

# Smart solutions that **work**

## **Engineering excellence. Innovative custom designs. Exceptional results**

**that save energy and money.** That's what New York City-based WM Group Engineers delivers to international clients in a wide range of markets from colleges and universities and medical centers to government agencies and commercial real estate. We're known for our creative, effective - and yes, smart - planning, design and commissioning of systems for

- > district heating and district cooling
- > cogeneration/CHP
- > building mechanical, electrical, plumbing and technology (MEPT)
- > LEED® building standards

By focusing on system optimization, the firm has a track record of producing exceptional energy- and money-saving engineering results for some of the most complex, high-profile projects in the U.S. and around the world.

WM Group has grown largely based on repeat business and referrals from clients or contractors who have experienced firsthand the "excellence in client service and excellence in engineering" that the company aims to offer. WM Group delivers significant savings to its clients along with innovative designs and plans tailored to each client's needs – no 'cookie-cutter' solutions.

The company has positioned itself as WM Group Engineers: Smart solutions that work, reflecting how the company differentiates itself from its competitors. Other companies may design solutions, but not all of the solutions result in optimal operations and cost savings. WM Group thinks "smart."

## Leading the Way



WM Group Engineers is led by President and Principal Hemant R. Mehta, PE, who was named 2011 Energy Engineer of the Year for Region I by the Association of Energy Engineers and Energy Engineer of the Year for 2010 by the New York Chapter of the Association of Energy Engineers. Regarded as an expert in utility master planning, Mehta has vast experience in optimizing the performance and improving efficiencies of existing utility plants, often through simple modifications. His recommendations have enabled many facilities to save millions of dollars in capital and operating costs.

## WM Group's Services

- > Master planning
- > System optimization
- > Feasibility studies
- > Detailed design
- > Construction administration
- > Equipment procurement
- > Field services
- > Commissioning and startup
- > Operations advice and training
- > Peer review
- > Expert witness

# Success Stories

## IBM Corp., Essex Junction, Vt.

Central Utility Plant Master Plan

**The smart solution:** WM Group's \$12 million plan for reusing existing chiller plant capacity saved IBM nearly \$30 million in capital costs against the plan proposed by other consultants. Proposed expansion of district heating and cooling systems.

**Key services provided 1995 to 1997:** planning, system optimization, design, construction administration, peer review



## World Trade Center, New York, N.Y.

The Port Authority of New York and New Jersey  
Chilled-Water Plant and River Water Systems Design

**The smart solution:** WM Group was selected to provide detailed design and construction documents for a central chilled-water plant and distribution systems to serve much of the new center. Collaborating closely with numerous design teams, WM Group produced plans for a new 12,500-ton chiller plant, located within the Memorial & Museum, which will utilize water from the Hudson River. The firm also designed the renovation of a river water pump station, inactive and corroded since Sept. 11, 2001, plus a distribution network that will run through various stakeholder spaces on the site.

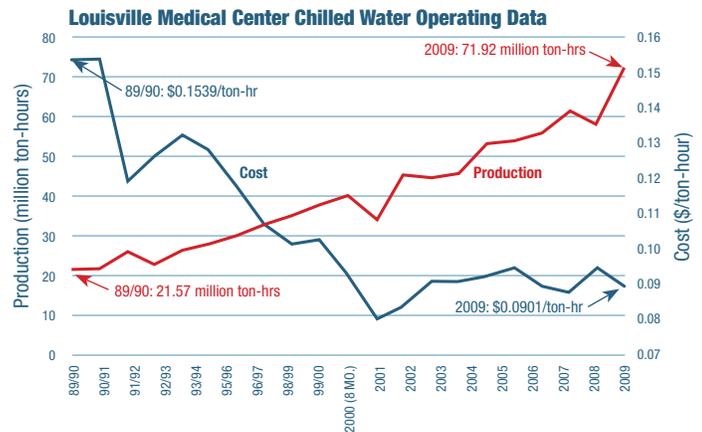
**Key services provided 2006 to 2011:** planning, design

## Louisville Medical Center, Louisville, Ky.

Multiple Chilled-Water System Projects

**The smart solution:** WM Group's 20-year vision for the site has cut chilled-water system costs by 50 percent – while total annual campus production has tripled.

