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The Year of LaRouche and Beethoven



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The Year of LaRouche and Beethoven

EDITORIAL

As We Enter the New Year: The Clear and Present Danger of the British Empire's Coup

by Barbara Boyd

Based on Mrs. Boyd's notes for her presentation on the LaRouche PAC Fireside Chat, December 26, 2019. She was joined on the program by William Binney, a former technical director of the National Security Agency who is now a member of the Veteran Intelligence Professionals for Sanity (VIPS). The full discussion, lasting more than 90 minutes, including a wide-ranging question and answer segment, is available [here](#). Subheads have been added.

As we enter the first week of the New Year, it is well to remember how dangerous and treacherous this coup against the American presidency actually is. The Senate, the battlefield to which the action is about to shift, has 53 Republicans, 45 Democrats, and 2 independents. Many of the Republicans are not allies of Donald Trump. They are wedded to the globalist and imperial war policies and ideas of the Bush and Obama regimes that this President, to their undying rage, continues to disrupt. While the two-thirds vote required for removal from office is not there, there is plenty of room to play havoc with the rules and procedures of the Senate trial using the anti-Trump Republicans. Moreover, not dismissing the impeachment outright for the fraud it is, continues to delegitimize the U.S. Presidency at a most critical time in world history.

Forcing the President to bargain with these Senators, allowing them to continue to demonstrate their in-



USAF/Spencer Slocum

President Donald Trump signs the National Defense Authorization Act for Fiscal Year 2020, at Joint Base Andrews on December 20, 2019.

dependence through such permanent warfare policies as the recent [National Defense Authorization Act](#), creates the appearance that the President is not in control of U.S. policy. And it is not an accident that Ukraine-gate was set into motion the day after the previous stage of the coup collapsed with Robert Mueller's disastrous appearance in the Congress. The very process of keeping this attack alive in the Senate encourages the traitors in our midst to act, because they believe they are protected by Washington's most corrupt legislative body. In short, allowing the coup to continue is a clear and present danger, and we should be telling everyone we talk to that this impeachment nonsense should be

ended now and decisively, so that we might concentrate on this nation's and the world's future.

I am told there is a powerful revulsion now, out there in the population, to this impeachment and the coup, as people can't stand it while they struggle to get healthcare, struggle against an epidemic of drugs and suicides, struggle to make ends meet, and recognize that the coup is limiting the President's ability to act on their behalf.

The Surveillance State

Now there have been some extremely useful elements coming forth. What I am going to emphasize is the issue of culture, and this movement's unique role of educating the population about physical economy—classical culture and the science of physical economy are the twin pillars upon which to build a new political movement based on the ideas of Lyndon LaRouche. And that movement, particularly the component of a new youth movement, is essential in 2020, right now in the new year which is approaching, a year that, because of our Presidential election and the mass strikes against globalization occurring throughout the world, presents itself as a turning point in human history.

Joe diGenova, the former U.S. Attorney for Washington, D.C., gave an interview on Monday morning, Dec. 23, in which he said that U.S. Attorney John Durham, examining the origins of the coup against the President, is spending lots of time with Mike Rogers, who used to be the head of the National Security Agency (NSA). DiGenova says the broader story of Russiagate is that Barack Obama, in 2012, undertook to create a complete surveillance regime, explicitly targeting anyone who might upset Obama Administration policies in the Presidential election of 2016, and that Mike Rogers has the goods on it, and is providing the information to Durham. Obviously, Donald Trump was the major and most consequential target of this surveillance, but it went way beyond that.

Larry Johnson, a former CIA analyst, had earlier reported the same shocking fact.

A significant addition to the surveillance policy occurred in October of 2015, when John Brennan created a cyberwar unit within the CIA, the Directorate of Digital Innovation. And, as Larry Johnson has reported, there is plenty of reason to believe that this unit created the personas "DCLeaks" and "Guccifer 2.0," to camouflage the fact that the documents published by WikiLeaks from the Democratic National Committee and John Podesta in June and October of 2016 were the result of an internal leak, not a Russian hack over the internet. Instead, John Brennan's false flag creations, these two internet personas, created a fake cyber trail pointing graphically to a Russian GRU author, and thus brought Russiagate, which was already in full bloom in Britain, to the United States.

As we have written, Christopher Steele, operating at the highest levels of British intelligence, preceded his war with Donald Trump by blaming Brexit on cyber manipulations by the Russians, in papers he wrote in the early part of 2016. Steele represented the terrified, incompetent, and thoroughly reckless response of the world's elites to the end of globalization represented by Brexit and by Donald Trump's campaign and election.

Now, why did Obama initiate this latest and most crude iteration of the surveillance regimes dating from 9/11? Mass surveillance remains a huge, compelling, and cultural problem here. The *New York Times* just ran a [series](#), "One Nation, Tracked," showing how, once you accede to location apps on your smart phone, your every movement is tracked by Silicon Valley; you have volunteered yourself to be a surveillance subject, just like Carter Page became one through that fake FISA warrant.

Dr. Robert Epstein has demonstrated, to Congress and elsewhere, that Silicon Valley, Google, et al. literally control, through artificial intelligence, 2.6 million to 10.4 million votes, the margin of the popular vote in



White House

President Barack Obama meeting with John Brennan, at that time his counterterrorism advisor, in February 2010. In October 2015, then as CIA Director, Brennan created a cyber war unit within the CIA.

2016. Now that everyone knows which states determine the outcome, and Silicon Valley—as well as the British House of Lords—have declared that Trump must be defeated at all costs, what do you imagine they are doing now?

Obama Targets Political Opponents

But, again, let’s go back to 2012. When you look at the year 2012, when Obama started targeting all of the potential political opponents of his programs, certain strategic facts hit you over the head, so to speak. Lyndon LaRouche characterized 2012 as the beginning of a final march to war with Russia and China, beginning with the 2011 NATO bombing of Libya and the assassination of its head of state, Muammar al-Qaddafi. At or around the same time, in 2011, NATO countries called upon Syria’s President Bashar al-Assad to step down and resign in the wake of the City of London-orchestrated protests dubbed the Arab Spring, first imposing sanctions, and then beginning a bombing campaign, and threatening all-out war with Syria by August of 2012. That war proposal was based on a NATO false flag operation which had Assad “using chemical weapons against his own people.”

When the British Parliament blocked British participation in NATO’s planned escalations toward all-out war in Syria, and the U.S. Congress got cold feet as



VOA/Scott Bobb

Free Syrian Army soldiers cleaning their AK47s in Aleppo, Syria during the civil war in October 2012. Like Al-Qaeda, Al-Nusra, and ISIS, the FSA is a surrogate for the regime-change powers.

the result of a popular uproar in the population here, Obama backed off. But, he continued to use actual terrorists, the predecessors of ISIS and the remnants of Al Qaeda, as the shock troops for regime change against Assad. Through all of this, Iran was also a constant target in a surrogate warfare campaign, aimed at mercenary wars on the borders of Russia and China, just as LaRouche outlined in his epic 1999 national television [documentary](#), *Storm Over Asia*.

Then in 2014, NATO, a front for the British since World War II, in complicity with Barack Obama’s State Department, Brennan’s CIA, the National Endowment for Democracy, George Soros, and the British Foreign Office, captured Ukraine, which Carl Gershman of the NED had been describing in the pages of the *Washington Post* as the ultimate prize in waging Cold War 2.0 against the Russians.

