

Best Tall Buildings

A Global Overview of 2013 Skyscrapers





CTBUH Awards

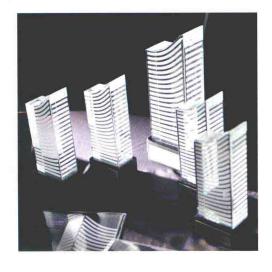
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Antony Wood, Steven Henry & Daniel Safarik













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Acknowledgments

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We would also like to thank our 2013 Awards Jury for volunteering their time and efforts in deliberating this year's winners.

About the CTBUH

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Foreword

Jeanne Gang, 2013 Awards Jury Chair

It has been an honor to serve as Chair of the 2013 CTBUH Tall Building Awards. Taking time to review and compare built work from around the world offers deep insight into the state of our collective practices, priorities, and societies. As expected of an international jury composed of architects, engineers, and technology and sustainability experts, our discussions were wideranging, touching on the many facets of tall buildings and their development around the globe.

Yet what resonated most for me was that, for many cities, tall buildings have become the "new normal." Thousands of high-rise buildings already exist and form the urban context in hundreds of cities worldwide. There are 490 new buildings scaling 200 meters or higher currently under construction around the world, with 11 over 500 meters in height. Tall buildings are no longer rare exceptions to the rule; they are becoming the preferred modality of the city.

While building tall retains unique technical challenges once reserved for iconic corporate headquarters, skyscrapers are now being enlisted to provide everyday uses such as workspace, accommodation, commerce, healthcare, and even education. These programs are finding new ways to navigate the vertical dimension. And although building tall is not the only solution to society's growth issues, it is a necessary part of sensitive land use and urban design in the twenty-first century. Tall buildings are providing smart solutions for expanding populations in new and existing – and even historic – cities.

The proliferation of these tall buildings means that it is more urgent than ever before to strive toward better designed, better performing, and less polluting strategies. This year's entries demonstrate progress along these fronts, with vertical structures continuing to employ smarter, more sustainable solutions with more ambitious structures and forms. And while some of the buildings in this year's competition have been on our collective radar for a while, this year marked their formal completion and a great moment to recognize their contributions.

In Asia, the completion of the Pearl River Tower stresses the relevance of increased energy production and performance, while the Sliced Porosity Block demonstrates the importance of better urbanism, evidenced in its creation of public space where the towers meet the ground. Recently completed buildings in Europe, including the Tour Total and ADAC headquarters, signal a return to materiality, adding liveliness and color to the streetscapes and challenging the preponderance of purely glass façades that have long held sway. And in buildings such as The Bow in Calgary and the CCTV tower in Beijing, structure is again celebrated, and inventive conceptual ideas are articulated through form and program.

The great variety of technical and programmatic solutions presented in this year's entries indicates that maturation in tall building design is coinciding with exciting experimentation. The sheer quantity and breadth of these projects translated into stronger

judging criteria and the need for winning entries to work on multiple levels. The projects recognized in this publication have all, in some way, contributed to the progressive evolution of tall buildings.

This evolution is perhaps most obvious in the entries we reviewed in this year's Innovation category, with several outstanding innovations hinting at the future of tall building construction. The Broad Sustainable Building (BSB) Prefabricated Construction Method, for example, captured the industry's attention in 2012 with the construction of a 30-story hotel building in just 15 days in Changsha, China — an innovation that has significant implications for future building. Similarly, the KONE UltraRope, a carbon-fiber hoisting technology whose weight and bending advantages effectively double the distance an elevator can travel in a single shaft, has the potential to significantly alter current barriers to height.

These and other research projects are vital to the continued progress of the tall building with regard to its sustainability and efficiency as well as its construction and operation. They epitomize the way innovative technologies work together to change our perception of what is possible within this typology and to inspire future invention.

It is with the utmost respect and admiration that I thank my fellow jurors Richard Cook, Nenjun Luo, Robert Okpala, David Scott, Karen Weigert, and Antony Wood as well as organizer Steven Henry at the CTBUH, for making the judging process so very enriching. Their contributions to our discussions on each of the many interesting projects demonstrate a deeply rooted commitment to moving architecture forward, and I am truly privileged to have stewarded this journey.