**Key services provided 1984 to present:** planning, system optimization, design, construction administration, operations advice and training, peer review



## New York-Presbyterian Weill Cornell Medical Center, New York, N.Y.

Cogeneration Plant Feasibility Study

**The smart solution:** Studied economic and physical feasibility of building a combined heat and power system at central plant that would parallel utility grid. Proposed using state-of-the-art circuit breakers along with custom-made low-impedance transformer that met Con Edison's requirements. NYPH became first Manhattan facility to receive Con Edison's approval of CHP system paralleling with grid and proceeded to build CHP system that's expected to save \$5 million in annual energy costs.

**Key services provided 2004 to 2008:** planning, design

## Fiona Stanley Hospital, Murdoch, Australia

Central Energy Plant Configuration Study

**The smart solution:** The Fiona Stanley Hospital is a new state-of-the-art hospital to be constructed by 2013 in Murdoch, Australia. WM Group was chosen to study central energy plant configuration and implementation options. To ensure the reliability and availability of this critical facility's energy supply, the study included a minimum equipment redundancy requirement of N+1 and the potential operation of the hospital in 'island mode.' WM Group produced a detailed study of the various options, ultimately recommending a new central energy plant configuration that will reduce carbon dioxide emissions by nearly 44 percent compared to the base plant configuration.

**Key services provided 2007 to 2008:** planning

## **Yale University, New Haven, Conn.**

Power Plant Expansion

**The smart solution:** Planned and managed power plant expansion involving district heating, district cooling and cogenerated power systems. Returned more than \$700,000 of unused construction contingencies.

**Key services provided 2000 to 2002:** planning, system optimization, design, construction administration, commissioning, peer review

## **Memorial Sloan-Kettering Cancer Center (MSKCC), New York, N.Y.**

Chilled Water System Optimization

**The smart solution:** As part of a feasibility study, WM Group conducted a detailed survey of the site's chilled water generation, distribution and utilization systems, which revealed that all chilled water plants were primary/secondary pumping systems with booster pumps. For starters, a hydraulic analysis by WM Group determined the system could be converted to a virtual central variable volume system by bypassing 32 pumps and demolishing 23 pumps. This and other recommended projects have reduced the peak load by more than 1 MW and are saving MSKCC more than \$1 million per year.

**Key services provided 2007-2009:** planning, system optimization, design, construction administration, commissioning, operations advice and training



# Testimonials

WM Group has earned a reputation for excellence in engineering, providing 'smart solutions' along with top-quality service for a variety of types of clients. Following are comments several of them have shared:

**Massachusetts Institute of Technology – Roger Moore, Superintendent of Utilities** “WM Group is highly knowledgeable in the chilled-water plant and distribution systems. Hemant Mehta, I believe, is one of the foremost experts in chilled-water plant design and distribution systems design...I would recommend them, and I have recommended them...I think there's probably not anybody, east of the Mississippi anyways, that has more knowledge in the chilled-water plant distribution design....”

**Amgen Inc. – Dave Callahan, Senior Project Manager** “I have had the pleasure of working with Hemant Mehta and his associates for the past few years. [They] have impressed me not only with their technical competence but also with their creativity. Their services have helped Amgen reduce our operating costs as well as postpone future utility expansion projects...By providing a 'total picture' of our district energy needs WM Group has allowed Amgen to expand our campus while leveraging our existing utility plants to their fullest. We expect to save millions of dollars in capital and O&M costs in the next 10 years, because of recent and future modifications to our systems.”

**Yale University – David J. Spalding, PE, Project Manager, Office of Facilities** “WM Group Engineers was retained for the design of major upgrades at two separate central utilities plants...[They] also provided additional on-site services during the construction phase...[They] demonstrated the ability to design and implement both of Yale University's major utility projects well within the project budget. They have provided innovative engineering solutions to meet the project goals...they saved us over \$100,000 and provided us an additional 1,200 tons capacity...The construction phase services provided by WM Group have made it possible to accomplish this work...it is the personal attention and responsible 'ownership' of the project that separates WM Group from any other firm that I have worked with. I highly recommend them for any major central utility project.”