Like the terrorists deployed under the U.S. flag in Syria, in Ukraine that nation’s longstanding Stepan Bandera Nazis were used as the shock troops for regime change. This set off a civil war, which pioneered new uses of cyber and whole-of-nation propaganda warfare, both to control the captured Ukrainian population and to use the new base to conduct propaganda operations against Russia directly. That Joe Biden, who performed the role of modern-day British viceroy for Obama in Ukraine, managed to place his coke-addled son in position to profit to the tune of millions, is really only a secondary aspect of this corruption story. Right now, the neo-Nazis we empowered are ac-



EIRNS

A graphic from LaRouche’s 1999 documentary, *Storm Over Asia*, exposing the surrogate warfare campaign aimed at mercenary wars on the borders of Russia and China.



White House/Pete Souza

Barack Obama's smiling virtual viceroy for Ukraine Joe Biden and the Right Sector fascist paramilitary shock force he helped set up to enforce regime change against the legitimate government.



tively preventing Ukraine's new President from pursuing peace or an end to oligarchical corruption, the policies Ukrainians overwhelmingly voted for in their March/April 2019 elections.

Similarly, the "whole of nation" black propaganda techniques first employed in Ukraine have been brought home in the coup against Donald Trump in the United States, in which repetitive, negative, and false media are the primary instrument.

March to War Interrupted

Three developments interrupted and destabilized this march to war begun in 2012: In 2016, Donald Trump won election in the United States and Britain voted to exit the European Union, striking a massive blow against the globalist regime supported by Obama and his British masters. Prior to that, President Vladimir Putin had intervened strategically throughout the world to halt the course toward World War; and China in 2013 began a massive effort to develop infrastructure throughout the world in the Belt and Road Initiative, providing an island of strategic stability and a flank



Russian Presidential Press and Information Office

Russian President Putin (right) welcomes Chinese President Xi Jinping to the Kremlin in March of 2013. Both leaders intervened strategically to interrupt the march to world war led by the British empire.

against the sanctions regimes used by the globalists to cripple target economies. At the same time, they declared an actual war on poverty, uplifting millions and providing a beacon of hope for the world's dispossessed.

Now Lyndon LaRouche also said that this march to war, commencing in 2012, was really the result of the financial collapse which manifested itself in 2007-2008, and the intellectual and cultural inability of a decadent elite class throughout the world to imagine doing any-

thing differently than they had been doing prior to the collapse.

True, they had managed to stitch together and hold the line on a false narrative about the causes of the collapse—no one could have foreseen it; it was a historical accident for which the massive cash bailout provided a remedy; populations had come to expect too much; and even then, back in 2010-2012, they were saying that a

Green New Deal policy would produce thousands of needed jobs if people only had patience to transition from the "old" to the "new" economy.

Further, LaRouche said that the new regime of endless wars and green economic austerity regimes was really but the latest stage of a population reduction policy first engineered by Henry Kissinger and Zbigniew Brzezinski in the late 1970s and early 1980s at the behest of Prince Phillip and the Anglo-Dutch establishment. He noted that the decadent elites promoting these policies believe, ultimately, that nuclear war can be won and will be beneficial to their cause, reducing the world's population to levels their bankrupt economic ideas can support and control. They

simply do not know how to create an economy which can reproduce itself at higher and higher levels of economic development, and they oppose this idea because it would mean the realization of a truly human creation, not one run by corrupt elites or oligarchs.

Building a Strategic Leap into the Future

In the New Year, with what LaRouche was saying then about the decadence, incompetence, and murderous intent of these elites, now becoming widely recognized—the population clearly recognizes that the Emperor has no clothes, while the Emperor, at the same time, continues to assert the right to rob them blind. Now, we have a huge chance to change all of this, to reverse the entire decadent course of the last 50 years on this planet—a course which, if continued in any respect, spells doom. And, given the actual physical state of the economy, surveying the skill and education set of the population—which is the driver of any economic renaissance—there is only one path to sustained survival, not immediate survival, but sustained survival.

That path lies in building—right now—the economy of the future, making the strategic leap into a fusion energy-powered economic development program, and expanding the Moon-Mars mission which this President has announced, while talking to Russia, China, India and other full-set economies about reorganizing the world’s financial system to fund joint projects at the frontiers of science. It also lies in classical culture, in the type of music and drama that can enable a culture to actively reflect on its present mental outlook, and the state of its development, or the flaws in that development—the music exemplified by Beethoven and the dramas of Shakespeare and Schiller.

As you look at the flat world presented by Hollywood and popular culture, recognize that it is a world that holds no nuance, no irony, no metaphor, and only slap-stick humor. In that flat political world, stick figure Manichean warriors rage in wars conducted solely in the present, shifting their roles as black or

white knights. That world is really nothing other than a video game with no palette of actual human emotions or thoughts.

It is a world which poets, the actual legislators of the world, can readily defeat, by launching, and maintaining, a superior culture in which any president can prevail against all foes by outlining and setting into motion a compelling vision of the future, a mission orientation that touches and moves the imaginations of the population. It is no accident that when the President spoke at the recent youth conference, Turning Point USA, his



President Donald Trump addressing an enthusiastic Turning Point USA 5th Annual Student Action Summit in West Palm Beach, Florida on December 22, 2019.

remarks about the Space Force received absolutely the most enthusiastic and lasting applause, more than anything else, and the President himself noted that extremely significant fact.

It is also a path that would end the entire system of mass surveillance, outlawing such abuses as the FISA Court and EO 12333, and substituting the rational security regime of Bill Binney and others, in which criminals and terrorists can be caught without using the excuse of their existence to justify a totalitarian regime. With what we can now cause to be exposed, it is finally possible to do that. In addition, on the path we just outlined, individuals will create and change, killing the premise of all mass surveillance—that human beings’ fixed habits and fixed modes of being, expose the never-changing flaws through which they can be endlessly manipulated.

*Cover
This Week*

Lyndon LaRouche with Norbert Brainin, first violinist of the legendary Amadeus Quartet, December 4, 1987.



EIRNS/Philip Ulanowsky

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I. Replacing a Bankrupt Elite

DECEMBER 9, 1993

The Breakdown of the Elites and the Economic Crisis

by Lyndon H. LaRouche, Jr.

I wish to address you on the subject of the breakdown of the elites, with special focus upon two things: the international financial monetary breakdown crisis in progress, and the relationship of this intellectual and, moral collapse of the majority of the elites of most leading nations relative to the current crisis in Russia and the former Warsaw Pact/former Soviet Union area.

Thirty years ago, immediately following the assassination and coverup of the assassination of U.S. President John F. Kennedy, those forces which had been responsible for authoring the assassination—Anglo-American forces in particular, the same forces which were behind the attempts to assassinate [Gen. Charles] de Gaulle in particular, for the same reason—moved to make a fundamental change in the cultural disposition of the leading institutions of North America and western Europe. This was an Anglo-American operation coming from a certain section, the extreme liberal section of the Anglo-American oligarchy, from circles typified by such as Bertrand Russell, the Huxley brothers, and H.G. Wells.

Editor's Note: This is a reprint of a speech delivered on behalf of Mr. LaRouche to the conference, "History as Science," co-sponsored by the Schiller Institute and Civil Rights Movement-Solidarity on Dec. 9, 1993 in Kiedrich, Germany. At the time he was imprisoned on fraudulent charges. The speech was first published in *EIR* Vol. 21, No. 2, January 1, 1994.

The 'Age of Aquarius'

This is a project which is sometimes called the Nietzsche Project, the "dawning of the Age of Aquarius," the superseding of a long period of Christian civilization in Europe by a new phase of civilization or destruction of civilization based on the ideas of Friedrich Nietzsche and his co-thinkers, or co-movement thinkers: the bringing of the Age of Dionysius or Aquarius to the fore.

