EXISTING MBCC SUSTAINABILITY STATUS

- Urban location with multiple bus routes to/from MBCC
- CMB public parking has preferred parking spaces for alternative fuel / low-emitting vehicles
- Light-colored roofing to minimize heat-island effect
- Exhibit Hall lighting is being replaced with energy-efficient fixtures
- Recycling program in place throughout MBCC

MBCC EXPANSION MASTER PLAN SUSTAINABILITY RECOMMENDATIONS

- Promote alternative transportation with current bus routes, bicycle racks for visitors and employees; parking garage with preferred parking spaces for alternative fuel / low-emitting vehicles
- Stormwater drainage retained on site with underground cisterns, filtered by Florida-friendly landscaping
- Light-colored paving to reduce heat-island effect (in addition to light-colored roofing)
- Building orientation is designed with glazing facing south with deep overhangs for lower heat gain
- Deep vertical fins also reduce solar heat gain
- Reduced water usage with drought tolerant landscaping, low-flow plumbing fixtures and kitchen equipment
- Low-VOC interior finishes for a healthier indoor environment
- Indoor Air Quality plan will be utilized during construction to ensure a healthier indoor environment
- Possible solar panels on the existing exhibit hall roof, which is large and can provide 1.2 to 1.4 megawatt of power (enough to power the garage and exhibit hall lighting)
- Possible vegetated roof on the new construction, which would reduce the heat gain, filter the stormwater and reduce the heat-island effect
- MBCC will be included in the geothermal plant campus as per Ameresco project

LEED-NEW CONSTRUCTION

As per LEED-NC v3 checklist, the MBCC Expansion has the potential to be Silver or Gold certified

LEED 2009 for New Construction and Major Renovation

Project Checklist

Project Name: Miami Beach Convention Center Expansion Master Plan

Date: 21 June 2010

22	2	2	**Sustainable Sites**		Possible Points:	**26**
Y	N	?				
Y			Prereq 1	Construction Activity Pollution Prevention		
1			Credit 1	Site Selection		1
5			Credit 2	Development Density and Community Connectivity		5
	1		Credit 3	Brownfield Redevelopment		1
6			Credit 4.1	Alternative Transportation—Public Transportation Access		6
1			Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms		1
3			Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles		3
2			Credit 4.4	Alternative Transportation—Parking Capacity		2
		1	Credit 5.1	Site Development—Protect or Restore Habitat		1
		1	Credit 5.2	Site Development—Maximize Open Space		1
1			Credit 6.1	Stormwater Design—Quantity Control		1
1			Credit 6.2	Stormwater Design—Quality Control		1
1			Credit 7.1	Heat Island Effect—Non-roof		1
1			Credit 7.2	Heat Island Effect—Roof		1
	1		Credit 8	Light Pollution Reduction		1

6	0	4	**Water Efficiency**		Possible Points:	**10**
Y			Prereq 1	Water Use Reduction—20% Reduction		
2		2	Credit 1	Water Efficient Landscaping		2 to 4
				Reduce by 50%		2
				No Potable Water Use or Irrigation		4
2			Credit 2	Innovative Wastewater Technologies		2
2		2	Credit 3	Water Use Reduction		2 to 4
				Reduce by 30%		2
				Reduce by 35%		3
				Reduce by 40%		4

9	18	8	**Energy and Atmosphere**	Possible Points:	**35**
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
2	15	2	Credit 1	Optimize Energy Performance	1 to 19
				Improve by 12% for New Buildings or 8% for Existing Building Renovations	1
				Improve by 14% for New Buildings or 10% for Existing Building Renovations	2
				Improve by 16% for New Buildings or 12% for Existing Building Renovations	3
				Improve by 18% for New Buildings or 14% for Existing Building Renovations	4
				Improve by 20% for New Buildings or 16% for Existing Building Renovations	5
				Improve by 22% for New Buildings or 18% for Existing Building Renovations	6
				Improve by 24% for New Buildings or 20% for Existing Building Renovations	7
				Improve by 26% for New Buildings or 22% for Existing Building Renovations	8
				Improve by 28% for New Buildings or 24% for Existing Building Renovations	9
				Improve by 30% for New Buildings or 26% for Existing Building Renovations	10
				Improve by 32% for New Buildings or 28% for Existing Building Renovations	11
				Improve by 34% for New Buildings or 30% for Existing Building Renovations	12
				Improve by 36% for New Buildings or 32% for Existing Building Renovations	13
				Improve by 38% for New Buildings or 34% for Existing Building Renovations	14
				Improve by 40% for New Buildings or 36% for Existing Building Renovations	15
				Improve by 42% for New Buildings or 38% for Existing Building Renovations	16
				Improve by 44% for New Buildings or 40% for Existing Building Renovations	17
				Improve by 46% for New Buildings or 42% for Existing Building Renovations	18
				Improve by 48%+ for New Buildings or 44%+ for Existing Building Renovations	19
	3	4	Credit 2	On-Site Renewable Energy	1 to 7
				1% Renewable Energy	1
				3% Renewable Energy	2
				5% Renewable Energy	3
				7% Renewable Energy	4
				9% Renewable Energy	5
				11% Renewable Energy	6
				13% Renewable Energy	7
2			Credit 3	Enhanced Commissioning	2
2			Credit 4	Enhanced Refrigerant Management	2
3			Credit 5	Measurement and Verification	3
		2	Credit 6	Green Power	2

