



ARCHITECTURE 2030 CRACKS THE BUILDING CODE

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Architecture 2030 has a knack for cutting through complexity and clarifying what needs to be done to dramatically reduce emissions from the building sector.

Take the organization's 2030 Challenge. It provides a pathway for the building sector to reach carbon neutrality by 2030. That's no small target: the sector is responsible for close to half of the USA's greenhouse gas footprint. But reform the way buildings consume energy and you open a highway to solving climate. Step one along the 2030 road? A 50% reduction in energy consumption in all new and renovated buildings by the end of 2010. That's a little more than 2 years from now.

Success depends on stronger buildings codes to catch everyone at the point where construction permits are issued. But if you think about all the building codes in every city, county and state that need to be changed, it's a Herculean task. Good luck.

But for Ed Mazria, 2030's founder and director, it's not a matter of luck but precise distillation. All he needed was a three column table with 14 rows to show any building department anywhere how to strengthen its code to hit the target.

Mazria had a lot of takers for his 2030 Challenge. The US Conference of Mayors, The National Association of Counties and the American Institute of Architects to name a few. The US Green Building Council, ICLEI - Local Governments for Sustainability, and ASHRAE (American Society of Heating, Refrigeration and Air Conditioning Engineers) to name a few more. They and others were game for the Challenge because taking action on emissions and improving energy efficiency would also yield big fuel-cost savings, create new jobs, and improve health and quality of life.

What was missing was the how, and that became Mazria's own challenge.

"No one knew how to implement the 2030 Challenge," Mazria said, "so we looked at all the building codes across the country in 12 different climate zones and came up with an elegant solution for squeezing energy consumption out of the building sector. The reception so far has been great."

While three US states have codes of their own, others -- if they have them at all -- develop them from standards created by other organizations -- like IECC, LEED, ASHRAE. Cities, towns and counties also adopt their own codes. Some are updated regularly, some once in awhile, some not for decades. So if you go to the map of US building codes maintained by the Department of Energy, it looks like an attempt to illustrate the consequences of the Tower of Babel. It's enough to make you speak in tongues.

But 2030 has found the Rosetta Stone for the sector and has translated the solution into the three column table with 14 rows. It allows a building department in any jurisdiction to identify its building code in the left hand column and see at a glance how it must be amended to make it meet the 2030 Challenge for commercial buildings (second column) and for residential buildings (third column).

"What they need to do is amend the performance path requirement of their building codes so the 50% reduction target is met," Mazria said. "It's a mechanism that allows you to catch everyone at the point where they apply for building permits."

Here's how the 2030 report explaining all this -- called Meeting the 2030 Challenge through Building Codes -- puts it:

Given the shortening timeline for dramatically reducing greenhouse gas emissions, it is imperative that governments committed to doing so have a readily accessible way to begin realizing reductions in their building sector.

The 2030 Challenge code equivalents listed in Table A provide a simple, practicable solution using existing building energy codes and rating systems. By amending existing codes based on these code equivalents, governments can be confident that their codes meet the initial 50% reduction target of the 2030 Challenge.

Table A. It could be one of the most important architectural innovations of the 21st century.

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