It was also an age which was characterized by bringing to an end the attempt to base civilization on the individual processes of cognition, as scientific discovery typifies cognition; and to replace that with a kind of symbolic, affective, emotional, associative reasoning like the ancient feminist cults.

As a result of that shift from a policy commitment to bettering the conditions of life of nations, families, and individuals through the benefits of scientific and technological progress *applied* to improve the human condition, a shift was made to a rock-drug-sex counterculture, which destroyed, in rapid succession, large sections of the college-age youth, then proceeded to the high school-age youth, and then to children in the pre-adolescent strata.

As a result of that process and the things that go with it—these cultural paradigm changes—the U. S. population today *is no longer capable of the kind of industrial and scientific undertakings for which it was admired as recently as the 1960s*. We see a similar thing in the postindustrial rust bucket called Britain; we see similar processes ongoing rapidly in Italy, in Germany, in France; we see a crisis in Japan of yet-undetermined

portent, but in progress; and so forth and so on.

We see conditions in Africa which are beyond belief; we see a collapse of the level of civilization as practiced in Central and South America, and grave threats to all parts of Asia. We see a collapse in the former Warsaw Pact nations of Eastern Europe, to approximately 30% of the level of physical output per capita and per square kilometer of 1989. We see a momentous collapse in the former Soviet Union of large, if not precisely determined, magnitude—at least not to my knowledge.

We see, worse, a process of a world as a whole going to hell, and a group of elites ruling the these nations, at least in the majority, who seem utterly incapable of grasping the nature of the situation or understanding the effects of their policy.

Now many people will say, in response to this, “Well, what policy do we give these elites? What policy do we give these governments to solve this problem?” And I would propose to you that there is no particular policy, in the sense of a theorem or suggestion, which would do much good, because the problem here is not bad policy; the problem here is the establishment of axiomatic assumptions which govern policymaking, which ensure that virtually none of these governments under the present leadership or present elites, *would be capable* of accepting or even tolerating the kind of policy structures which would be needed to lead civilization out of this mess.

Axiomatic Assumptions Must Be Changed

Let’s go back first of all to 1989, to focus a bit on the Russian situation. At that time, with the fall of the Berlin Wall in Eastern Europe, the western nations, if they had chosen to do so, had the greatest opportunity for building peace in the twentieth century. *And they blew it.* Under the leadership of Margaret Thatcher in England and George Bush in the United States, and their respective advisers, they blew it. They turned the



EIRNS/Dean Andromidas

Lyndon and Helga LaRouche visit Berlin’s Charlottenburg Palace on Oct. 11, 1988, before the Berlin Wall came down. LaRouche writes that the function of his exploratory presidential campaign at this stage is to provide, not only for the United States, but for the world, a reference point for policy. “I shall address largely the axiomatics.”

greatest opportunity for peace-building in this century into the threat of new nuclear wars, of new superpower thermonuclear conflicts, and of the alternative or accompaniment of the spread of chads through 80% and more of this planet.

They turned the greatest opportunity for building peaceful prosperity into the threat of a thermonuclear, epidemic-ridden, famine-ridden, vastly mass-murderous New Dark Age—*planetwide*.

And thus we find the situation in Eastern Europe. We find the Russian people thrown back upon this misery which is imposed upon them not so much by the heritage of communism as by the imposition of International Monetary Fund (IMF) conditionalities, [former U. S.] Ambassador Bob Strauss’s ideals, and the shock therapy of George Soros the looter, and of his spokesman, Harvard University’s Jeffrey Sachs.

The cruelty which is being wreaked upon Poland and other nations of eastern Europe, as upon the developing nations, and also upon Russia, Ukraine, and so forth, builds up a reservoir of potential hatred against the western nations as the authorship of this policy, which threatens, in the case of the continuation of such a policy, either the emergence of a Third Rome imperialism imbued with thermonuclear hatred against the West within that region of the world—how

soon or how rapidly one knows not—or else, in the alternative, a degeneration of that part of the world and most of the rest of it, into chaos.

Democracy and Free Trade

The policies which reign among the Anglo-Americans, the pseudo-policies of democracy and free trade, are the chief cause of this problem; and if they are not reversed, this planet will see such hell as has not been known on the planet as a whole in all known human history. Not absolute doom, perhaps; the human spirit and human nature is a very redoubtable thing and sooner or later a recovery, perhaps, for humanity must be expected. But what we can say, is not an absolute doom, not an absolute apocalypse, but something near enough as to awe us all. And all of this will occur if we confine ourselves to discussing particular policies and fail to address the *cultural change* that is sometimes called a cultural paradigm shift, which was introduced about 30 years ago.

The center from which to look at this policy paradigm issue, is two standpoints: one, the standpoint of physical economy, and two, the standpoint of fundamental scientific discovery and its realization as technological progress.

What I shall be doing, I trust, in the very near future, is to consolidate some work I began many, many years ago, a project which has languished somewhat during the time of my imprisonment: to set up a realization, in terms of data bases and analyses, of the science of political economy as I more or less re-founded it over the course of the past 50 years.

Essentially, what I propose to show in some detail (not perfect detail, but at least preliminarily sufficient detail for policy planning) is that the planet over the past 30 years has collapsed by the standards of demographics related to per capita, per household, and per square kilometer consumption and production of physical wealth. Not monetary wealth, not dollar-



IN-Press/Bundesbildstelle

German Chancellor Konrad Adenauer welcomes President John F. Kennedy to Bonn in June 23, 1963. The elites of the western nations today do not measure up to the stature of Adenauer, Kennedy, and de Gaulle. With the collapse of communism, they faced an unprecedented opportunity for building peace; but they squandered it, bringing on instead the threat of new, nuclear wars.

value wealth, but physical wealth, as measured in market baskets of essential household and productive—that is, industry, management, infrastructure—goods.

When we look at the matter from that standpoint, as opposed to the faked figures which pour out of all of the statistical agencies, including the infamously incompetent and fraudulent production runs from the World Bank and similar institutions associated with the IMF; when we look instead at the bare facts of physical production and consumption per capita, per family, per square kilometer; when we look at the condition of infrastructure, such as fresh water per capita, per square kilometer; transportation in ton-mile hours per capita, per square kilometer; in market baskets, in physical content per capita, per square kilometer, we see readily that there has been *no significant growth* in any part of the world economy since the year 1970—almost 25 years ago.

In fact, shortly after the assassination of President Kennedy, there was a turning point about the mid-1960s (1966 through 1968) where the downturn began, at

least in the United States, such that from 1970 to the present, *there has been no net economic growth in the United States per capita and per square kilometer at any time since 1970*. That's a fact. Those facts are obvious on the surface; it's necessary, of course, to treat these in much greater detail for purposes of policy planning.

Who is Credible?

What I shall be doing in the coming period, is the following. I shall be continuing an exploratory presidential campaign. The function of that campaign at this stage is to provide, not only for the United States but for the world, a reference point for policy.

That is to say, what is our condition? What has happened to us over particularly the past 50 years—but especially the past 30 years? How did we get here? Show the connection; and what do we do about it, to get out of here. In what direction do we go?

I shall address largely the axiomatics. The manner in which I shall do this, is to present to the U.S. and other publics, a series of chronologies on policy. And I shall do it from a personal standpoint, because I've been active in policymaking (with not much influence, of course, until the mid-1970s), but policymaking. That is, a public commitment on policy, a matter of record, over the past 30 years. On a few policies over that period, and some other matters only recently, in the past 20 years. But that record is absolutely clear.

On the other side, we have what governments and so-called experts have said who have attacked me, or who have attacked the particular kinds of policies I've represented without attacking me by name, but have attacked those kinds of policies and perspectives which I've advocated as adoptable.

