**CT1 Private Investment**

#### **We Negate:**

#### **Contention One is Private Investment**

#### **First, Private investment ensures nuclear transition now**

***Heckler 25 [Brian Heckler "Private equity flows to advanced nuclear companies hit record high in 2024" LinkedIn Post Feb 2025] [thiele] [https://www.linkedin.com/in/brian-heckler?trk=public\_post\_feed-actor-name] [Brian Heckler is a seasoned professional with over 39 years of experience in Audit world; Head of Strategy and Development, Virtas Partners, 52 employees, based in Chicago]***

The energy demand is not slowing down any time soon and the desire for clean energy production is opening up a nuclear renaissance. Private equity investment in new technologies in advanced nuclear is helping. “Private equity transaction value in the advanced nuclear sector reached $783.3 million in 2024, 13x the 2023 total,” according to S&P Global Market Intelligence data. I think Nuclear generation is part of the solution to clean production to replace some of our natural gas baseload and leveling out variability from renewables. That’s a significant spike in funding that I've not seen in decades. It emphasizes a desire from the world to adopt viable energy systems and, at the same time, shows how private equity is going to be a catalyst in achieving that.

#### **Second, Banks and tech are financing**

***Qvist 24 [Malwina Qvist David Stearns Nuclear energy stocktake: Heading into COP29, finance lags behind ambitions Clean Air Task Force November 8, 2024] [thiele] [https://www.catf.us/2024/11/nuclear-energy-stocktake-heading-into-cop29-finance-lags-behind-ambitions/]***

The world is going to need more energy, not less. Global electricity demand is expected to grow by as much as 75% by 2050, requiring strategies that limit emissions while meeting this increased demand. Nuclear energy stands out as a critical tool in this effort—offering the promise of reliable, round-the-clock, zero-carbon electrical and thermal energy. Recognizing this potential, 22 nations committed to tripling their nuclear energy capacity by 2050 through the Net-Zero Nuclear (NZN) Initiative at COP28 in Dubai. While a sign of progress, particularly at a forum that has been slow to recognize nuclear energy’s value in addressing the climate challenge, commitments are nothing without action. As we mark the anniversary of the NZN Initiative, it’s important to evaluate what’s been accomplished to advance the promise of nuclear energy, and what still needs to happen as world leaders head to COP29 in Baku. International collaboration to scale nuclear energy continues to gain momentum In March 2024, world leaders, heads of state, and nuclear sector stakeholders gathered in Brussels for the first-ever Nuclear Energy Summit at the head of state level, organized by the International Atomic Energy Agency (IAEA) and the Belgian government. With participants from over 30 countries, mostly from Europe, the summit highlighted nuclear energy’s role in decarbonization and economic growth, signaling unprecedented interest in scaling up nuclear energy through international collaboration. Calls for innovative financial instruments to support nuclear energy projects and advocacy for an EU strategy to advance small modular reactors (SMRs) through a new EU industrial alliance underscored the urgency for action. Building on this momentum, in September 2024, delegates from the 22 member nations of the NZN pledge convened at the second Roadmaps to New Nuclear Ministerial Conference in Paris. Hosted by the Nuclear Energy Agency (NEA) and Sweden’s Ministry of Climate and Enterprise, the conference reaffirmed the pledges to triple global nuclear capacity by 2050. Participants emphasized nuclear energy’s essential role in achieving a climate-neutral future, enhancing energy security, and reducing fossil fuel reliance amid geopolitical tensions. The resulting communiqué highlighted the importance of international cooperation, advancing small modular reactors and other new technologies, and involving global financial institutions to support nuclear expansion. Private sector leaders are recognizing the advantages of nuclear energy In a major shift, the private sector—particularly the tech industry—is making significant investments in nuclear energy to meet growing demand for power. Just before Climate Week NYC, Constellation Energy announced a 20-year agreement to supply Microsoft with 835 megawatts of zero-carbon power by restarting Three Mile Island (TMI) Unit 1 in Pennsylvania. Google and Amazon soon followed with landmark agreements of their own. For Google’s part, it agreed to purchase nuclear energy from small modular reactors (SMRs) developed by Kairos Power, marking the first corporate agreement of its kind. Amazon joined the wave of support by signing agreements to back multiple new nuclear energy projects, including SMRs. Perhaps the biggest signal of shifting attitudes was the announcement from 14 major banks expressing their support for efforts to triple global nuclear energy capacity by 2050. But banks and investors are required to make risk-adjusted returns on the capital that is entrusted to them. This signal does not automatically translate into agreeable term sheets, information memoranda and transactions with drawdown approvals. Thus, incentives will be needed to unlock the significant levels of capital necessary for financing new reactors, eventually driving down costs and speeding up deployment. The announcement was just a moment; the heavy lifting for the industry and policymakers lies ahead, because mainstream finance is already very busy and has not felt any historical compulsion to support nuclear energy buildout.

