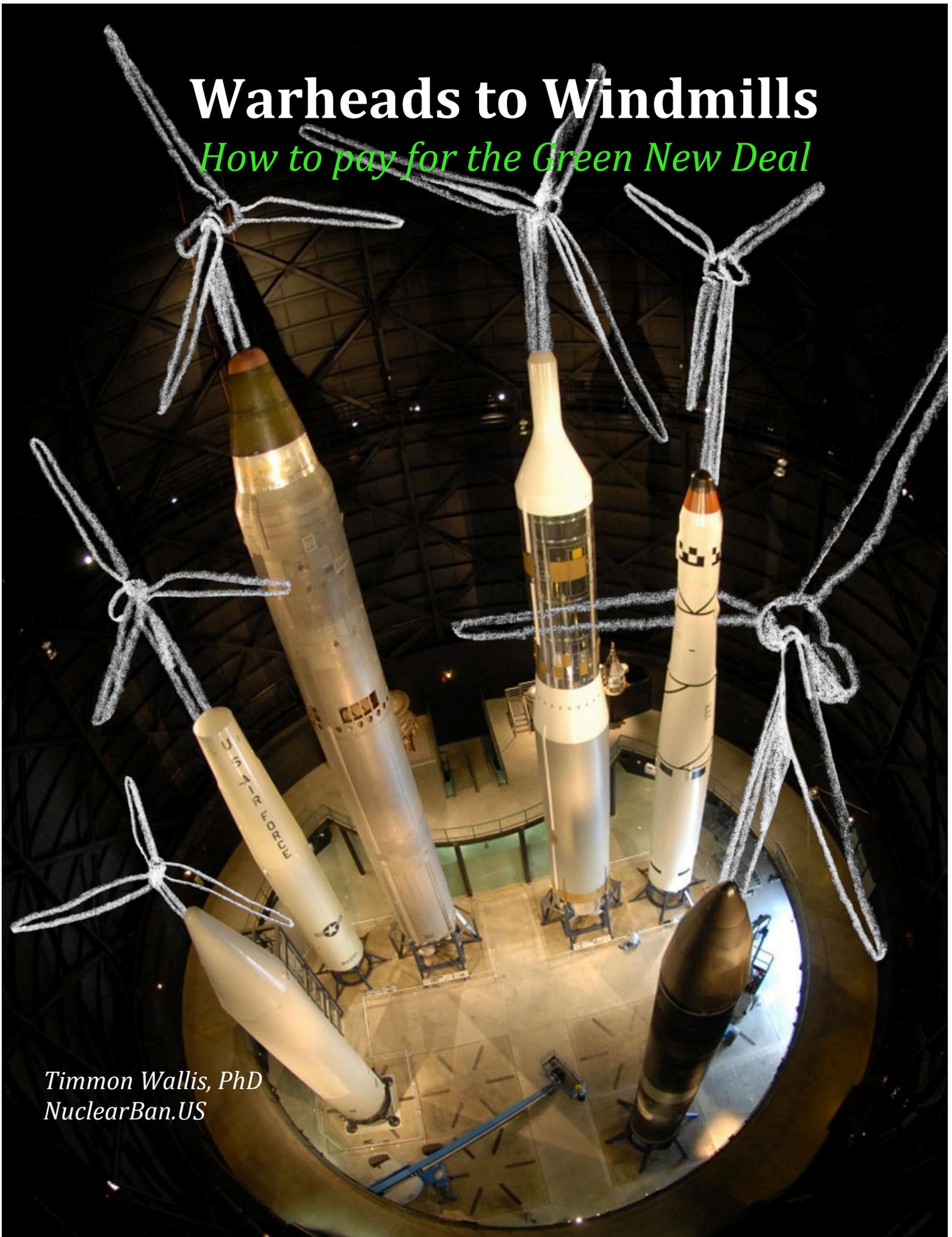


Warheads to Windmills

How to pay for the Green New Deal



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EXECUTIVE SUMMARY

Climate change poses an existential threat to the planet

- The latest IPCC report gives us until 2030 to make radical cuts in greenhouse gas emissions – and until 2050 to reduce these to zero (net) – if we are to avoid the worst effects of climate change.
- The Green New Deal (GND) is a 10-year mass mobilization of resources to fully address this challenge head-on.
- Nothing short of this will achieve the required cuts to greenhouse gas emissions in the timescale we have.

