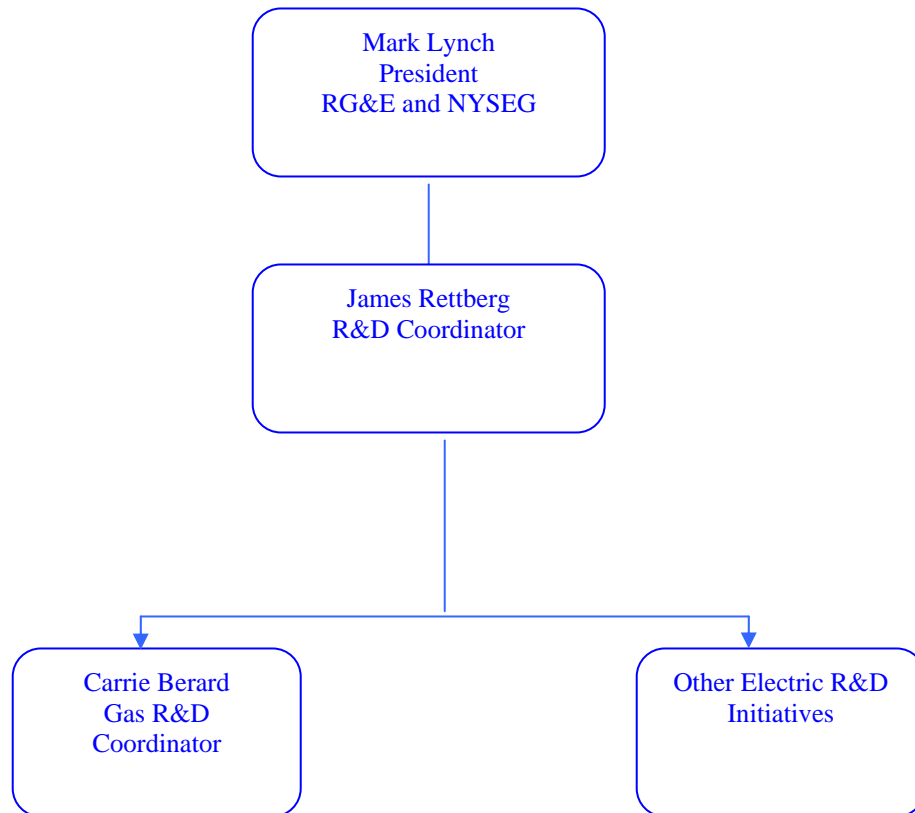
### ELECTRIC SERVICE AREA

of  
New York State Electric & Gas Corp.  
and  
Rochester Gas and Electric Corp.



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## ORGANIZATION CHART



## Introduction

Beginning in 2004, the R&D function at NYSEG and RG&E has been administered by a combined staff in the Energy Technology Group. NYSEG's staff will continue to maintain an electric R&D function through a staff primarily focused on Gas R&D supplemented by project specific support from staff at both NYSEG and RG&E; however, future electric R&D projects will be funded by the respective Business Areas.

## Goals and Objectives

R&D activities are focused on preparing for the future by providing technology that:

- Increases system operational performance
- Improves restoration time
- Reduces outage incidence
- Lowers operating cost
- Improves customer satisfaction
- Assists in meeting emerging regulatory requirements
- Provides growth opportunities
- Improves system efficiency
- Improve safety

As areas of interest are identified the value and need for the project are evaluated for each company. Projects of mutual benefit to NYSEG and RG&E are coordinated, sharing costs on a proportioned basis to accomplish increased benefits at a reduced cost to both companies.

## Internal Research

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RG&E internal electric research projects are categorized into the main process areas of

- Distribution
- Distributed Resources

## Distribution

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Our Electric Distribution Program investigates a variety of technologies, focused on:

- Reducing operating costs and future expenditures for capital equipment;
- Improving and optimizing reliability of the distribution system;
- Improving and enhancing electric service for our customers.

Projects: None currently budgeted

## Distributed Resources

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RG&E's Distributed Resources Program would include energy generation, energy storage, and the use of waste heat where the resource(s) are typically located close to the user. The primary objective would be to study small modular sources of electric generation and storage distributed around the electric distribution system to provide NYSEG with supply and T&D alternatives, and our customers with credible information. Success in this program area in particular requires close cooperation with the Coordinator of the gas R&D program and the resources available both inside and outside of the company.

Projects: None currently budgeted

## Transmission

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Projects within RG&E's Electric Transmission Program would investigate a variety of technologies to:

- Reduce operating and maintenance costs, as well as future capital equipment costs.
- Increase operational flexibility enabling the strategic and competitive operation of the transmission system.
- Minimize and control environmental health and safety impacts.

Electric transmission research involves work relevant to overhead and underground transmission lines, substation equipment and protective relaying, controls, and monitoring systems. The program's primary objective is to increase availability, reliability, and performance of this equipment.

Projects: None currently budgeted

**ROCHESTER GAS AND ELECTRIC CORP. ELECTRIC RESEARCH, DEVELOPMENT, AND  
DEMONSTRATION PROGRAM EXPENDITURES  
(\$000)**

PROJECT TITLE		ACTUAL COST	ANTICIPATED EXPENDITURES			
		2012	2013	2014	2015	2016
<b>Administration</b>						
Research & Development (Salaries)		0	0	0	0	0
<b>Total Administration</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Company contributions to industry research and development programs</b>						
NYSERDA Electric*		3,787	4,344	3,297	4,215	6,119
<b>Subtotal</b>		<b>3,787</b>	<b>4,344</b>	<b>3,297</b>	<b>4,215</b>	<b>6,119</b>
<b>TOTAL</b>		<b>3,787</b>	<b>4,344</b>	<b>3,297</b>	<b>4,215</b>	<b>6,119</b>

\* Represents funds transferred to NYSERDA in accordance with the Commission's Order in Case 10-E-0457, issued and effective October 24, 2011.

# ABBREVIATIONS

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NYSEG	New York State Electric & Gas
NYSERDA	New York State Energy Research Development Authority
RG&E	Rochester Gas and Electric
SBC	Systems Benefit Charge
T&D	Transmission and Distribution