

What's new?



**DOOMSDAY CLOCK WAS MOVED AHEAD  
30 SECONDS:  
IT IS NOW 2 ½ MINUTES TO MIDNIGHT**

**Just announced by the Bulletin of Atomic Scientists  
January 26, 2017**

**What does it mean?**

What is the Doomsday Clock?  
and  
Who are the Atomic Scientists?

-links to [Announcement video](#)

What does it all mean?  
Making sense of the statement

How can we make a difference?

Plan of action.

## What is the Doomsday Clock?

A public statement, begun in 1947 by the Federation of Atomic Scientists, to demonstrate the existential threat to humanity posed by nuclear weapons, as a countdown to self destruction. In 2007, climate change was added to the topics considered.

The Atomic Scientists was founded by a group of physicists who had worked on the Manhattan Project and after the bombing of Hiroshima and Nagasaki realized how devastating these new weapons really were. They advocated the formation of an international body to oversee and control further nuclear projects, but were overridden by the military. Shunned by their government, they reached out to the global scientific community and the public.

They have continued to monitor the nuclear industry ever since, and evolved into an international consortium of physicists, environmental scientists, engineers, and experts in many fields of foreign relations.

## First announcement of Doomsday Clock 1947

IT IS 7 MINUTES TO MIDNIGHT



1947: As the Bulletin evolves from a newsletter into a magazine, the Clock appears on the cover for the first time. It symbolizes the urgency of the nuclear dangers that the magazine's founders--and the broader scientific community--are trying to convey to the public and political leaders around the world.

The clock has been reset 22 times since then, last in 2015, from 5 minutes to 3.

1953 was the only year when the danger was more severe than today

IT IS 2 MINUTES TO MIDNIGHT



1953: After much debate, the United States decides to pursue the hydrogen bomb, a weapon far more powerful than any atomic bomb. In October 1952, the United States tests its first thermonuclear device, obliterating a Pacific Ocean islet in the process; nine months later, the Soviets test an H-bomb of their own. "The hands of the Clock of Doom have moved again," the Bulletin announces. "Only a few more swings of the pendulum, and, from Moscow to Chicago, atomic explosions will strike midnight for civilization."

2017



“Lawrence Krauss, theoretical physicist, chair of the Bulletin of the Atomic Scientists Board of Sponsors, left, and Thomas Pickering, co-chair of the International Crisis Group, display the Doomsday Clock during a news conference at the National Press Club in Washington, Thursday, Jan. 26, 2017, announcing that the Bulletin of the Atomic Scientist have moved the minute hand of the Doomsday Clock to two and a half minutes to midnight. (AP Photo/Carolyn Kaster)(Credit: AP)”

**Links to announcement Jan 26, 2017**

<https://vimeo.com/201154594>

<http://www.cnn.com/2017/01/26/world/doomsday-clock-2017/>

<http://www.bbc.com/news/world-38760792>

## What does it mean?

- 1.** Warhead decommissioning has slowed drastically, now going back to arms race mode.  
Russia and US have started to “modernize” nuclear arsenals
- 2.** Possibility of accidental or impulsive launch is increased by unstable actors
- 3.** Danger of regional conflicts increased
- 4.** Danger of terrorist theft and use of nuclear materials increased
- 5.** Cyber threats increased
- 6.** Climate change accelerating

1. Defense and Energy Departments are budgeted to spend \$30B a year for next 30 years to replace control systems, increase yields of warheads, add guidance systems to gravity bombs, build new cruise missiles, and build new trident subs. It is happening now.

Sources:

Arms Control Association

<https://www.armscontrol.org/factsheets/USNuclearModernization#overview>

[bit.ly/trilliondollartrainwreck](http://bit.ly/trilliondollartrainwreck)

