

CUMMINS MIDDLE EAST HQ & HHP



| | | |
|----------------------------------|--|---|
| | 40 | 69 |
| Sustainable Sites | 9 | 14 |
| Water Efficiency | 5 | 5 |
| Energy & Atmosphere | 7 | 17 |
| Materials & Resources | 6 | 13 |
| Indoor Environmental | 8 | 15 |
| Innovation & Design | 5 | 5 |
| | <input type="checkbox"/> Points Achieved | <input type="checkbox"/> Points Available |

FAST FACTS

LEED Certification: **Gold, New Construction (NC) V2.2**
 Square Feet: **92,148 sq ft / Office and Industrial Building**
 Neighborhood: **Jebel Ali Free Zone South, UAE**
 Construction Cost: **\$78.4 / square foot**
 Completed: **HQ-March 2011 & HHP – May 2012**
 Date of Certification: **20 September 2012**

PROJECT BACKGROUND

A new resolution on the implementation of green building specifications and standards in the emirates of Dubai has been issued by H.H. Sheikh Mohammed bin Rashid Al Maktoum, Vice-President and Prime Minister of UAE and ruler of Dubai. As per the new resolution, effective on January 2008, all owners of residential and commercial buildings and properties in the emirates of Dubai must comply with the internationally recognized environment friendly specifications to turn Dubai into a healthy city that meets the demands of best practices and benchmarks of pollution-free sustainable development.

In response to this resolution, we are proud to inform that "**CUMMINS ME (HQ&HHP)**" has been awarded with Prestigious LEED Gold Certification established by the U.S. Green Building Council and verified by the Green Building Certification Institute (GBCI).

CUMMINS ME (HQ&HHP) – is a new construction Facility Complex project which is comprises of **Workshop, Warehouse and HQ Office (G+1)** with a total built-up area of **92,148 sq ft**. The Cummins Project building was conceived in late 2007. However in 2008, the world was hit by the global financial crisis and Cummins management had chose to defer the construction of the HHP (workshop) into a Phase II plan, and went ahead with a Phase I plan that included the construction of the HQ & Warehouse building. The Cummins Phase I HQ Plan was scheduled to be completed by the end of 2009, but the completion was delayed until the middle of 2010, when it was occupied. The Phase II Rebuild Center Plan was redesigned and started construction in the middle of 2010, and was completed by March 2012 and ready for occupancy by June 2012.

The Cummins Project was designed and constructed such that the two Phases are joined together by corridors and common cooling of the Phase I Warehouse and the Phase II Workshop through two chillers which were provided in the 2nd phase.

Both Phase have been submitted to USGBC LEED-NCv2.2 as one project for certification vying for Gold Ratings. The described Cummins Facility Complex has a gross land area of **16,5118.40 ft²**. Even the project was constructed in different phases in expand of more than 4yrs, the Project Team has not deterred from its goal of Silver Ratings and later on vying for Gold.

BENEFITS

23.8% Savings on Energy Use
48.3% Savings on Potable Water Use by Water Fixtures
47.6% Materials Use with Recycled Content
37.5% Regional Materials Use
84.0% Diverted on-site generated construction waste from landfill

CUMMINS MIDDLE EAST (HQ & HHP, Jebel Ali Freezone South, Dubai, UAE)

SUSTAINABLE SITES AND TRANSPORTATION

The project team sought to encourage sustainability. The following are strategies to support it:

- ◆ Provides preferred parking and low-emitting and fuel-efficient vehicles on-site
- ◆ Provides car/van pool parking
- ◆ 100% of non-roof impervious surfaces on-site have been paved with highly reflective materials
- ◆ 100% of roofing materials meet the SRI requirement
- ◆ Installed water efficient landscaping AND water treatment plant for recycling of water process load for irrigation purposes
- ◆ Installed rainwater tank to mitigate rainwater run-off in the site

MECSD as a Sustainability Consultant for Cummins Middle East, has created an energy model to evaluate the effectiveness of the building's energy conservation measures, in compliance with ASHRAE Std. 90.1-2004 Appendix G methodology.

The following are the Energy Efficiency Measures incorporated in the project:

- ◆ Highly insulated mass walls
- ◆ Optimized glazing and incorporation of skylights in the office, warehouse and workshops
- ◆ Efficient lighting through using LED lights in the HQ and lighting control such as motion sensors in corridors and timer control for the internal and external lighting.
- ◆ Efficient HVAC systems
- ◆ Installation of solar PV panels for some external lighting and solar water heater

INDOOR ENVIRONMENTAL QUALITY

- ◆ The IAQ performance complies with the minimum requirements of ASHRAE Std 62.1-2004, Ventilation for Acceptable IAQ
- ◆ Installed air flow monitoring device for each mechanical ventilation to monitor the fresh air
- ◆ Installed CO2 sensors to monitor the carbon dioxide concentration in the densely occupied spaces
- ◆ Developed and implemented a Construction Indoor Air Quality (IAQ) Management Plan in reference to SMACNA guidelines
- ◆ Use of building finishes materials with low emission of volatile organic compounds (VOC) for adhesives, sealants, paints and coatings
- ◆ Had installed carpet which is CRI certified

OTHER GREEN FEATURES INCLUDES

- ◆ Earned an exemplary performance in with recycled content construction materials use, water efficient, heat island effect, and maximize open space.
- ◆ Provides appropriately sized dedicated areas for the collection and storage of recycling materials

THE TEAM

Owner: **Cummins Middle East FZE**

Design Consultant: **Design Concepts**

Contractor:

Phase I (Warehouse & HQ) – FAST Construction LLC

Phase I (Workshop) – Pravarthi Building Contracting LLC

Green Building Consultant: **Middle East Centre for Sustainable Development (MECSD), Dubai, UAE**

Chief Technical Officer: **Thom Bohlen, Architect, LEED AP**

LEED AP: **Melanie Bacho, Sheila Mateo & Loveleen Raval**

Commissioning Authority: **Pacific Control Systems**

Photograph Courtesy of: **Cummins ME**