#### **14 Energy policy**



Fission is in Fashion

#1 **Educate** people and politicians about fission energy.

#2 **Technologies** deserving of public and private investment.

#3 Lift regulatory roadblocks.

#4 Prioritize **low energy costs** through free competition.

#5 Proffer low cost energy first, use mandates and taxes last.



THE WHITE HOUSE WASHINGTON

April 28, 2022

Dr. Robert Hargraves Hanover, New Hampshire

Dear Dr. Hargraves,

The climate crisis is one of the most consequential challenges of our time—an existential threat to life on this planet. But it also represents an extraordinary opportunity for all of us to build a better America with a clean energy economy that lowers costs for families, creates good-paying jobs in cutting-edge industries, and delivers healthier air and cleaner water for every community.

We are seeing the impacts of climate change every day across our country and around the globe. In the last year, extreme weather events took the lives of 688 people in America, and the 20 biggest disasters alone cost the United States more than \$145 billion. The climate crisis is a blinking code red for our Nation, and the actions we take now will shape our future for generations.

As President, I have set ambitious climate goals: reducing greenhouse gas emissions to 50-52 percent below 2005 levels by 2030, reaching 100 percent carbon pollution-free electricity by 2035, and achieving a net-zero economy by 2050. To achieve these goals, agencies across my Administration are reducing emissions throughout federal operations and integrating climate considerations and environmental justice into their work at home and abroad. We are fast-tracking clean energy projects, launching the American offshore wind industry, setting the strongest-ever vehicle efficiency standards, and tackling super-pollutants like methane and hydrofluorocarbons.

I also made climate action and environmental justice a centerpiece of the Bipartisan Infrastructure Law—which includes the largest federal investments ever to build a clean power grid, modernize and upgrade public transit, invest in zero-emission transit and school buses, install a nationwide electric vehicle charging network, clean up legacy pollution, deliver clean water by replacing 100 percent of America's lead service line pipes, spark the development of innovative climate technologies, and make our infrastructure more resilient against extreme weather. With these historic investments, we are tackling the climate crisis in a way that will lower families' energy bills, support good-paying jobs, and ensure that America can compete and win in the race for the 21st century.

Please know that I will keep your letter in mind as we tackle the climate crisis with American jobs, ingenuity, and leadership.

Sincerely,



Ja Jan



# **Russia Energy Policy** (Putin's 1997 economics thesis)

1. Mineral and raw materials represent the most important potential for the economic development of the country.

leading economic power with a high standard of living for the majority of the population is comprehensive assistance to the development of the **national** processing industries based upon the extraction industries.

3. The analysis of the economic processes taking place in the world requires comprehensive state support and the creation of large financial-industrial the West.

# processing industries based upon the extraction industries in every way.

https://www.theatlantic.com/daily-dish/archive/2008/08/putins-thesis-raw-text/212739/

- 2. The main reserve for transforming Russia in the relatively near-term future into a
- corporations which span several industries on the basis of the resource-extracting enterprises, which could compete as equals with the transnational corporations of
- 4. The development of the extracting complex should be regulated by the state using purely market methods; moreover the state must assist the development of





#### Mandate carefully. Mandates often don't work; for example:

#### Renewable Fuel Standard



# US Congress mandated cellulosic ethanol: 5.5 **billion** gallons (2017)

https://www.agmrc.org/renewable-energy/renewable-energy-climate-change-report/renewable-energy-climate-change-report/september-2009-newsletter/cellulosic-ethanol-will-the-mandates-be-met

Renewable fuel standard cellulosic biofuel production (2010-September 2018) million gallons



EIA reports: "About 10 million gallons of cellulosic ethanol was used to comply with the RFS in 2017, about half of which was produced domestically. A 2014 final rule expanded EPA's definition of cellulosic biofuel to include certain types of biogas."



# Make NRC competent in fission, energy, and engineering.







Chairman Christopher T. Hanson

Hanson earned master's degrees from Yale **Divinity** School and Yale School of **Forestry and Environmental** Studies, where he focused on ethics and natural resource economics. He earned a Bachelor of Arts degree in **Religious Studies** from Valparaiso University in Valparaiso, Indiana.

<u>Jeff Baran</u>

Commissioner Baran earned a bachelor's degree and a master's degree in **political** science from Ohio University. He holds a **law** degree from Harvard Law School.

https://www.nrc.gov/about-nrc/organization/commfuncdesc.html

<u>Commissioner</u> David A. Wright VACANT

VACANT

Vacant

Vacant

Commissioner Wright received a bachelor's degree in political science from Clemson University.



# #1 Educate people and politicians about fission energy.

#### **Problems**

- 1. Unawareness of costs of intermittent wind/solar/battery energy.
- 2. Even most French people think their fission power plants emit CO2.
- 3. Many fear fission power plants might **blow up** like a bomb.
- 4. People (even doctors) are taught all radiation is carcinogenic.
- 5. Pompous advisory organs substitute fear and doubt for evidence and science.

#### **Solutions**

- 1. Science education; young people are more open minded.
- 2. Public communications: ample, cheap, clean energy for health and prosperity. 3.
- **Rebranding** as "fission" avoids nuclear weapons mindset.
- 4. Political leaders endorse fission and blame all who continued the ALARA fraud.
- 5. Frame fission energy as the **feedstock** for a clean, prosperous economy.





#### #2 Technologies deserving of public and private investment.

- 1. Liquid fission electricity, cheap, 24x7
- 2. Hydrogen electrolysis
- 3. Vehicle batteries
- 4. Fuel cells, SOEC/SOFC
- 5. Ammonia synthesis
- 6. Ammonia combustion engines
- 7. Hydrogen fueled trucks, buses
- 8. Resonant inductive highway charging

- 9. Hydrogen enhanced biofuels
- 10. CO2 from seawater or air to jet fuel
- 11. High speed trains, public transportation
- 12. Buildings, codes, cooling, heating
- 13. Iron ore electrolysis, H2 reduction
- 14. Cement production, alternatives
- 15.Shipping
- 16. Building factories with shipyards





## #3 Lift regulatory roadblocks.

- 1. End ALARA/LNT policy, which keeps fission energy costs high. Government agencies now appease activists, accede to politicians, ignore science.
- 2. Base environmental protection on science, not the precautionary principle.
- 3. **Permits** take decades and billions. Fund and speed up reviews.
- 4. Speed up obtaining rights of way for power lines, pipe lines, rail lines.
- 5. Overhaul fractured responsibility for electric power grid regulation (in US).
- 6. Limit activist, special-interest intervenor, stakeholder delays.

## #4 Prioritize low energy costs through free competition.

- 1. Sunset all stimulus subsidies.
- 2. End directive technology preferences.
- 3. Open competition beyond 'certified' suppliers.
- 4. End tariffs; enable imports from all international suppliers.
- 5. Use multiple, diverse suppliers for energy security.
- 6. Remove selective taxes on assets, revenues, and income.

#### #5 Proffer low cost energy first, use <u>mandates</u> and taxes last.

Imposing global CO2 taxes is not feasible; noncompliance creates economic

- 1. Deploy liquid fission <u>electricity</u> cheaper than from coal or LNG. - eliminate over 1/3 of energy CO2 emissions, without mandates or taxes.
- 2. Electrified transportation can be cheaper than petroleum fueled transportation. - eliminate almost 1/3 of energy CO2 emissions, with few mandates or taxes.
- 3. For buildings, market energy cost savings; support district heating; mandate building codes.
- 4. Industry. Assist, subsidize, cajole, bully, threaten, tax; then mandate.

benefits. Developing nations need energy, have highest, growing CO2 emissions.





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