Alliance for Nuclear Accountability

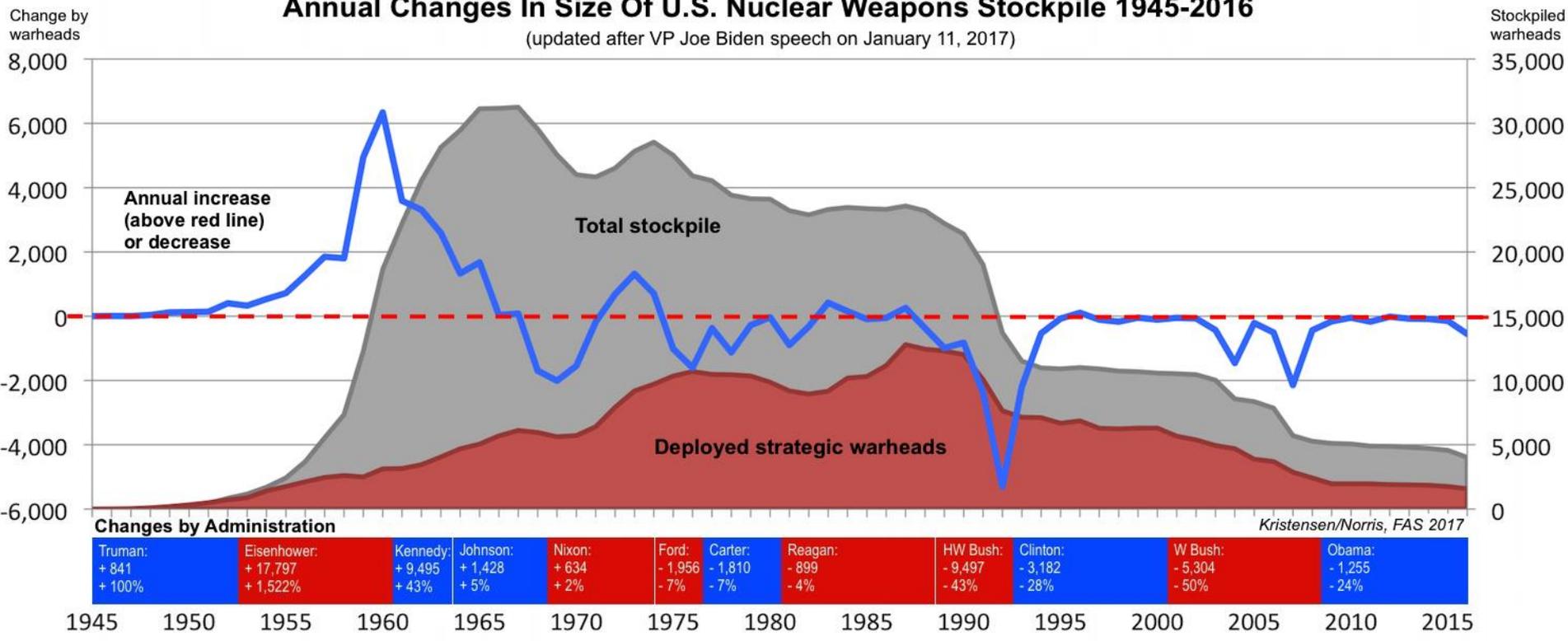
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# A quick look back: Current US nuclear arsenal remains above treaty limits

## Annual Changes In Size Of U.S. Nuclear Weapons Stockpile 1945-2016

(updated after VP Joe Biden speech on January 11, 2017)



Russian arsenal decommissioning is similarly stalled

## 2. Chance of accidental or impulsive launch increased

Reckless and uninformed talk during and after presidential campaign has cast serious doubt about stability of the single hand on the US trigger, Donald Trump.

“Both his statements and his actions as president-elect have broken with historical precedent in unsettling ways. He has made ill-considered comments about expanding the US nuclear arsenal. He has shown a troubling propensity to discount or outright reject expert advice related to international security, including the conclusions of intelligence experts.”

“North Korea conducted two more nuclear weapons tests, the second, in September, yielding about twice the explosive power of the first, in January. Pyongyang also relentlessly tested missiles, achieving a rate of about two launches per month in 2016. In his 2017 New Year’s statement, Kim Jong-un declared he would soon test a missile with an intercontinental range.”

### 3. Regional instability increasing

South Asia is a serious hotspot that could spread.

“Threats of nuclear warfare hung in the background as Pakistan and India faced each other warily across the Line of Control in Kashmir after militants attacked two Indian army bases.”

Iran and Israel continue to threaten each other.

US could renege on JCPOA, restarting Iran’s nuclear programs.

## 4. Terrorist access to nuclear materials increased

ISIS has shown that it will not stop at any level of violence to achieve its goals. The shifting battlefields in the Middle East have disrupted normal security situations in many countries.

At a UN conference last year, IAEA reported that more nuclear materials are showing up on the black market.

Increasing conflict with China may jeopardize their cooperation in securing nuclear materials, that has been established by President Obama's Nuclear Security Summits over the last several years.