Then we have those who have proposed policies which are different than mine, independent, [although they] may not have taken my own pronouncements into consideration at all.

Then we have the results, the practical results on, variously, a national and an international scale.

We can see, therefore, who is credible. Is the kind of policy method which I've employed correct? Does it stand the test of time? How do my critics, my direct critics, stand up on this, or critics of the same policy which I've advocated, even if they did not mention me or direct it against me in particular; and third, how about

those who simply were making the policy of nations in that period? And what were the events?

Who is credible? Or more particularly, *what method of analysis* is credible? What was right, what was wrong? What is true, what is false?

Because, in point of fact, for all the abuse my friends and I have taken for our political advocacies, the fact is, we have gained objectively a unique authority in these matters. I dare say there is no government in the world today which has greater earned credibility on matters of analytical method, of forecasting, of policy studies, than we do.

People are not going to look, in this time of crisis, simply toward new ideas; they are going to look to an alternate set of authorities. They are not going to take Johnny-come-latelys who come from nowhere out of the bushes and entrust great power to them—only a few fools will do that.

People looking for alternatives, serious people, are going to look among us, to find which among us has earned authority. They are going to turn around, away from those who have lost authority, or who have earned a loss of authority, and they're going to turn to those who have *earned* an alternative authority. Not to blindly follow, but to learn, to hear, to think, to act accordingly.

And I propose to you that the following answers will emerge. And I will propose to you also that it is my job, in particular, or my main job, to help make those answers apparent within the independent judgment of many groups of people around the world.

Imago Dei

The answer is, first of all, that we must distinguish mankind absolutely from and above the beasts; that mankind is the only living creature which has demonstrated the capability of *changing the characteristic relationship of our species to nature* in such a way that we can willfully, through scientific and technological and related progress, increase the potential population density of our species. No other species can do that. In Christianity, we call that *imago Dei*, that creative power of reason—of *cognitive* reason, not associative reason, but cognitive reason, which places man in the image of God.

Secondly, because of this power of reason, mankind can look at the experience of our own discoveries over many thousands of years to date, beginning perhaps

with the first development of solar astronomical calendars, maybe 20,000 years ago or something of that sort. We can see the ideas which have been brought to us as scientific discoveries and cultural discoveries over these many thousands of years.

We can see something more than the importance of those discoveries. We can see in all those valid discoveries—valid in the sense that they contributed to progress in man’s knowledge of nature and so forth—a *method* which is exercised by each of those minds who have made that discovery. We can see that method because our children and we ourselves can replicate that experience of discovery—as they should be doing in schools—for example, just as a child replicates Pythagoras’ discovery of his famous theorem, or a child slightly older in geometry class replicates the proof of the five Platonic solids, and so forth and so on.

Each of these discoveries can be experienced *de novo* within the mind of a child if the thing is done in a certain sequence. And thus every person can recognize that there is a method of discovery, a method of changing ideas, of going from less adequate principles to more adequate principles, which is the direction of progress.

What is Scientific Method?

This is the true scientific method. This is true in the physical sciences; this is also true in the arts. And we know that by following this method, and by applying this method to improving our behavior in respect to nature, that we can improve the condition of man—as measurable, for example, in increase of potential population density.

We see thus that every single individual who generates or who communicates these vital discoveries to become general human practice, is an indispensable and, shall we say, sacred individuality. We see thus the importance and relative sacredness of the family which generates the newborn individual, which nurtures that person in loving nurture until they become an adult, so that we have a valuable new human being who, as an adult, can also contribute to the generation, application, and distribution of these important ideas.

We see the importance of the state, and the importance of the sovereign nation-state based on a literate form of common language and common principle in nurturing the Good to protect the individual, to protect

the family, to nurture the good they contribute, to the benefit of present and future generations.

We see a natural order in things made apparent to our reason from such reflections. We see that the life on this planet is best ordered by sovereign nation-states based on literate forms of language and common principle, among all nations hopefully based on the same general notion of principle, which we call natural law—a natural law for mutual benefit of all humanity among neighbors in a division of labor. And we should hope to bring about that order on this planet, by whatever means and however long a struggle that takes; but to bring it forth nonetheless. Not for any utopian reason, but simply because that is the only just, peaceful order which is possible among men and women.

We must thus place those values of scientific and related discovery, and the sacredness of the individual life as the axioms upon which society bases itself, and push aside the sometimes quite literally satanic ideas which we associate today with the so-called environmentalist movement, with post-industrialism, with chaos theory, with the rock-drug-sex counterculture, and so forth and so on.

If we do that, then we can make that axiomatic change and build up from among people who are dedicated to that, a kind of elite, the elite of the educated people who, such as a priesthood more or less, are concerned more than the rest, day to day, with the care for the society; who find their whole identity in caring for this society, for the next generations to come, for the relations among states; who proceed not as dictators or tyrants, as powers, but, as Plato described them, as philosopher-kings.

We must renew, regenerate, and, to a large degree, replace the present ruling elites over society, and to replace them with an emerging beneficent elite of philosophers who care for society and who seek to instill in nations, and in individuals within those nations, the kind of conscience which is needed to guide nations to make those kinds of cooperative decisions, those changes in policy, which will enable us to escape from the New Dark Age now facing us.

The ‘Third Way’

Let me conclude with one brief case in point: the economic crisis. The world is now gripped by a form of psychosis called free trade. I do not exaggerate; it is not

hyperbole to call it psychosis. Nor would it be hyperbole to say it is a metastatic cancer. This is a process by which junk bonds, derivatives, and other instruments of free trade speculation in Russia, but also in the United States, loot the existing investment in infrastructure, in industry, in all kinds of physical assets. These assets are then sold, by pillaging them at 10-20¢ on the dollar, so to speak, in order to put more money in the hands of a few speculators who take that money to multiply its notional value on speculative markets, and then turn around and say, “We require more loot! We require more privatization!” which is simply looting; it is Genghis Khan all over again in Russia, or in the United States.

The more this bubble of derivatives grows; the more it has looted from the real economy, from farms, from industries, from infrastructure, from entitlements, pensions, the medical care of the population, from nature itself, in order to live another day, that same cancerous bubble of financial speculation must loot the economy—the real economy, the physical economy—more savagely than it did the day before. And thus we have, not a cyclical crisis, but a systemic one.

We must destroy this cancer of speculation. We must return to the kind of principles of statecraft in these matters, which were understood by Gottfried Leibniz in, for example, his proposals to Czar Peter II. We must return to those principles of statecraft which were understood by the first U.S. administration of President George Washington; the ideas of Alexander Hamilton; the ideas of Benjamin Franklin; the ideas of the Careys, Mathew and his son Henry; the ideas of Friedrich List; the ideas of similar people and, in the case of Russia, the echoes of appreciation of List by such geniuses and collaborators of the great Mendeleyev as Count Sergei Witte.

We must build nations which are based on a dirigist model, as some of our people used to speak of Colbert and, later, Charles de Gaulle, in which the state takes responsibility for creating the infrastructure needed in terms of water management, sanitation, public transportation (especially rails, modern rails), power supplies, health care, and education, and fosters through that means and through public credit, the growth of private enterprises which are partners with government in building up infrastructure, but which are also the means through which technological progress is translated into agricultural and manufacturing production, and other

forms of physical production.

We must have a dirigist form of government, a third way, so to speak, between Mazzinian communism and free trade. After all, Karl Marx was a protégé of Mazzini, of that freemasonic group; and on the other side, were the teachings of Karl Marx’s teachers in economics, Adam Smith, the Physiocrats, and David Ricardo.

