



**ARCHITECTURE 2030
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See the online version at www.architecture2030.org/news/news_090608.html

"The comprehensive energy plans proposed by politicians that are centered on oil drilling and nuclear power would supply just 1.8% of total US energy needs - a drop in the bucket."

-Edward Mazria

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**WHAT'S YOUR 2030 IQ?
TAKE THE QUIZ AND TEST YOUR KNOWLEDGE**

At peak production, how long will it take the US to consume a year's supply of oil from expanded off-shore drilling in the outer continental shelf?

- Four Days
- Six Weeks
- Five Months
- One Year

Check My Answer (http://www.architecture2030.org/news/2030IQ_OSDanswer.html)

How many nuclear power plants would need to be built to supply the world's current fossil-fuel-based energy needs?

- 879
- 3,123
- 7,571
- 12,954
- 19,869

Check My Answer (http://www.architecture2030.org/news/2030IQ_Nuclearanswer.html)

How much would sea level need to rise to create a catastrophic situation in the US?

- 1 meter (3.3 feet)
- 2 meters (6.6 feet)
- 4 meters (13.1 feet)
- 6 meters (19.7 feet)

Check My Answer (http://www.architecture2030.org/news/2030IQ_SLanswer.html)

DRILL HERE, DRILL NOW:

A PIPE DREAM

According to the US Energy Information Administration, oil production from drilling offshore in the outer continental shelf wouldn't begin until around the year 2017. Once begun, it wouldn't reach peak production until about 2030 when it would produce only 200,000 barrels of oil per day (in yellow above). This would supply a meager 1.2% of total US annual oil consumption (just 0.6% of total US energy consumption). And, the offshore oil would be sold back to the US at the international rate, which today is \$106 a barrel. So, the oil produced by offshore drilling would not only be a "drop in the bucket", it would be expensive, which translates to "no relief at the pump".

12,954 NUCLEAR POWER PLANTS

That's how many nuclear plants the world would need to build to replace its current fossil-fuel-based energy. Even if it was physically possible to build this many plants within the seven-year timeline set by scientists to avoid dangerous climate change (it takes 8 to 12 years to get a nuclear plant on-line), the cost would be astronomical. At \$6 billion per plant (a conservative figure), 12,954 plants would cost \$77.72 trillion - more than the total Gross World Product (GWP) of \$65.95 trillion!

Recently, politicians have suggested that the US aggressively build 45 nuclear power plants by 2030. By 2030, the US is projected to need 84 QBtu of delivered energy. So, how much energy will these 45 plants supply? About 1 QBtu. This is just 1.2% of our energy needs in 2030 - another 'drop in the bucket'. At a total construction cost of \$270 billion (not including land, waste storage, etc.), this plan is incredibly expensive, translating to "no relief in consumer utility bills".

SEA LEVEL RISE GREATER THAN EXPECTED BAD NEWS FOR THE US

A new report appearing in today's Science magazine, 'Kinematic Constraints on Glacier Contributions to 21st-Century Sea-Level Rise', projects a sea level rise of up to two meters this century. Many Americans are unaware of how little a rise in sea level is required to devastate the US. According to Architecture 2030's sea level rise study, 'Nation Under Siege', beginning with just one meter, hundreds of US cities and towns along the East Coast, Gulf of Mexico and West Coast would be inundated - from East Boston MA, Point Pleasant NJ, Charleston SC and Miami FL on the Atlantic to Cape Coral and Tampa FL, New Orleans LA, and Galveston TX on the Gulf to Foster City CA and Seaside OR on the Pacific.

Prior to 1996, the rate of sea level rise was approximately two millimeters per year. Since 1996, the rate of sea level rise has almost doubled to 3.4 millimeters per year, the increase being due to land-based ice melt in Greenland and West Antarctica (see graph below). NASA's Jet Propulsion Laboratory recently launched a new website measuring the planet's vital signs, including sea level rise.

Sea level rise is already having a significant impact on US coastal areas. "Flooding of low-lying regions by storm surges and spring tides is becoming more frequent and causing more damage and disruptions. Around the Chesapeake Bay, wetlands are being submerged, fringe forests are dying and being converted to marsh, farmland and lawns are being converted to marsh; and some roads are routinely flooded at high tides. 'Ghost forests' of standing dead trees killed by salt-water intrusion are becoming increasingly common in southern New Jersey, Maryland, Virginia, Louisiana, and North Carolina. Rising sea level is gradually intruding into estuaries and threatening fresh-water aquifers", according to a recent study (draft) from the US Climate Change Science Program.

RISING SEAS ON THE SOUTH CAROLINA COAST

Using Architecture 2030 maps and video, the Southern Alliance for Clean Energy (SACE) created this video on the impacts of rising sea level on the Charleston, SC area.

HIGHLIGHTS

Mazria Unveils Blueprint
at Historic Energy Summit

Read the article (<http://www.marketwatch.com/news/story/energy-independence-within-reach/story.aspx?guid=%7BCD11EF24-7671-498F-8F91-24C746F13A29%7D&dist=hppr>)

2030 Makes Headlines
in BusinessWeek

Read the article
(http://www.businessweek.com/innovate/content/aug2008/id2008081_566619.htm?chan=top+news_top+news+index_innovation+%2B&+design)

Your City Council
Could Save the World

Meeting the 2030 Challenge Through Building Codes provides an unprecedented and much-anticipated guide for every city, county and state in the nation to swiftly meet the greenhouse gas reduction targets of the 2030 Challenge.

Read the white paper (http://www.architecture2030.org/pdfs/2030Challenge_Codes_WP.pdf)

Adopt the 2030 Challenge

Choose to have your firm/organization listed as an official adopter, and describe your progress (obstacles/successes) as you implement The Challenge.

Sign up (http://www.architecture2030.org/2030_challenge/index.html)

Adopt the 2010 Imperative

Choose to have your school listed as an official adopter, and describe your progress (obstacles/successes) as you implement The Imperative.

Sign up (http://www.architecture2030.org/2010_imperative/index.html)

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Go to the News/Resources section of our website to get the latest news updates on issues regarding climate change and the building sector.

(<http://www.architecture2030.org/news/index.php>)

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Comments and suggestions for future Architecture 2030 E-news issues should be sent to:

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