The Green New Deal will require \$9.5 trillion of investment

- The Green New Deal will *not* cost US taxpayers \$100 trillion, as some claim.
- The GND is also not going to be ‘free.’ It will require up-front investment on a massive scale, even if fully recovered later.
- The GND will also produce enormous savings and benefits over the long term.
- Damage from extreme weather events cost the US \$400 billion in 2018 and these costs could easily reach \$3 trillion by 2050.
- The cost of air pollution due to burning of fossil fuels is estimated to be as much as \$176 billion a year, or \$5.2 trillion by 2050.
- The cost of the existing fossil fuel-based economy is also high: consumers currently spend \$2 trillion per year on electricity.
- The replacement cost for existing fossil fuel infrastructure is around \$5 trillion.
- The Green New Deal will require roughly \$9.5 trillion of investment over the next 30 years, or roughly \$320 billion per year.
- This is not a ‘cost’ as such, but a capital investment, since all that money will be more than recouped by future sales of electricity and cars, bus and train fares and other income generated during that time.

Private investment can be expected to cover at least two-thirds of this total (\$6.5 trillion)

- The overall (levelized) cost of generating electricity (LCOE) from wind is already lower than it is for gas, and prices are falling fast for all renewable sources.
- Private investment in renewable energy is already targeted to reach \$1 trillion over the next 10 years, which is potentially \$3 trillion over 30 years.
- With a strong commitment to the GND from the federal government, and an expected high rate of return on investment, private investment can be reasonably expected to at least double, providing \$6.5 trillion over 30 years.

GND will require government investment of around \$3 trillion

- A shortfall of approximately \$3 trillion will need to come from the federal budget. This averages at \$100 billion per year, or slightly more than the total investment in renewables by the Obama administration.
- Additional capital could be raised by: reversing the Trump tax cuts (\$1.2 trillion), increasing the national debt (currently going up by \$1.1 trillion per year), or by ‘printing money’ with quantitative easing, as they did to bail out the banks in 2008 (approximately \$800 billion).
- The most obvious place to find ‘spare cash’ in the federal budget to pay for the GND is from the bloated military budget, which has increased by \$150 billion since 2018.
- The Department of Defense budget is now approaching \$¾ trillion per year.
- Other military-related spending from other government departments brings this to nearly \$1 trillion for FY2020.

Nuclear weapons will cost US taxpayers \$3.3 trillion to 2050

- Figures from the Department of Defense show only a fraction of the full cost of nuclear weapons to this country.
- Costs for the development, design, testing and construction of nuclear weapons themselves actually come out of the Department of Energy budget.
- Total nuclear weapons-related costs have been approximately \$70 billion per year.
- Current plans to modernize the nuclear weapons stockpile have been costed at \$400 billion over the next 30 years.
- New additions to this plan have already added another \$17 billion, and the full cost is likely to be \$100 billion over 30 years.
- Adding these additional costs to the \$1.2 trillion expected over the next 30 years brings that total to \$2.2 trillion.
- With inflation, this comes to \$3.3 trillion.
- At least \$300 billion will be needed to clean up the mess from 75 years of mining, testing and weapons production.
- The rest is needed for the Green New Deal.

Nuclear weapons also pose an existential threat to the planet

- The Bulletin of Atomic Scientists has set the Doomsday Clock to 2 minutes to midnight.
- These weapons are illegal, hugely dangerous, and very costly. It is time to eliminate them.
- The US has been legally committed to eliminating these weapons for over 50 years through the Nonproliferation Treaty.
- The 2017 UN Treaty on the Prohibition of Nuclear Weapons now outlaws everything to do with these weapons under international law.
- Unlike climate change, getting rid of nuclear weapons is relatively easy and requires only the political will to make it happen.
- Despite the abiding faith in their value as a 'deterrent' there is actually no evidence to support this theory.