We must return to the only successful model of economy from the past centuries, a model conceived by Gottfried Leibniz, as in his advice to Peter the Great; the model associated with George Washington’s first and second administrations; the model associated with the name of Alexander Hamilton, treasury secretary under President Washington; the model associated with Mathew and Henry Carey, and with Friedrich List and others, and also the model admired so much by that friend and collaborator of Mendeleyev, the great Count Sergei Witte.

We must have what was called in the late eighteenth and nineteenth century, the American System of Political Economy, in which the state created a monopoly in the generation of currency and credit through a currency issued by the Treasury, under the control of government. That currency, loaned to enterprises of state infrastructure, and to private firms for meritorious investments in production, becomes the basis for the growth of employment and useful production and trade within the nation.

By having cooperation among states which have such so-called dirigist models, we shall bring the world out of chaos, if we choose to do so.

The time will come fast for us to make that kind of choice, for when the systemic collapse of this metastatic cancer of speculation called free trade occurs, there will be nothing but chaos before us, except as nations choose to turn to the third way—the American System.

But that is, after all, only a good economic system. It will work only if it is based on respect for the creative uniqueness of the human individual, and is based on a commitment to scientific, technological, and related cultural forms of progress, and is based on investment in those improved modes of production which realize, in practice, the benefits of scientific and technological progress as increased potential population density and thus, as increased standards of living for the population as a whole.

PRESIDENT TRUMP TO SPEAKER PELOSI

The Unconstitutional Impeachment

This is the full text of President Donald Trump's [letter](#) to Speaker of the House Nancy Pelosi regarding the "Impeachment Hoax" against him.



THE WHITE HOUSE
WASHINGTON

December 17, 2019

The Honorable Nancy Pelosi
Speaker of the House of Representatives
Washington, D.C. 20515

Dear Madam Speaker:

I write to express my strongest and most powerful protest against the partisan impeachment crusade being pursued by the Democrats in the House of Representatives. This impeachment represents an unprecedented and unconstitutional abuse of power by Democrat Lawmakers, unequalled in nearly two and a half centuries of American legislative history.

The Articles of Impeachment introduced by the House Judiciary Committee are not recognizable under any standard of Constitutional theory, interpretation, or jurisprudence. They include no crimes, no misdemeanors, and no offenses whatsoever. You have cheapened the importance of the very ugly word, impeachment!

By proceeding with your invalid impeachment, you are violating your oaths of office, you are breaking your allegiance to the Constitution, and you are declaring open war on American Democracy. You dare to invoke the Founding Fathers in pursuit of this election-nullification scheme—yet your spiteful actions display unfettered contempt for America's founding and your

egregious conduct threatens to destroy that which our Founders pledged their very lives to build. Even worse than offending the Founding Fathers, you are offending Americans of faith by continually saying "I pray for the President," when you know this statement is not true, unless it is meant in a negative sense. It is a terrible thing you are doing, but you will have to live with it, not I!

Your first claim, "Abuse of Power," is a completely disingenuous, meritless, and baseless invention of your imagination. You know that I had a totally innocent conversation with the President of Ukraine. I then had a second conversation that has been misquoted, mischaracterized, and fraudulently misrepresented. Fortunately, there was a transcript of the conversation taken, and you know from the transcript (which was immediately made available) that the paragraph in question was perfect. I said to President Zelensky: "I would like you to do us a favor, though, because our country has been through a lot and Ukraine knows a lot about it." I said do *us* a favor, not *me*, and *our country*, not a campaign. I then mentioned the Attorney General of the United States. Every time I talk with a foreign leader, I put America's interests first, just as I did with President Zelensky.

You are turning a policy disagreement between two branches of government into an impeachable offense—it is no more legitimate than the Executive Branch charging members of Congress with crimes for the lawful exercise of legislative power.

You know full well that Vice President Biden used his office and \$1 billion dollars of U.S. aid money to coerce Ukraine into firing the prosecutor who was digging into the company paying his son millions of dollars. You know this because Biden bragged about it on video. Biden openly stated: "I said, 'I'm telling you, you're not getting the billion dollars'.... I looked at them and said: 'I'm leaving in six hours. If the prosecutor is not fired, you're not getting the money.' Well, son of a bitch. He got fired." Even Joe Biden admitted just

days ago in an interview with NPR that it “looked bad.” Now you are trying to impeach me by falsely accusing me of doing what Joe Biden has admitted he actually did.

President Zelensky has repeatedly declared that I did nothing wrong, and that there was No Pressure. He further emphasized that it was a “good phone call,” that “I don’t feel pressure,” and explicitly stressed that “nobody pushed me.” The Ukrainian Foreign Minister stated very clearly: “I have never seen a direct link between investigations and security assistance.” He also said there was “No Pressure.” Senator Ron Johnson of Wisconsin, a supporter of Ukraine who met privately with President Zelensky, has said: “At no time during this meeting . . . was there any mention by Zelensky or any Ukrainian that they were feeling pressure to do anything in return for the military aid.” Many meetings have been held between representatives of Ukraine and our country. Never once did Ukraine complain about pressure being applied—not once! Ambassador Sondland testified that I told him: “No quid pro quo. I want nothing. I want nothing. I want President Zelensky to do the right thing, do what he ran on.”

The second claim, so-called “Obstruction of Congress,” is preposterous and dangerous. House Democrats are trying to impeach the duly elected President of the United States for asserting Constitutionally based privileges that have been asserted on a bipartisan basis by administrations of both political parties throughout our Nation’s history. Under that standard, every American president would have been impeached many times over. As liberal law professor Jonathan Turley warned when addressing Congressional Democrats: “I can’t emphasize this enough . . . if you impeach a president, if you make a high crime and misdemeanor out of going to the courts, it is an abuse of power. It’s your abuse of power. You’re doing precisely what you’re criticizing the President for doing.”

Everyone, you included, knows what is really happening. Your chosen candidate lost the election in 2016, in an Electoral College landslide (306-227), and you and your party have never recovered from this defeat. You have developed a full-fledged case of what many in the media call Trump Derangement Syndrome and sadly, you will never get over it! You are unwilling and unable to accept the verdict issued at the ballot box during the great Election of 2016. So you have spent

three straight years attempting to overturn the will of the American people and nullify their votes. You view democracy as your enemy!

Speaker Pelosi, you admitted just last week at a public forum that your party’s impeachment effort has been going on for “two and a half years,” long before you ever heard about a phone call with Ukraine. Nineteen minutes after I took the oath of office, the *Washington Post* published a story headlined, “The Campaign to Impeach President Trump Has Begun.” Less than three months after my inauguration, Representative Maxine Waters stated, “I’m going to fight every day until he’s impeached.” House Democrats introduced the first impeachment resolution against me within months of my inauguration, for what will be regarded as one of our country’s best decisions, the firing of James Comey (see Inspector General Reports)—who the world now knows is one of the dirtiest cops our Nation has ever seen. A ranting and raving Congresswoman, Rashida Tlaib, declared just hours after she was sworn into office, “We’re gonna go in there and we’re gonna impeach the motherf****r.” Representative Al Green said in May, “I’m concerned that if we don’t impeach this president, he will get re-elected.” Again, you and your allies said, and did, all of these things long before you ever heard of President Zelensky or anything related to Ukraine. As you know very well, this impeachment drive has nothing to do with Ukraine, or the totally appropriate conversation I had with its new president. It only has to do with your attempt to undo the election of 2016 and steal the election of 2020!