#### **Third, current private investment is sufficient, additional government investment produces less reliable energy**

***Béliveau 24 [André Béliveau, written by Three Mile Island: Private Investment is Key to Expanding Nuclear Power – Not Government Subsidies Commonwealth Foundation September 20, 2024] [thiele] [https://commonwealthfoundation.org/2024/09/20/three-mile-island/]***

André Béliveau, Commonwealth Foundation’s Senior Manager of Energy Policy, issued the following statement: “The announced partnership between Constellation and Microsoft is a victory for reliable energy and market-driven solutions to secure our energy future. Refiring the closed reactor through private investment demonstrates that Pennsylvania does not need subsidies for nuclear power. The market will deliver reliable, affordable, and clean power far better than government central planning, and here is a case study demonstrating it. “Private industry knows the need for reliable energy sources to keep the grid online for the new wave of data centers powering our ever-advancing technology needs. Current progressive policy trends toward a government-forced transition away from reliable energy and advocates for handouts to achieve it. These programs—such as the Inflation Reduction Act and Gov. Josh Shapiro’s proposed Pennsylvania Reliable Energy Sustainability Standard (PRESS)—disrupt price signals in our energy markets and flood them with unreliable, weather-dependent sources. Most importantly, such government programs force ratepayers to pay more for less reliable energy, threaten high-paying jobs, and arbitrarily close reliable power plants without replacements. “Resisting handouts and tax credits and prioritizing reliable energy are fundamental principles for the Commonwealth Foundation’s energy platform. We celebrate this effort that brings private investment onboard and more reliable baseload power to the grid.” Pennsylvania has nine nuclear reactors, which produce nearly one-third of the commonwealth’s electricity. Only Illinois produces more energy from nuclear.

#### **Fourth, Government investment picks losers**

***Lesser 23 [Jonathan Lesser "Green Energy and Economic Fabulism" Report 58, The Global Warming Policy Foundation 2023] [thiele] [https://www.thegwpf.org/content/uploads/2023/12/Lesser-IRA-Subsidies.pdf] [Lesser = president of Continental Economics, an economic and energy consulting firm, an adjunct fellow with the Manhattan Institute, and a senior fellow with the Discovery Institute; BS in mathematics and economics from the University of New Mexico, and an MA and PhD in economics from the University of Washington]***

Second, government spending also can crowd out private investment. This is similar in concept to subsidized generators crowding out unsubsidized generators. Here, ‘crowding out’ refers to the adverse impacts of higher government spending on private investment. If government spending increases, but with no corre- sponding increase in total economic activity, the private sector is said to have been ‘crowded out’.53 Even increased R&D spending on green energy has been shown to crowd out private investment in more productive areas.54 Another recognized issue associated with crowding out by government spending is higher interest rates caused by deficit spending, as the US is experiencing, in part because of the trillions of dollars in subsidies promised under the Inflation Reduction Act. Deficit spending that results in higher market interest rates reduces private investment by increasing opportunity costs for private investors. Third, because subsidies increase energy costs, despite claims to the contrary, they cause a reduction in overall economic growth and jobs. For example, as shown in Table 3, the projected total of subsidies – in the form of above-market prices – paid to offshore wind developers is around $58 billion. These higher electricity prices reduce economic growth in several ways. Firstly, as seen in Europe, electricity prices can become so high as to cause deindus- trialization, because energy-intensive industries move elsewhere. The problem is particularly acute in Germany. Secondly, as elec- tricity prices increase, consumers and businesses have less money to spend on other goods and services, which leads to reduced economic growth. In previous research, I have estimated the direct employment impacts of the increased spending owing to higher electricity prices in Pennsylvania to be the loss of six job-years per million dollars.55 Hence, using the $58 billion estimate of above- market costs of electricity associated with the seven offshore wind projects, the resulting job losses would be almost 350,000 job- years, ten times larger than the number of jobs the projects claim they would create. As a result, the net economic impacts of green energy subsidies are negative, both in terms of jobs and economic output. 4. Conclusions Over the last half century, the US government’s track record of selecting ‘winning’ energy technologies has been a dismal failure. Current US and state government energy policies will be no differ- ent. The staggering amounts of money on offer through the IRA will have long-lasting and adverse consequences on energy supplies, economic growth, and the well-being of the citizenry. Federal investment tax credits, which can be as high as 60% of the costs of certain green energy projects, must be paid for. Given the country’s profligate spending and rapidly increasing deficit, for the foreseeable future, federal green energy subsidies are likely to be financed with additional debt. The financing costs alone to service that additional debt will be huge and will increase the deficit still further. As growing deficits lead to increases in interest rates, they crowd out more productive private investment. Moreover, federal spending on renewable energy itself is inefficient, rewarding low- quality resources such as wind and solar energy, rather than high- quality ones, such as nuclear power. The subsidies for these low- quality resources then crowds out spending on higher quality ones by distorting competitive markets and raising energy prices. The impacts ripple through the entire economy and further restrict economic growth and wealth creation. Moreover, higher energy prices disproportionately affect the least well off in society. Adver- tising specific green energy projects for their economic develop- ment and job creation potential may be politically appealing, but the true economic costs will be far greater. Politicians and policymakers may all choose to ignore basic economic principles in favour of political expediency and, in some cases, personal gain. However, basic economic principles will not ignore them. Eventually, the profligate spending on costly, but low- value, green energy will collapse under its own economic weight. The unanswered question is this: How high an economic and social price will the US pay for this folly before that occurs?