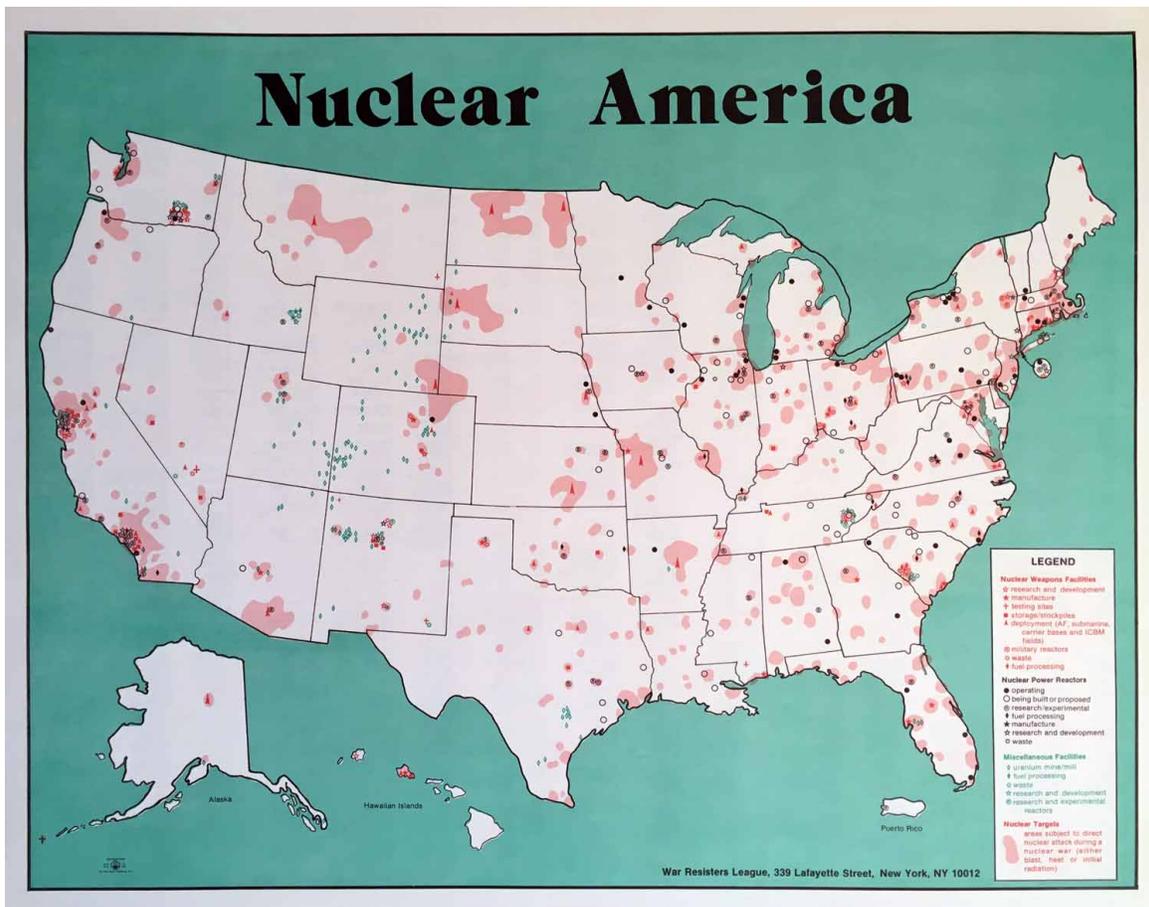
Green New Deal requires STEM experts to solve remaining issues

- The GND will require money and it will provide millions of jobs.
- Most of these jobs are blue-collar workers: PV installers, wind turbine construction workers, electric car and bus production line workers, etc.
- But there is one key ingredient without which the GND cannot succeed: expertise.
- To achieve the rapid growth in renewable energy required, and to lower the cost of making the transition, we need innovation, research, science and technology.
- We need to solve some highly complex and technical problems like large-scale battery storage, increasing the efficiency of solar panels, zero emission fuels for airplanes, carbon capture and storage, etc.
- There is a serious national shortage of STEM graduates and expertise right now.
- Some of our nation's best and brightest STEM graduates who could be solving these problems are instead working on nuclear weapons (and other totally unnecessary weapons).
- **We cannot fully implement the GND or solve the climate crisis without the scientists, engineers, technicians, research, industrial and technological infrastructure that is currently devoted to nuclear weapons.**

We can solve two existential threats to the planet with a single stroke

- By re-directing the talent and expertise, as well as the money, to the GND, we can solve the problems that still confront us *and we can pay for them.*
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US Renewable Resources