Congressman Adam Schiff cheated and lied all the way up to the present day, even going so far as to fraudulently make up, out of thin air, my conversation with President Zelensky of Ukraine and read this fantasy language to Congress as though it were said by me. His shameless lies and deceptions, dating all the way back to the Russia Hoax, is one of the main reasons we are here today.

You and your party are desperate to distract from America’s extraordinary economy, incredible jobs boom, record stock market, soaring confidence, and flourishing citizens. Your party simply cannot compete with our record: 7 million new jobs; the lowest-ever unemployment for African Americans, Hispanic Americans, and Asian Americans; a rebuilt military; a completely reformed VA with Choice and Account-

ability for our great veterans; more than 170 new federal judges and two Supreme Court Justices; historic tax and regulation cuts; the elimination of the individual mandate; the first decline in prescription drug prices in half a century; the first new branch of the United States Military since 1947, the Space Force; strong protection of the Second Amendment; criminal justice reform; a defeated ISIS caliphate and the killing of the world's number one terrorist leader, al-Baghdadi; the replacement of the disastrous NAFTA trade deal with the wonderful USMCA (Mexico and Canada); a breakthrough Phase One trade deal with China; massive new trade deals with Japan and South Korea; withdrawal from the terrible Iran Nuclear Deal; cancellation of the unfair and costly Paris Climate Accord; becoming the world's top energy producer; recognition of Israel's capital, opening the American Embassy in Jerusalem, and recognizing Israeli sovereignty over the Golan Heights; a colossal reduction in illegal border crossings, the ending of Catch-and-Release, and the building of the Southern Border Wall—and that is just the beginning, there is so much more. You cannot defend your extreme policies—open borders, mass migration, high crime, crippling taxes, socialized healthcare, destruction of American energy, late-term taxpayer-funded abortion, elimination of the Second Amendment, radical far-left theories of law and justice, and constant partisan obstruction of both common sense and common good.

There is nothing I would rather do than stop referring to your party as the Do-Nothing Democrats. Unfortunately, I don't know that you will ever give me a chance to do so.

After three years of unfair and unwarranted investigations, 45 million dollars spent, 18 angry Democrat prosecutors, the entire force of the FBI, headed by leadership now proven to be totally incompetent and corrupt, you have found NOTHING! Few people in high position could have endured or passed this test. You do not know, nor do you care, the great damage and hurt you have inflicted upon wonderful and loving members of my family. You conducted a fake investigation upon the democratically elected President of the United States, and you are doing it yet again.

There are not many people who could have taken the punishment inflicted during this period of time, and yet done so much for the success of America and its citizens. But instead of putting our country first, you

have decided to disgrace our country still further. You completely failed with the Mueller report because there was nothing to find, so you decided to take the next hoax that came along, the phone call with Ukraine—even though it was a perfect call. And by the way, when I speak to foreign countries, there are many people, with permission, listening to the call on both sides of the conversation.

You are the ones interfering in America's elections. You are the ones subverting America's Democracy. You are the ones Obstructing Justice. You are the ones bringing pain and suffering to our Republic for your own selfish personal, political, and partisan gain.

Before the Impeachment Hoax, it was the Russian Witch Hunt. Against all evidence, and regardless of the truth, you and your deputies claimed that my campaign colluded with the Russians—a grave, malicious, and slanderous lie, a falsehood like no other. You forced our Nation through turmoil and torment over a wholly fabricated story, illegally purchased from a foreign spy by Hillary Clinton and the DNC in order to assault our democracy. Yet, when the monstrous lie was debunked and this Democrat conspiracy dissolved into dust, you did not apologize. You did not recant. You did not ask to be forgiven. You showed no remorse, no capacity for self-reflection. Instead, you pursued your next libelous and vicious crusade—you engineered an attempt to frame and defame an innocent person. All of this was motivated by personal political calculation. Your Speakership and your party are held hostage by your most deranged and radical representatives of the far left. Each one of your members lives in fear of a socialist primary challenger—this is what is driving impeachment. Look at Congressman Nadler's challenger. Look at yourself and others. Do not take our country down with your party.

If you truly cared about freedom and liberty for our Nation, then you would be devoting your vast investigative resources to exposing the full truth concerning the FBI's horrifying abuses of power before, during, and after the 2016 election—including the use of spies against my campaign, the submission of false evidence to a FISA court, and the concealment of exculpatory evidence in order to frame the innocent. The FBI has great and honorable people, but the leadership was inept and corrupt. I would think that you

would personally be appalled by these revelations, because in your press conference the day you announced impeachment, you tied the impeachment effort directly to the completely discredited Russia Hoax, declaring twice that “all roads lead to Putin,” when you know that is an abject lie. I have been far tougher on Russia than President Obama ever even thought to be.

Any member of Congress who votes in support of impeachment—against every shred of truth, fact, evidence, and legal principle—is showing how deeply they revile the voters and how truly they detest America’s Constitutional order. Our Founders feared the tribalization of partisan politics, and you are bringing their worst fears to life.

Worse still, I have been deprived of basic Constitutional Due Process from the beginning of this impeachment scam right up until the present. I have been denied the most fundamental rights afforded by the Constitution, including the right to present evidence, to have my own counsel present, to confront accusers, and to call and cross-examine witnesses, like the so-called whistleblower who started this entire hoax with a false report of the phone call that bears no relationship to the actual phone call that was made. Once I presented the transcribed call, which surprised and shocked the fraudsters (they never thought that such evidence would be presented), the so-called whistleblower, and the second whistleblower, disappeared because they got caught, their report was a fraud, and they were no longer going to be made available to us. In other words, once the phone call was made public, your whole plot blew up, but that didn’t stop you from continuing.

More due process was afforded to those accused in the Salem Witch Trials.

You and others on your committees have long said impeachment must be bipartisan—it is not. You said it was very divisive—it certainly is, even far more than you ever thought possible—and it will only get worse!

This is nothing more than an illegal, partisan attempted coup that will, based on recent sentiment, badly fail at the voting booth. You are not just after

me, as President, you are after the entire Republican Party. But because of this colossal injustice, our party is more united than it has ever been before. History will judge you harshly as you proceed with this impeachment charade. Your legacy will be that of turning the House of Representatives from a revered legislative body into a Star Chamber of partisan persecution.

Perhaps most insulting of all is your false display of solemnity. You apparently have so little respect for the American People that you expect them to believe that you are approaching this impeachment somberly, reservedly, and reluctantly. No intelligent person believes what you are saying. Since the moment I won the election, the Democrat Party has been possessed by Impeachment Fever. There is no reticence. This is not a somber affair. You are making a mockery of impeachment and you are scarcely concealing your hatred of me, of the Republican Party, and tens of millions of patriotic Americans. The voters are wise, and they are seeing straight through this empty, hollow, and dangerous game you are playing.

I have no doubt the American people will hold you and the Democrats fully responsible in the upcoming 2020 election. They will not soon forgive your perversion of justice and abuse of power.

There is far too much that needs to be done to improve the lives of our citizens. It is time for you and the highly partisan Democrats in Congress to immediately cease this impeachment fantasy and get back to work for the American People. While I have no expectation that you will do so, I write this letter to you for the purpose of history and to put my thoughts on a permanent and indelible record.

One hundred years from now, when people look back at this affair, I want them to understand it, and learn from it, so that it can never happen to another President again.

Sincerely yours,
DONALD J. TRUMP
President of the United States of America

cc: United States Senate
United States House of Representatives

II. Unleashing the Power of Science

Get Small Nuclear Reactors Off the Starting Blocks—Now!

by Ramtanu Maitra

Dec. 23—Mass production of modular nuclear reactors to industrialize developing countries, until fusion power comes online! That was the title I used when I last [wrote](#) about the ongoing efforts to make small modular nuclear reactors (SMRs)—in the *EIR* issue of November 16, 2018. SMRs will be a reliable source of a steady supply of electrical power. Some few positive steps have been taken in a few countries, including in the United States.