#### **Finally, this ensures nuclear industry collapse**

***Lesser 23 [Jonathan Lesser "Green Energy and Economic Fabulism" Report 58, The Global Warming Policy Foundation 2023] [thiele] [https://www.thegwpf.org/content/uploads/2023/12/Lesser-IRA-Subsidies.pdf] [Lesser = president of Continental Economics, an economic and energy consulting firm, an adjunct fellow with the Manhattan Institute, and a senior fellow with the Discovery Institute; BS in mathematics and economics from the University of New Mexico, and an MA and PhD in economics from the University of Washington]***

The Inflation Reduction Act (IRA) has expanded the availability of subsidies for green energy, especially investment tax credits. Over the next ten years, direct spending is estimated to be more than $1 trillion. However, given rising US deficits, much, if not all, of the tax credits for green energy, especially wind and solar, will be financed with additional debt. The resulting interest payments will add several trillion dollars to the overall cost of these subsidies. In addition to claims that these subsidies will address climate change, a primary justification for this increased spending is the idea that it will increase economic growth and provide millions of new jobs in green industries. The economic reality is far differ- ent, with the subsidized costs of these jobs far exceeding the actual salaries of workers who may be hired. For example, based on several offshore wind developers’ estimates of the numbers of jobs their projects will create, the subsidies average between $2.2 million and $2.4 million for each job per year. The staggering amounts of money made available for green energy subsidies under the IRA, far more than even was spent by the government during the Great Depression, will have long- lasting and adverse consequences on energy supplies, economic growth, and the well-being of the citizenry. Under the IRA, the subsidies on offer will continue until carbon emissions decrease by 75% below 2005 levels. Only then will they gradually decrease. Based on the Administration’s estimates of the amounts of wind and solar capacity needed to reach that goal, the investment tax credit (ITC) subsidies will total over $1 trillion, even if the infla- tion-adjusted costs of those resources fall by 40% over the next 20 years. If, instead, the inflation-adjusted costs of those resources remain constant over time, then the ITC subsidy alone would exceed $3 trillion. If US interest rates increase as the country’s deficit soars, the subsidy alone could exceed $4 trillion or more. Production tax credits for wind generation will add hundreds of billions more to these totals. The subsidies will further distort energy markets. They will crowd out more productive private investment and reduce the resources available for more efficient forms of generation, such as nuclear power, especially small modular reactors. As in Europe, the subsidies will result in higher energy prices, which will cause economic and job losses throughout the entire economy. These losses will far exceed the gains provided by the subsidies them- selves. Thus, the net economic impacts on jobs and output will be negative. Although some policymakers may choose to ignore basic economic principles in favour of political expediency and, in some cases, personal gain, those principles will not ignore them. Even- tually, the profligate spending on costly, but low-value, green energy will collapse under its own economic weight. The unan- swered question is how high an economic and social price the US will pay for this folly before that occurs.

