Hotel Carbon Measurement Initiative (HCMI)

Denise Naguib
Vice President, Sustainability & Supplier Diversity
Marriott International, Inc.

April 30th, 2014
**Hotel Carbon Measurement Initiative**

**What is it?**

- Initiative to unite hotel industry efforts to calculate and communicate carbon emissions from guest rooms and meeting space in a uniform way.

**Why is it being done?**

- Provides a reputable voluntary methodology to respond to corporate RFPs, individual travellers, and government.
- Creates transparency in reporting.
The Facilitators

- **International Tourism Partnership** brings together leading international hotel companies to provide a voice for environmental and social responsibility in the industry.

- **World Travel & Tourism Council** is the global authority on the economic and social contribution of Travel & Tourism.

- **KPMG** is a global network of professional firms providing Audit, Tax, and Advisory services, operating in 152 countries.
The Working Group Members
Definition of Green Hotels?
May 2011
HCMI formed

Collaboration of 20 global hotel groups

Jan 2012
Phase II Methodology refinement

Feb 2012
Phase II road testing

March 2012
Phase II road testing completed

April 2012
Wider methodology refinement

May 2012
Finalisation of methodology

July 2013
Working Group Reporting using HCMI

Hotel size ranged from 48 – 4300 rooms

52 hotels in 16 countries worldwide

49 key stakeholders identified and approached

In-person meeting
Methodology

Standing data + Annual data + Supplementary data

Apportionment of consumption between rooms and meeting space

- Reporting year, conditioned area, guest room area, meeting room area
- Occupied rooms, energy consumption, emission factors
- Outsourced laundry, private space

Remaining space

Apportion

Guest room space

Meeting space

Convert to carbon using emission factors

Apportion footprint to clients

- Total annual guest room footprint (incl. Apportioned space) ÷ reporting year occupancy
- Total annual meeting space footprint (incl. Apportioned space) ÷ 365 days ÷ 10 hours

Footprint per room per night

Meeting room footprint per hour
Calculating Carbon Footprint

Footprint Per Occupied Room

\[ \times \]

Number of Occupied Rooms

\[ = \]

Carbon Footprint For Hotel Stays

Footprint Per Square Foot Per Hour

\[ \times \]

Square Footage of Meeting Space Used

\[ \times \]

\# of hour utilized

\[ = \]

Carbon Footprint For Meeting
Calculating Multiple Hotels & Meetings

Carbon Footprint For Hotel Stay - A
+ Carbon Footprint For Hotel Stay - B
+ Carbon Footprint For Hotel Stay - C

= Hotel Footprint

Carbon Footprint For Meeting 1
+ Carbon Footprint For Meeting 2
+ Carbon Footprint For Meeting 3

= Meeting Footprint
<table>
<thead>
<tr>
<th>Property Name</th>
<th>Room Night Carbon Factor (lbs CO2e per occupied room-night)</th>
<th>Total lbs CO2e from accommodation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Westfields Marriott Washington Dulles</td>
<td>99.18</td>
<td>9918</td>
</tr>
<tr>
<td>Wichita Marriott</td>
<td>225.75</td>
<td>4515</td>
</tr>
<tr>
<td>Winston-Salem Marriott</td>
<td>106.00</td>
<td>1590</td>
</tr>
<tr>
<td>World Golf Village Renaissance St. Augustine Resort</td>
<td>125.03</td>
<td>625</td>
</tr>
<tr>
<td>Worsley Park, A Marriott Hotel &amp; Country Club</td>
<td>103.36</td>
<td>129203</td>
</tr>
<tr>
<td>Yeouido Park Centre, Seoul - Marriott Executive Apartments</td>
<td>192.66</td>
<td>192661</td>
</tr>
<tr>
<td>York Marriott Hotel</td>
<td>68.16</td>
<td></td>
</tr>
<tr>
<td>Zurich Marriott Hotel</td>
<td>37.77</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>338513</td>
</tr>
</tbody>
</table>
# Cornell Benchmarking Study

<table>
<thead>
<tr>
<th>GEOGRAPHY</th>
<th>Region</th>
<th>Country</th>
<th>Upscale/Upper Upscale/Luxury</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Count</td>
</tr>
<tr>
<td>America</td>
<td>Atlanta</td>
<td>USA</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Baltimore</td>
<td>USA</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Boston</td>
<td>USA</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Charlotte</td>
<td>USA</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Chicago</td>
<td>USA</td>
<td>53</td>
</tr>
<tr>
<td>Asia</td>
<td>CHINA</td>
<td></td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Cincinnati</td>
<td>USA</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Dallas</td>
<td>USA</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Denver</td>
<td>USA</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Detroit</td>
<td>USA</td>
<td>13</td>
</tr>
<tr>
<td>Asia</td>
<td>Hong Kong-Shenzhen-Macau</td>
<td>CHINA</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Houston</td>
<td>USA</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Indianapolis</td>
<td>USA</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Kansas City</td>
<td>USA</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Los Angeles</td>
<td>USA</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Miami</td>
<td>USA</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>New Orleans</td>
<td>USA</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>New York City</td>
<td>USA</td>
<td>47</td>
</tr>
</tbody>
</table>
Why HCMI?

- HCMI was developed by industry, for industry, specifically for hotels
- Involved global stakeholders in process
- It uses the metrics of the Global Business Travel Association – 4000 companies pulling data into RFP
- It can be used by any hotel anywhere in the world
- Over 18,000+ hotels worldwide are using HCMI already; more added daily
- It is robust and transparent
- It is free for both hoteliers and customers!
Denise Naguib
Vice President, Sustainability & Supplier Diversity
Denise.Naguib@marriott.com
(301) 380-1846