**IBM Corp. – Michael Pelletier, PE, Chilled Water System Engineer** “They have also completed an integrated design for installing an additional 12,000 tons to our existing 20,000 ton distributed central chilled water plant without causing any plant interruptions...The individuals...that I have been working with on these endeavors have only demonstrated the highest levels of professionalism and integrity.”

**NewYork-Presbyterian Weill Cornell Medical Center – Paul Schwabacher, PE, Assistant Director, Facilities** “[WM Group] has been responsive, creative and thorough. Projects they have engineered for us range from an entirely new 1,000,000-sq-ft hospital to rebuilding a 60-year-old high-pressure steam plant without interrupting service to the facility. The projects have been consistently on time and within budget.”

# Serving Diverse Clients

WM Group's primary clients comprise colleges/universities, hospitals and major corporations and institutions, the balance. In addition, WM Group has procured multiyear open-end contracts with the New York State Energy Research and Development Authority (NYSERDA), State University of New York (SUNY), Columbia University and the Port Authority of New York and New Jersey (PANYNJ). NYSERDA has approved WM Group to work on energy-savings projects for private businesses through its FlexTech program. Under this program, WM Group is eligible for reimbursement of 50 percent of WM Group fees for engineering services.

## A sampling of past and present WM Group clients.

### International

Al-Anood Towers, Riyadh, Saudi Arabia  
Dubai Investments, United Arab Emirates  
Fiona Stanley Hospital, Australia  
National Commercial Bank, Jeddah, Saudi Arabia  
National Tri-Generation CHP Company (NTCC), Saudi Arabia  
Sorouh Developments (Shams Abu Dhabi), United Arab Emirates

### Universities and Colleges

Brown University  
Columbia University  
Duke University  
Fordham University  
Harvard University  
Massachusetts Institute of Technology  
New York University  
Princeton University  
Rutgers University  
SUNY College at Old Westbury  
The College of New Jersey  
University of Connecticut  
University of Medicine and Dentistry of New Jersey  
University of Vermont  
Vassar College  
Yale University

### Energy Systems

Consolidated Edison Co. of New York  
Trigen Energy Corp.

### Medical Centers

Hospital of Special Surgery  
Louisville Medical Center  
Mount Vernon Hospital  
NewYork-Presbyterian Hospital  
NYU College of Dentistry David B. Kriser Dental Center  
NYU Langone Medical Center  
Saint Francis Hospital  
Sound Shore Medical Center

### Corporations

Amgen Inc.  
Bristol-Myers Squibb Co.  
Pfizer  
Herman Miller Inc.  
IBM Corp.  
Morgan Stanley  
Verizon Communications Inc.

### Non-Profit and Public Agencies

Battery Park City Authority  
Dormitory of the State of New York  
New York State Energy Research and Development Authority  
Pennsylvania Department of General Services (Pennsylvania State Capitol Building Complex)  
Port Authority of New York & New Jersey (World Trade Center)  
The Church of Jesus Christ of Latter-day Saints (Manhattan New York Temple)

### Architects and Commercial Real Estate

Albanese Organization Inc.  
Chelsea Associates  
di Domenico + Partners LLP  
Maxwell-Kates Inc.  
North End Ave Associates LLC  
Pelli Clark Pelli Architects  
Rose Associates Inc.

### Hospitality & Entertainment

Foxwoods Resort-Casino  
Lincoln Center for the Performing Arts  
Marriott International Inc.  
The Walt Disney Co.  
Westchester Country Club

### Other

FlexTech consultant for NYSERDA  
On-call contract with Port Authority of New York and New Jersey  
On-call contract with Dormitory Authority of the State of New York  
Pay for performance partner with New Jersey SmartStart



WM Group Engineers is a member of the Combined Heat and Power Partnership of the U.S. Environmental Protection Agency.

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**WM**Group Engineers  
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