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Introduction

Antony Wood, CTBUH Executive Director

Abu Dhabi, Beijing, Calgary, London. I wonder if, even ten years ago, we'd have predicted that the Best Tall Buildings in the World completed in 2013 would be based in those four cities, as opposed to the New Yorks, Dubais, or Shanghais of the world, where the center of gravity of tall buildings – certainly in terms of numbers – seems to have been focused.

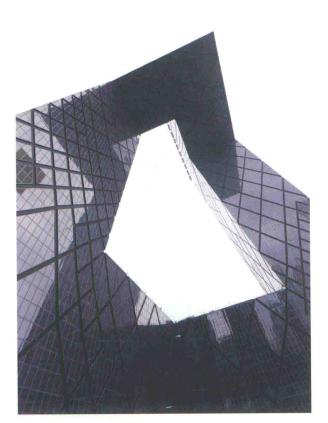
This is, of course, further evidence of the biggest trend that has been happening in tall buildings over the past



couple of decades; the simultaneous rise of skyscraper cities the world over. No longer concentrated in the US, or even Asia, we are seeing the vertical rise of cities on every continent and in virtually every region globally – increasingly so now, as the world starts to rebound from the financial crisis of five years ago.

Less apparent, but no less interesting, is the fact that, if we seek quality or innovation in tall building design and engineering – as is obviously the case with this book and the awards program that supports it – then it is often these "second-tier" vertical cities that hold the best examples, possibly enabled by their relative distance from the heated pace of construction in the megacities.

We believe that the four 2013 winning regional projects as profiled in these pages certainly do exhibit high levels of quality and innovation, but in different ways. The Bow in Calgary not only applies a steel diagrid to a curved skyscraper for the first time in North America; the building plan curves concavely into the predominant sun direction, symbolically and physically embracing the sun into the building, when the majority of buildings strive to block it out. Once inside, the building puts this solar gain to good use, especially during the cold northern winters, through a series of façade atria that act simultaneously as buffer zones and depositories for the excess heat built up in the office spaces beyond. The inclusion of three sky gardens within this façade atrium zone, and the embrace of a large public plaza at the ground plane created by the curve of the building, also assists with the social sustainability of the project.



By providing shared, semi-recreational spaces at height, where a sense of building community can develop, as well as a strong interface at the ground floor, where the public and building community meet, The Bow takes a bold step in a direction most tall buildings fail to address.

Some readers may be surprised to see the CCTV Building in Beijing winning the Asia & Australasia award this year. The building – already topped out and clad in 2008 – had such an iconic presence during the Beijing Olympics that many thought it complete several years ago. The reality, however, is that the building only became occupied and operational – an important part of the criteria for "completion" as defined by the CTBUH (see page 210) – in 2012, hence its inclusion in the awards this year. Unlike The Bow, where the innovations are primarily in environmental approach, the main innovations of CCTV are in form and internal planning. Though the building image has already been consumed millions of times and replicated on the pages of books,

Opposite: Americas winner The Bow, Calgary. The concave form is supported by a diagrid system and encloses façade atria and sky gardens.

Left: Asia & Australasia winner CCTV Headquarters, Beijing. A technically daring form creates a dramatic cantilever, helping make the CCTV Building an icon years before it actually completed construction.

journals, and in city branding since it was first proposed almost a decade ago, I ask you to cast your mind back to the first time you saw the proposition of this looping, cantilevering "anti-skyscraper" (as the architect intended it initially). Has a form as stylistically simple, and yet technically daring as this ever been attempted before? Though we have, by now, grown somewhat desensitized to that form due to its extensive media coverage, the jury felt it important to recognize the achievements of the building, and the positive impact it has already had on Beijing. Beyond form, the building program is amazingly complex, yet skillfully contained, with a "public loop" route through the building that takes visitors direct from the subway, up past television studios and associated facilities, to the spectacular observation deck with views out over the city, and down through glass apertures in the floor to the public plaza below. Speaking personally, I can say that visiting the CCTV Building is an amazing experience.

The Shard in London is, in many ways, no less remarkable than CCTV – not least in the negotiation of the considerable planning hurdles its creators overcame to make a supertall (300 meter+) building possible in such a historic city as London. The innovations in this beautiful column of glass include the clever accommodation of the differing physical requirements of its program within the tapering form: the smaller floor plates support residential and hotel programing in the top half, while larger floor plates support offices in the lower half. The project is also remarkable for its integration with, and rejuvenation of, the major transport