### **CT 2 Inflation**

#### **Contention Two is Inflation**

#### **First, Inflation down in March**

***Bureau of Labor Statistics April 10 [“Consumer Price Index Summary” Bureau of Labor Statistics Thursday, April 10, 2025 USDL-25-0459] [thiele] [https://www.bls.gov/news.release/cpi.nr0.htm]***

CONSUMER PRICE INDEX - MARCH 2025 The Consumer Price Index for All Urban Consumers (CPI-U) decreased 0.1 percent on a seasonally adjusted basis in March, after rising 0.2 percent in February, the U.S. Bureau of Labor Statistics reported today. Over the last 12 months, the all items index increased 2.4 percent before seasonal adjustment. The index for energy fell 2.4 percent in March, as a 6.3-percent decline in the index for gasoline more than offset increases in the indexes for electricity and natural gas. The food index, in contrast, rose 0.4 percent in March as the food at home index increased 0.5 percent and the food away from home index rose 0.4 percent over the month. The index for all items less food and energy rose 0.1 percent in March, following a 0.2-percent increase in February. Indexes that increased over the month include personal care, medical care, education, apparel, and new vehicles. The indexes for airline fares, motor vehicle insurance, used cars and trucks, and recreation were among the major indexes that decreased in March. The all items index rose 2.4 percent for the 12 months ending March, after rising 2.8 percent over the 12 months ending February. The all items less food and energy index rose 2.8 percent over the last 12 months, the smallest 12-month increase since March 2021. The energy index decreased 3.3 percent for the 12 months ending March. The food index increased 3.0 percent over the last year.

**Second, spending on nuclear energy significantly increases inflation rates.**

Long **Zhang** [HSBC Business School, Peking University, Shenzhen, China], Hemachandra Padhan, Sanjay Kumar Singh, Monika Gupta; August, 20**24** “The impact of renewable energy on inflation in G7 economies: Evidence from artificial neural networks and machine learning methods”

[<https://www.sciencedirect.com/science/article/abs/pii/S0140988324004262#:~:text=It%20is%20observed%20that%20renewable,on%20inflation%20rates%20are%20positive>]

Renewable energy and inflation Nexus

To our knowledge, hardly any studies (except Deka et al., 2022) analysed the direct relationship between renewable energy and inflation. However, Deka and Dube (2021) took these two variables as control variables while analysing the aspects of economic growth. Deka and Dube (2021) and Deka et al. (2022) found a significant and positive relationship between renewable energy and the inflation rate, which shows that the production and consumption of renewable energy tend to increase the prices of

#### **Third, federal investment increases inflation**

***Lesser 23 [Jonathan Lesser "Green Energy and Economic Fabulism" Report 58, The Global Warming Policy Foundation 2023] [thiele] [https://www.thegwpf.org/content/uploads/2023/12/Lesser-IRA-Subsidies.pdf] [Lesser = president of Continental Economics, an economic and energy consulting firm, an adjunct fellow with the Manhattan Institute, and a senior fellow with the Discovery Institute; BS in mathematics and economics from the University of New Mexico, and an MA and PhD in economics from the University of Washington]***

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#### **Fourth, Federal nuclear investment will cost trillions**

***Paraskova 24 [Tsvetana Paraskova "The West’s Nuclear Power Revival Could Be Slower Than Hoped" Yerepouni Daily News March 24, 2024] [thiele] [https://energycentral.com/news/west%E2%80%99s-nuclear-power-revival-could-be-slower-hoped] [writer for Oilprice.com with over a decade of experience writing for news outlets]***

