



2007 New Jersey Clean Energy Leader

Trump Marina Clean Energy Business Leader of the Year

PROJECT INFORMATION

Organization

- Trump Properties

Project Name

- Trump Marina Energy Conservation Project

Location

- Atlantic City, NJ

Project Contact

- Joseph Polisano, VP of Facilities, Trump Properties

Technologies

- Lighting
- HVAC Variable Speed Motor Drives
- Occupancy-based Room Controls
- Variable Speed Kitchen Hood Fans
- Energy Recovery for Ventilation Air
- Water Conservation

NJCEP Incentive/Rebate

- \$200K from NJ SmartStart Buildings Program for energy efficiency measures

PROJECT SAVINGS

Energy Costs/Savings (Trump Marina):

- \$6.3 million investment
- \$2.35 million annual savings (electric and gas)

Energy Savings (Trump Marina, Trump Taj Mahal, & Trump Plaza)

- \$11 million saved annually
- 90 million+ kWh per year
- 1.7 million therms of fuel saved per year
- 150 million lbs. of CO₂ avoided per year

Project information, savings, and environmental benefits were provided by the project manager.



“This multimillion-dollar project, which began at Trump Marina, has the capacity to return the value of our investment in only a few years. We hope that other companies will continue to make similar decisions in the future.”

Joseph Polisano
VP of Facilities
Trump Properties



Background

In 2005, Trump Marina, a 728-room hotel and casino in Atlantic City, had an energy bill averaging around \$360,000 a month. An energy study was conducted using proposed energy conservation measures, and simulated facility energy use utilizing hourly analysis software and operation and maintenance savings. To realize energy cost and usage savings, Trump Properties embarked on an aggressive program, with Trump Marina becoming the pilot property for implementation.

Challenge

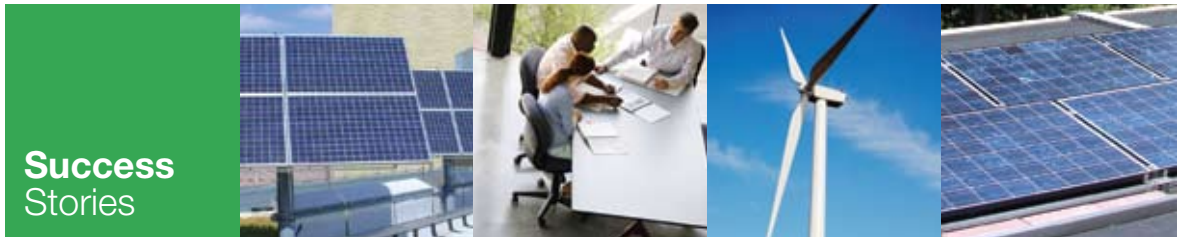
After extensive analysis of energy savings options, Trump Properties decided on a competitive bid energy performance contract to implement various demand side management technologies. This was a very innovative direction to take for a hospitality property. Many of these technologies had not previously been considered in the hospitality industry and the high risk of customer dissatisfaction could produce massive losses. Trump Properties understood the risks and stepped forward as the first property in Atlantic City to demonstrate such a commitment to energy conservation.

Solution

In selecting contractors for its energy performance measures, Trump Properties prepared a de-scoping document to compare all goods and services to be provided, and developed a 10-year life cycle comparison for each respondent's proposal. Concord Atlantic Engineers worked in partnership with Trump throughout the project to help the hospitality firm select contractors and realize its energy savings.

Besides the property's 728 hotel rooms, it also has a 145,000 sq. ft. casino, a 1.03 million sq. ft. garage, a marina building, and 640 marina boat slips. There was, therefore, no single answer of how to conserve energy and save on energy costs.





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Trump is saving energy and money using various demand side management technologies not previously considered for hospitality facilities.

With help from New Jersey's Clean Energy Program, including a \$200K incentive for energy efficiency measures, Trump was set to put its aggressive plans in motion.

Working with Concord Atlantic Engineers and its selected contractors – including Constellation Energy Group – Trump Marina installed a combination of energy saving measures, including:

- Lighting – utilizing occupancy sensors, high-efficiency fluorescent lighting, cold cathode lighting for its outdoor signage, and LED lighting
- Variable Speed Motor Drives – for its HVAC large air handler fans. The variable speed drives offer precision control of the HVAC based on the actual demand for heating/cooling
- Demand Controlled Ventilation – including CO₂ controls for HVAC equipment. CO₂ sensors ensure the ventilation is based on the actual occupancy of the room
- Occupancy-based hotel room controls
- Variable Speed kitchen hood exhaust fans
- Energy Recovery for ventilation air
- Water Conservation – including low-flow shower heads, sink aerators, and low-volume flush toilets

Benefits

After approximately nine months, Trump Marina saved over \$2 million in energy costs; reduced electricity by 18.2 million kilowatt hours, and avoided over 33 million pounds of CO₂ emissions and almost 50,000 pounds of nitrogen oxide emissions.

The energy efficiency efforts were then duplicated at the Trump Plaza and are in progress at Trump Taj Mahal. All three projects will yield a projected annual savings of over \$11 million in energy costs and the avoidance of over 150 million pounds of CO₂ emissions. In fact, the energy efficiency measures at the three Trump Properties equates to a reduction in electricity consumption by more than 90 million kWh, demonstrating the vast potential inherent in energy efficiency measures.

New Jersey's Clean Energy Program recognized Trump Marina as its 2007 Clean Energy Business Leader of the Year for its aggressive energy conservation measures and its leadership in promoting these initiatives to the business community at large. Other businesses can take a tip from Trump's initiatives and install their own energy conservation measures. For example, restaurants will benefit from the kitchen greasehood exhaust fans installed at Trump, and large arenas will see savings from the use of CO₂ sensors and variable speed motor drives for their HVAC systems.

More importantly, the New Jersey environment and its citizens are benefiting from the avoidance of millions of pounds of greenhouse gas emissions and the decreased drain on the electricity grid. The energy cost savings realized means a more favorable business climate for Trump, which will translate to more jobs for New Jerseyans.

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