But the funding available to get the SMRs out of the test laboratories and deployed commercially does not match the interest expressed in SMRs exhibited by many concerned individuals around the world who acknowledge the necessity of SMRs for power generation, desalination and other societal benefits. Consequently, the existing funding also does not match the plans for development and production of this revolutionary generation of advanced nuclear reactors.

The capability to manufacture a safe and sound SMR could hardly be the only objective of SMR developers. The more important objective is to develop the capability to fabricate these SMRs in large numbers

Mr. Maitra is a professional engineer who worked for many years in the U.S. nuclear industry. He was the editor of *Fusion Asia*, a science and technology journal, in India for ten years (1984-93) and was part of a team organized by India's Department of Science and Technology (DST) to promote future technologies in a number of major universities of India. From 2002-2004, he served as an adviser to India's Planning Commission's 2020 Vision project. He has also served as the New Delhi Bureau Chief of *EIR* and was an Associate Editor of *21st Century Science and Technology* magazine.



concurrently. According to one estimate, if the United States wants to secure 25% of the *potential* global SMR market, it must establish an assembly line to produce 28 to 30 NuScale-type SMRs annually. But this estimate, implying the addition of perhaps 10 gigawatts of nuclear power capacity per year around the world through SMRs, is completely insufficient to the demand: Seventy-five countries in the world currently cannot provide 1,000 kilowatt-hours per year per person, which is less than 10% of the American level, and 1.1 billion people still have no access to electricity at all.

If this blight on humanity is to be dramatically and quickly changed, it is SMRs that will do it, for reasons this article will demonstrate.

A new international credit system will have to be established by leading industrial nations, to enable

them to export capital goods on a large scale to the developing countries, enabling them to grow rapidly and productively and to thereby tackle poverty. SMRs represent a crucial category of such exports during the immediate future. It must begin by the mid-2020s, but it will only happen with such a new, and relatively vast, global generation of credit.

In other words, plans and programs to set up highly-productive “assembly lines” to manufacture these SMRs are an integral part of an overall SMR development. That process has yet to take off due to lack of adequate appreciation of their potential by those who should know better, and behind the scenes blocking by green malthusians. This is manifest in the lack of funding to jump start the many projects. SMRs will be considered a success when deployed in large numbers in energy-hungry nations, most of which are located in Africa, Asia and Latin America.

Except for a few small, but oil- and gas-rich nations in the Middle East, these power-starved nations have neither the capital resources nor the infrastructure for large nuclear power plants on the order of 1,000 MW per reactor, although such large reactors are more efficient and cost-effective when finally on line. The solution for these countries lies squarely in the speedy and abundant deployment of scalable, small modular reactors.

Developing the Modern Labor Force

To usher in an SMR-based nuclear power revolution requires generous participation of the countries where these SMRs are being developed, and wide-ranging collaboration among the countries such as the United States, Russia, China, Japan, France, among others, who have mastered the peaceful use of nuclear technology for power generation.

As for the power-short nations, necessarily only a few of the smaller nations have been able to show financial interest so far. Romania, which is well on its way to adding two new 700 MW CANDU-type units to its fleet, is nevertheless talking to at least one SMR developer. Ukraine is committing to building an SMR component factory for exports. And South Africa, which ditched the plan to buy eight 1200 MW units from Russia, is rethinking its plans for producing electrical power from nuclear energy, and smaller, more affordable units are clearly one of the possibilities it has in mind. Except for Saudi Arabia and Jordan, which have expressed their keenness to buy SMRs, very little movement has been noticed elsewhere.

It is no longer just hearsay that many of these power-deprived nations clearly recognize that the setting up of nuclear power generation plants is of absolute necessity for developing a workforce that for the first time will be backed by a hundred-percent reliable power source—the very essence for developing the foundation of any economy. A power-strong infrastructure enables the setting up of viable industrial and commercial sectors, urgently needed by the people of those countries.

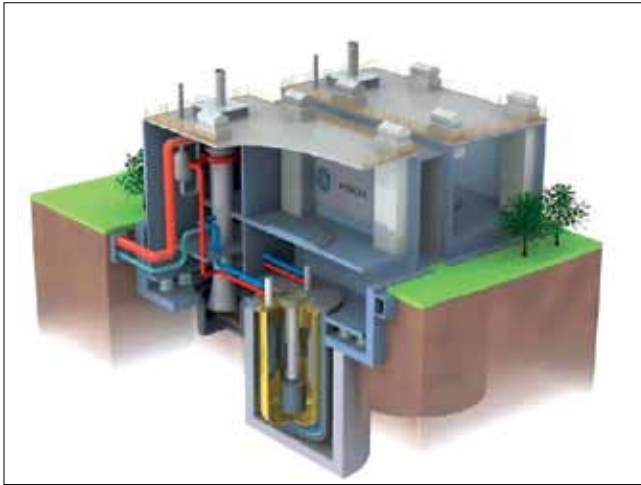
The reason that those countries will be in the market for purchasing SMRs is not only that the capital cost for SMRs is manageable and installation time is short, but also that they do not demand a strong power transmission infrastructure. Most importantly, these reactors will come completely fabricated and tested in the factory. All that will be required is transportation, by land and sea, and setting them up. Added advantage? These SMRs are scalable. Fabricated modules can be added over a period of time to increase power generation as needed to meet growing economic requirements.

Nonetheless, the success of SMRs will depend on how much and how quickly nations such as the United States, Canada, Russia and China finance the entire gamut of SMR *development*. Russia is developing small reactors mainly for export. “Russia’s energy system is more suited to large nuclear plants,” Anton Moskvina, Vice President of Rusatom Overseas responsible for marketing and business development, [told Nuclear Engineering International](#) on October 3, 2018. Floating plants could be of interest to nations needing to supply power and water to isolated territories, or facing seasonal power shortages, or having underdeveloped power systems, he said. Russians admit that floating plants have limitations and cannot be set inland.

Why SMRs

A few points as to why the SMRs are attractive for developing and developed nations are reiterated here. For instance:

- As major components can be manufactured off-site and shipped to the point of use, SMRs allow for the centralization of manufacturing expertise.
- Limited on-site construction is required, as work is concentrated in the manufacturing stage.
- Individual factories could fabricate components for multiple SMRs, increasing fleet-wide design consistency and standardization.
- Modularity and standardized designs can also increase the safety and efficiency of plant operations, as



USNRC

GE Hitachi Nuclear Energy's PRISM nuclear power plant design locates the reactor modules below grade, making them less vulnerable.

they eliminate idiosyncratic design features between plants and streamline operating and maintenance procedures.

- The cost of an SMR has been estimated to be between \$800 million and \$3 billion per unit, whereas a large reactor typically costs between \$10 billion and \$12 billion per unit.

- The smaller size of SMRs should translate to each reactor being less capital intensive; costs associated with manufacturing and construction are reduced as less material is required. Factory fabrication can mean quicker construction on site, which reduces the cost of labor and shortens the interval between construction of the reactor and when the reactor begins to generate electricity.

- Transportation of fuel may be minimized since the reactors can be fueled when built in a factory.

- In developing countries or rural communities that lack the electricity transmission infrastructure to support a large nuclear plant, SMRs provide a way for utilities to still have baseload power on the grid.

- Nuclear plant operators can gradually scale up the number of SMRs at a single plant location as demand grows, distributing cost evenly throughout the lifetime of a nuclear power plant.