-- At the COP28 climate summit at the end of last year, the United States and 21 other countries pledged to triple nuclear energy capacities by 2050. -- Most Western governments – with the notable exception of Germany – are now betting on nuclear power to help them with the carbon emission targets. -- The West has seen in recent years several cautionary tales of huge delays and cost overruns in looking to boost nuclear capacity. Western nations may be getting ahead of themselves in their ambition to swiftly roll out new nuclear power capacity in the current push to reduce dependence on Russian uranium and meet net-zero targets with more nuclear-generated electricity. At the COP28 climate summit at the end of last year, the United States and 21 other countries pledged to triple nuclear energy capacities by 2050, saying that incorporating more nuclear power in their energy mix is critical for achieving their net zero goals in the coming decades. The United States, alongside Britain, France, Canada, Sweden, South Korea, Ghana, and the United Arab Emirates (UAE), among others, signed the declaration at the COP28 climate summit in Dubai. “The Declaration recognizes the key role of nuclear energy in achieving global net-zero greenhouse gas emissions by 2050 and keeping the 1.5-degree Celsius goal within reach,” the U.S. Department of State said. John Kerry, President Joe Biden’s climate envoy, says there are “trillions of dollars” available that could be used for investment in nuclear energy. “We are not making the argument to anybody that this is absolutely going to be the sweeping alternative to every other energy source — no, that’s not what brings us here. But you can’t get to net-zero 2050 without some nuclear power,” he told reporters at the time. “Too Optimistic” Most Western governments – with the notable exception of Germany – are now betting on nuclear power to help them with the carbon emission targets. But many may have become too optimistic they would see a fast rollout of nuclear reactors and capacities in an industry notoriously known for years of delays and huge cost overruns.

#### **Fifth, this increases inflation by 20 percent over 3 years**

***Beach 24 [William W. Beach, Is Inflation the Result of Excessive Deficit Spending? Economic Policy Innovation Center. February 9, 2024] [thiele] [https://epicforamerica.org/the-economy/is-inflation-the-result-of-excessive-deficit-spending/] [former Commissioner of Labor Statistics and head of the U.S. Bureau of Labor Statistics (BLS), Senior Fellow in Economics at the Economic Policy Innovation Center and the Coolidge Fellow at the Calvin Coolidge Presidential Foundation; BA degree from Washburn University, a master's degree from the University of Missouri in Columbia, Missouri and a PhD in economics from the University of Buckingham]***

Executive Summary The purchasing power of families has declined since inflation began in the spring of 2021. Americans saw the prices of goods and services rise much faster than their income, which produced a painful squeeze on family budgets. Who is to blame for the family budget squeeze? The answer is historically high budget deficits. The Federal government borrowed heavily to meet its spending needs in 2020 and 2021, and that borrowing was converted by the banking system into funds that fueled the rise in prices. From June 2020 through October 2023, overall prices grew by 19.7 percent, or nearly one- fifth in just three years. Food prices rose 21 percent and shelter prices increased by 19 percent. The Case-Shiller index, a sensitive metric for new and used home sale prices, increased by 43 percent. Adding up the deficits for FY2020 through FY2023 totals $8.8 trillion. Outside of wartime, no four years in U.S. history has seen deficits this large, either in nominal terms or as a percent of GDP. This infusion of trillions of deficit dollars resulted in a 25.4 percent increase in bank assets between 2020 and 2021, which banks converted into loans. Consumer loans rose by 19.2 percent, real estate loans grew by 12.1 percent, and total loans for the banking system expanded by 13.7 percent. The last time there was such a jump in lending was in the run-up to the Great Recession, 2005 and 2006. This greater supply of credit was complemented by a large increase in the money supply. Between March 2020 and April 2022, a broad measure of the money supply grew by $5.4 trillion, which was about a third of GDP during that period. Alternative explanations of inflation fail to refute the connection between funding federal deficits and rapid increases in household and business purchases. These alternative explanations of inflation include supply chain disruptions, price gouging, and the arguments of Modern Monetary Theory.

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Economics, unlike physics, is not an exact science. We need always to be open to unique circumstances and unexpected results. That said, theory, history, and recent events point very clearly to a powerful nexus between excessive and sustained deficit spending and rapid increases in overall prices. This record also points to the responsibility that policymakers uniquely bear for worsening living conditions and for widespread pessimism about the economic future among the citizens they serve. High and sustained inflation undermines the economic and social fabric of a country, and will continue to do so in a predictable fashion if policymakers count their political aspirations facilitated by higher spending as more important than the goals and living standards of their constituents. When that happens, just as predictably, voters will find fault with these same policymakers and demand change through political or other means.

