



SIEMENS

[www.siemens.com/demandflow](http://www.siemens.com/demandflow)

# First City Tower – strategy to reduce energy consumption

Achieve annual energy reduction targets and maintain LEED Gold Certification with Demand Flow from Siemens

Leveraging Demand Flow technology, Siemens and CB Richard Ellis have helped First City Tower reduce energy consumption, maintain LEED Gold Certification and receive significant utility rebates.

## The building

In downtown Houston, First City Tower is a 49-story, Class “A” CB Richard Ellis property. Approximately 2,500 people work in the 120,770 m<sup>2</sup> facility, which is committed to sustainability and efficient operations. Through the efforts of the management team, First City Tower has achieved the LEED Gold accreditation.

## The challenge

To maintain its LEED Gold status, First City Tower has an overall sustainability strategy that includes annual energy reductions of 5% for the facility. By working with Siemens, First City Tower wanted to achieve that target and find a holistic solution that would generate a rapid return on investment.

Answers for infrastructure.



### The solution

To help First City Tower to achieve its objectives, Siemens proposed Demand Flow™ to make the central chilled water plant more energy-efficient. Demand Flow is a proven control strategy that optimizes the complete central chilled water system, including potential air-side savings. With its controller's specialized algorithms the Demand Flow solution would deliver chilled water system efficiencies through First City Tower's existing Johnson Controls' building automation system.

The building's owners compared Demand Flow with a competitive chiller plant optimization solution that requires variable frequency drives (VFDs) on compressor motors. The compressor motors at First City Tower are original to the building – since the 1970s – and the plant's design presented a challenge in replacing the chillers. To achieve maximum efficiency, while avoiding the technical risks and high costs of compressor VFDs, First City Tower selected Demand Flow from Siemens.

Once Demand Flow is fully implemented in First City Tower's chiller plant, the following results are estimated:

- 30% reduction in energy usage within the central chilled water plant
- 8% overall energy reduction for the entire facility

By helping reduce the overall energy usage for the building, First City Tower will easily achieve its energy reduction goal – a mandate from the building owner and earn additional points that will help the building maintain its LEED Gold Certification.

### Highlights

- Proven control strategy to optimize complete central chilled water system
- 30% reduction in energy usage within central chilled water plant
- 8% overall energy reduction for entire facility