6	5	3		**Materials and Resources**	Possible Points: **14**
Y			Prereq 1	Storage and Collection of Recyclables	
1	1	1	Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3
				Reuse 55%	1
				Reuse 75%	2
				Reuse 95%	3
	1		Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
1		1	Credit 2	Construction Waste Management	1 to 2
				50% Recycled or Salvaged	1
				75% Recycled or Salvaged	2
	2		Credit 3	Materials Reuse	1 to 2
				Reuse 5%	1
				Reuse 10%	2
2			Credit 4	Recycled Content	1 to 2
				10% of Content	1
				20% of Content	2
2			Credit 5	Regional Materials	1 to 2
				10% of Materials	1
				20% of Materials	2
	1		Credit 6	Rapidly Renewable Materials	1
		1	Credit 7	Certified Wood	1

10	4	1		**Indoor Environmental Quality**	Possible Points: **15**
Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
1			Credit 1	Outdoor Air Delivery Monitoring	1
	1		Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
		1	Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
1			Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
1			Credit 5	Indoor Chemical and Pollutant Source Control	1
1			Credit 6.1	Controllability of Systems—Lighting	1
	1		Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1	Thermal Comfort—Design	1
1			Credit 7.2	Thermal Comfort—Verification	1
	1		Credit 8.1	Daylight and Views—Daylight	1
	1		Credit 8.2	Daylight and Views—Views	1

6	0	0	**Innovation and Design Process**	Possible Points:	**6**
1			Credit 1.1	Innovation in Design: Green Building Program (by contractor)	1
1			Credit 1.2	Innovation in Design: Low Mercury Lighting	1
1			Credit 1.3	Innovation in Design: Green Cleaning	1
1			Credit 1.4	Innovation in Design: Exemplary WEc3 Water Use Reduction by 45%	1
1			Credit 1.5	Innovation in Design: Exemplary SSc4.1 Public Transportation	1
1			Credit 2	LEED Accredited Professional	1
1	0	3	**Regional Priority Credits**	Possible Points:	**4**
		1	Credit 1.1	Regional Priority: SSc5.2 Maximize Open Space by Case 3 to 20%	1
		1	Credit 1.2	Regional Priority: MRc1.1 Building Re-use to 75%	1
		1	Credit 1.3	Regional Priority: WEc2 Innovative Wastewater Technologies	1
1			Credit 1.4	Regional Priority: MRc5 Regional Materials 20%	1
60	29	21	**Total**	Possible Points:	**110**

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

(DRAFT) SUSTAINABILITY (LEED) NARRATIVE

I. MECHANICAL, ELECTRICAL, AND PLUMBING CREDITS:

WE PR1: Water Reduction

EA PR1: Fundamental Commissioning of the building

EA PR2: Minimum Energy Performance

EA PR3: Fundamental Refrigerant Management

EA CR1: Optimize Energy Performance

EA CR2: On-Site Renewable Energy

1. Use Photovoltaic panels on roof of existing building (375,000 square feet).
2. Approximate 1.2 to 1.4 Megawatts (1200 KW) of power can be provided by solar panels.
3. Approximate Cost is between $7 and $9 million.
4. Backup power is by FPL grid; if battery backup is desired, it will add additional cost for the batteries and a room to house such.
5. Possible uses:
    - Parking Garage Lighting = 342 KW (30% of the roof square footage)
    - Halls Lighting = 654 KW (50% of the roof square footage)
    - Fountain lights and pumps = Approximately 25 KW (3% of the roof square footage)
    - Water heating = Approximately 100 KW (10% of the roof square footage)

The total average existing electrical load for the year is approximately 4800 KW (4.8 MW). The solar panels could provide power for approximately 25% of the existing Convention Center load.

EA CR2: Enhanced Commissioning of the building

EA CR3: Enhanced Refrigerant Management

EA CR5: Measurement and Verification

EA CR6: Green Power (Maybe column)

- Based on the energy usage as calculated on the Model, or the project square footage.

EQ PR1: Minimum IAQ Performance

EQ CR1: Outdoor Air Delivery monitoring

EQ CR5: Indoor chemical and pollutant source control

EQ CR6.1: Controllability of Systems: Lighting

EQ CR7.1: Thermal Comfort: Design

EQ CR6.1: Thermal Comfort: Verification

ID CR1.2: Low mercury lamps

ID CR1.4: Exemplary WE CR3-Water use reduction by 45%