#### **Seventh, This decreases life expectancy by .66 percent**

***Bao, Wensheng, et al. "Real estate prices, inflation, and health outcomes: Evidence from developed economies." Frontiers in public health 10 (2022): 851388] [thiele] [https://pmc.ncbi.nlm.nih.gov/articles/PMC8884244/] [Bao = Department of Jiaozhou Campus Construction, Qingdao University, Qingdao, China]***

Another major aspect that influences the health outcome is persistently increasing inflation. In the wake of rising and high inflation, children and females are at risk of poor health and malnutrition in developing economies. In view of the United Nations, the mortality rate for children under the age of five is recorded at almost 5.4 million during 2017 (United Nations, 2018). Several studies reported the influence of inflation on child mortality. However, the implications of inflation on health outcomes are yet unexplored (16). Due to constraints in budget and rising inflation, households have to compromise on nutritional quality which results in malnutrition, child mortality, and poor health conditions. Empirical studies report that inflation shocks might affect education, social behavior, outcomes of the labor market, health, and skills formation (17, 18). During inflation, the resulting decline in affordability influences the wellbeing of people through several channels, such as a reduction in investment for education, lower levels of consumption, malnutrition, and poor health outcomes.

***Card continues***

GMM uses a set of instrumental variables to solve the problem of endogeneity. The GMM estimators can be estimate coefficients via difference and system (3, 21). At least, there are two main reasons for choosing GMM. The first is to control for country-specific effects, and the second is to control for endogenous problems. Another edge of the GMM method is that it also captures time-series variation in the data and allows for the addition of lagged dependent variables as repressors. Using panel standard methods of estimations, we assess the impacts of house price and inflation on health outcomes in the next section. Previous literature has used the same methods for health outcomes (22).The study aims to explore the impact of house rents and inflation on the health outcomes of developed economies (Canada, France, Japan, Netherlands, Spain, Switzerland, Sweden, United Kingdom, USA) from 1996 to 2019. Descriptive statistics and details regarding symbols, definitions, and sources of data are given in Table 1. Health outcome is measured by infant mortality rate (per 1,000 live births) and life expectancy at birth in total years. The focused explanatory variables are house rents and inflation. House rent prices are taken at the base of 2015. At the same time, consumer prices in annual percentage are used to measure inflation. Besides focused variables, GDP per capita (at 2015 US$), health expenditures as a percent of GDP, and unemployment (in percent of the total labor force) are used as control variables. Data for house rent is extracted from the OECD, while data is taken from the World Bank for the remaining variables. Table 2 shows the correlation matrix of variables. It is obvious from the correlation matrix that all explanatory variables are free from multicollinearity problems.

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The findings of GMM models display that house rent reduces infant mortality rate and expands life expectancy. These findings reveal that a 1 percent increase in house rent reduces the infant mortality rate by 0.016 percent and increases life expectancy by 0.029 percent. In contrast, a rise in inflation deteriorates health outcomes, as shown by the coefficient estimate, which depicts that a 1 percent increase in inflation reduces life expectancy by 0.033 percent. However, inflation produces an insignificant impact on the infant mortality rate. GDP and health expenditures reduce the infant mortality rate, but unemployment increases the infant mortality rate. In contrast, GDP improves life expectancy, and unemployment declines life expectancy in GMM models.

#### **Eighth, that’s half a year on average for every American**

***Macrotrends 2025 [U.S. Life Expectancy 1950-2025] [thiele] [https://www.macrotrends.net/global-metrics/countries/usa/united-states/life-expectancy]***

Chart and table of U.S. life expectancy from 1950 to 2025. United Nations projections are also included through the year 2100. The current life expectancy for U.S. in 2025 is 79.40 years, a 0.18% increase from 2024. The life expectancy for U.S. in 2024 was 79.25 years, a 0.18% increase from 2023. The life expectancy for U.S. in 2023 was 79.11 years, a 0.08% increase from 2022. The life expectancy for U.S. in 2022 was 79.05 years, a 0.08% increase from 2021.

#### **Finally, prefer life expectancy death framing**

***European Commission Online ["10. Life expectancy"] [https://ec.europa.eu/health/indicators/docs/echi\_10\_ds\_en.pdf]***

Definition Life expectancy at a given age represents the average number of years of life remaining if a group of persons at that age were to experience the mortality rates for a particular year over the course of their remaining life. Life expectancy at birth is a summary measure of the age- specific all cause mortality rates in an area in a given period. Calculation Life expectancies are calculated using (abridged) life tables presenting age specific mortality rates. Life expectancy tables are calculated based on death probabilities according to Farr's death rate method: qx = Mx / (Bx + (Mx/2)) where Mx = the number of deaths at the age of x to under x+1 years in the reported period; Bx = average population aged x to under x+1 in the base period; qx = death probability from age x to x+1. Farr's method of calculation of abridged life-tables assumes that there is a constant mortality within the age intervals and thus the years of life lived by a person dying in the interval is (on average) half of the length of the interval.