Additional sources: Dr William J Perry's online course at Stanford U, "Living at the Nuclear Brink: Yesterday and Today"

## 5. Cyber security diminished

“In December, US intelligence agencies concluded that Russia had intervened in the 2016 US presidential campaign in ways that highlight the vulnerability of critical information systems in cyberspace. Information monocultures, fake news, and the hacking and release of politically sensitive emails may have had an illegitimate impact on the US presidential election, threatening the fabric of democracy, which relies on an informed electorate to decide the direction of public policy—including policy relating to existential threats such as nuclear weapons and climate change.”

As demonstrated by the 2010 US stuxnet hacking of Iran, each cyber attack provides new opportunities for expanding retaliatory hacking activity.

Artificial Intelligence (smart devices) global connectivity is growing at accelerating pace, much faster than controlling regulations.

## 6. Climate change accelerating

Each of the last 3 years have shown record global atmospheric temperature increases.

“The continued warming of the world measured in 2016 underscores one clear fact: The relationship between increased atmospheric carbon dioxide levels and increased terrestrial temperature has been researched for decades, and national science academies around the world agree: Human activity is the primary cause of climate change, and unless carbon dioxide emissions are dramatically reduced, global warming will threaten the future of humanity.”

“In 2016, however, the international community did not take the steps needed to begin the path toward a net zero-carbon-emissions world. The Marrakech Climate Change Conference, for instance, produced little progress beyond the emissions goals pledged under the Paris Accord.”

## The big question: why only 30 seconds closer?

**“The board’s decision to move the clock less than a full minute reflects a simple reality: As this statement is issued, Donald Trump has been the US president only a matter of days.”**

For the moment, the Council is waiting to see what direction the new administration chooses to go, and what responses the international community will make to their policies and actions.

In effect, they are withholding judgement, hoping that things don’t get worse, and allowing the possibility that they could improve, or not.



## A reminder of where we already were, what hasn't changed.

We still have almost 7000 nuclear warheads, Russia has about the same, China, Britain, France, Pakistan, India, and Israel all have about 200 each, and North Korea maybe 10-20.

Over 1700 of ours are deployed, ready to launch within minutes.

In each country holding nuclear weapons, launch is a prerogative of single individuals, some elected, some not.

## And a few things that have improved:

The United Nations just restarted Non Proliferation Conferences, new opportunities for cooperation.

Renewed interest by all the peace organizations and new collaboration by International groups of experts, in science, politics, and diplomacy.

And, we are still here.  
So what can we do?

## Here is a plan of action

1. Learn

2. Connect

3. Act

# 1. Learn more

[www.wjperryproject.org](http://www.wjperryproject.org)

News updates, references to books and movies, online course at Stanford U

[www.ploughshares.org](http://www.ploughshares.org)

**Early Warning** newsletter

<https://www.wagingpeace.org/>

Nuclear Age Peace Foundation **Sunflower** newsletter

<http://thebulletin.org/>

Bulletin of Atomic Scientists, and their newsletter

<http://livableworld.org/>

Council For Livable World, and their **Front and Center** newsletter

<https://www.fcnl.org/updates>

Friends Committee on National Legislation **Nuclear Calendar** newsletter

What's happening in Congress?

<https://www.congress.gov/browse>

## 2. Connect with those active peace groups

And extend the connections, by making use of what we learn, and sharing it with others:

Your Representatives at all levels

Your Churches

Your School Districts and Colleges

Your Friends and Family

None of us can do anything by ourselves, but we can be the connections that bring together effective networks

## 3. Act

Reach out

Money matters

Get out and get active

## **From the comfort of your home**

**Reach out with positive messages:**

Write **letters**, send **emails**, and make **phone calls** to **Senators** and **Representatives in Congress**,  
State Legislators, and others, including newspapers,

**Be specific** if possible, especially when legislative activity is in play:

**"Restricting First Use of Nuclear Weapons Act of 2017."  
Senate bill S. 200 , Sen. Edward Markey (D-MA),  
and House bill H.R.669 , Rep. Ted Lieu (D-CA)**

Sign online petitions and/or surveys

Use Social Media at whatever level you are comfortable with

**Vote**

## **Economic action**

Donate to the causes you support

Divest from weapons makers and their financiers

<http://www.dontbankonthebomb.com/>

Do you know where your Pension Funds are invested?

Shop smart.

Invest in socially responsible funds

<http://charts.ussif.org/mfpc/>

# **Take it to the streets and meeting rooms and offices of power**

Marches and Vigils

Attend meetings of any board or commission that may have responsibility for policies you care about

Meet your elected representatives in person

**Organize with your friends and neighbors:  
Start an action group, or local chapter of a  
larger organization**



**Can we work together for Peace?  
For our children?**

A presentation by [nomorebombs.org](http://nomorebombs.org) 2017



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