- The small size of SMRs may allow them to be sited in places where a large baseload plant is not feasible or not needed. For example, SMRs have been considered as a power source for remote mines in Canada that cannot access the grid. This factor is also of great importance in large, power-short nations, such as Nigeria, Indonesia with 17,000-plus islands, and Brazil.

- SMRs will require significantly less land than do power plants with the same output that use wind, solar, biomass, or hydropower. NuScale, one of the leading SMR developers in the United States, estimates that SMRs require only 1% of the land area required for similar generation by other technologies.

- Because of their small size, SMRs can be located underground. This would make them less vulnerable to natural phenomena and destructive acts by man, either through carelessness or by intention.¹

Who Needs Small Modular Reactors?

In reality, SMRs will have wide-ranging use, not only in small or middle-sized power-short nations, but also in large countries with freshwater shortage but long coastlines. Take the case of India, for instance.

According to a report by India's government planners,

currently, 600 million Indians face high to extreme water stress and about 200,000 people die every year due to inadequate access to safe water. The crisis is only going to get worse. By 2030, the country's water demand is projected to be twice the available supply, implying severe water scarcity for hundreds of millions of people and an eventual ~6% loss in the country's GDP.

As per a report of the National Commission for Integrated Water Resource Development of MoWR [Ministry of Water Resources], India's water requirement by 2050 in a high use scenario is likely to be a milder 1,180 BCM (billion cubic-meter), whereas present-day availability is 695 BCM. The total availability of water possible in country is still lower than this projected demand, at 1,137 BCM.

For more on this [see](#) a discussion of the national *Composite Water Management Index* (NITI Aayog, Government of India: June 14, 2018).

Over the years, India's indiscriminate use of groundwater has been squarely blamed for this growing crisis. India has ambitious river-diversion plans to meet the demands of water-short areas. That plan has been hanging fire for decades. However, the river-diversion plan has

1. *Small Modular Reactors: Adding to Resilience at Federal Facilities*, by Seth Kirshenberg, Hilary Jackler, and Jane Eun (at Kutak Rock LLP); and Brian Oakley and Wil Goldenberg (at Scully Capital Services, Inc.), December 2017.

its limitations, since India depends heavily on annual monsoon for replenishing its rivers and groundwater. Monsoon often fails to deliver the water Indians expect and need, to make the rivers run full. Such failures lead to widespread drought in large parts of the country.

On the other hand, India has a coastline of about 6100 km. It touches nine states. Desalination using the SMRs will provide India with a reliable amount of usable water, and over a period of time, will reduce its dependence on drawing out the groundwater and making the land fallow.

SMRs can bring similar benefits to developed nations, such as the United States. California, the most populous state in the Union, is water short. Under present circumstances, the fresh-water shortage in California will be permanent. Today, 75 percent of California's fresh water supply originates in the northern third of the state, above Sacramento, while 80 percent of water users live in the southern two-thirds of the state.

In an average year, California gets about 240 BCM of fresh water from rain, snow and imports from other states. Roughly half of that is absorbed by native plants, evaporates, or flows into the sea. However, the actual amount varies widely from year to year because of nature's uncertainties. California also has about 1350 km of coastline running from north to south. A well-designed deployment of SMRs along the coast would provide a reliable, steady flow of usable fresh water to Californians forever.

Puerto Rico

There are also other reasons why SMRs could be of great benefit to the developed nations. Take the case of Puerto Rico, an unincorporated territory of the United States, located about 1850 km southeast of Florida. In essence, however, Puerto Rico is more like a colony of the United States. Puerto Ricans are U.S. citizens, but they have no elected representative serving in the U.S. Congress. Yet they are bound by its decisions, and those of the executive branch.

In 2017, Puerto Rico was battered by two strong hurricanes, Hurricane Irma in September 2017 and two weeks later, by Hurricane Maria. After these back-to-back storms, massive landslides and downed trees

blocked mountain roads, cutting towns off from the rest of the island for weeks. Two years later, Puerto Rico's infrastructure remains in shambles, partly because Washington has disbursed very little for the island's rebuilding. While the failure to rebuild Puerto Rico is rooted in politics, what cannot be denied is that the island lies in the path of major hurricanes and the conventional development of infrastructure, such as the island's power grid, in particular, will keep the island vulnerable forever. Puerto Rico's power sector needs a total change, and SMRs would enormously help to usher in that change.

While the energy policy makers in the United States and elsewhere have fallen under the influence of advocates promoting wind, solar, tidal wave basins, and other



USAF/Nicholas Dutton

Extensive damage after Hurricane Maria in Puerto Rico, September 2017.

such so-called renewables, the truth is that Puerto Rico is an ideal location for setting up SMRs. During a panel discussion at a National Clean Energy Week event in Washington in September 2017, former Energy Secretary Rick Perry [addressed](#) the issue squarely:

Wouldn't it make abundant good sense if we had small modular reactors that literally you could put in the back of a C-17 [military cargo] aircraft, transport it to an area like Puerto Rico, push it out the back end, crank it up and plug it in? That could serve tens of thousands if not hundreds of thousands of people very quickly. That's the type of innovation that's going on at our national labs.

Hopefully, we can expedite that.

For a fuller discussion of the opportunities for SMRs in Puerto Rico, [see](#) “Puerto Rico Group Seeks SMRs for Island Electric Power,” in *Neutron Bytes*, October 26, 2018.

Secretary Perry was not the only one who recognized how SMRs would provide a real, and not a cheap and ineffective thumb-tack solution, to the millions living in Puerto Rico who hate the miserable powerless condition in that island. Paul Murphy, managing director of Murphy Energy & Infrastructure Consulting LLC, is part of a project team funded by the U.S. Department of Energy to conduct a feasibility study as to whether advanced nuclear reactors could be a good solution to the island’s power problems. Murphy also sits on the advisory board of the Nuclear Alternative Project (NAP), a volunteer-based organization composed of University of Puerto Rico alumni, in partnership with the United Nuclear Industry Alliance (UNIA), based in Mayagüez, Puerto Rico.

Murphy has pointed out that advanced nuclear reactors could be a viable, long-term solution to meet Puerto Rico’s needs in an island environment, which poses unique issues of suitability, durability and grid size.

An Oct. 1, 2019 [article](#), “Nuclear Advocates Receive DOE Funding for Exploratory Study on Puerto Rico,” posted on the website of Morning Consult, a global technology company that collects, organizes, and shares survey research data to inform decision-making, quotes Murphy: “Windmills and solar panels don’t do well in hurricanes. Nuclear plants actually do.” For a territory with a vital tourism sector, he said, blanketing the island with wind and solar is untenable. He added that nuclear energy could help reduce Puerto Rico’s dependence on fossil fuels.

On March 15, 2018, the Civil Nuclear Trade Advisory Committee (CINTAC) of the U.S. Department of Commerce published a [position paper](#), “Puerto Rico and the Case for Small Modular Reactors,” outlining the economic and export potential of SMRs for Puerto



Gage Skidmore

Rick Perry, Secretary of Energy (2017-2019). “Puerto Rico’s power sector needs a total change, and small nuclear reactors would enormously help to usher in that change.”

Rico. In its [cover letter](#) to Commerce Secretary Wilbur Ross, the group wrote:

The aftermath of Hurricanes Irma and Maria has launched a movement to transform the island’s energy infrastructure into a more reliable, environmentally friendly and sustainable one. Today’s SMR designs present the technological advances specially tailored for energy challenges of island-type territories like Puerto Rico. For instance, some SMR designs are built underground which could also potentially increase the island’s energy security in future hurricane situations.

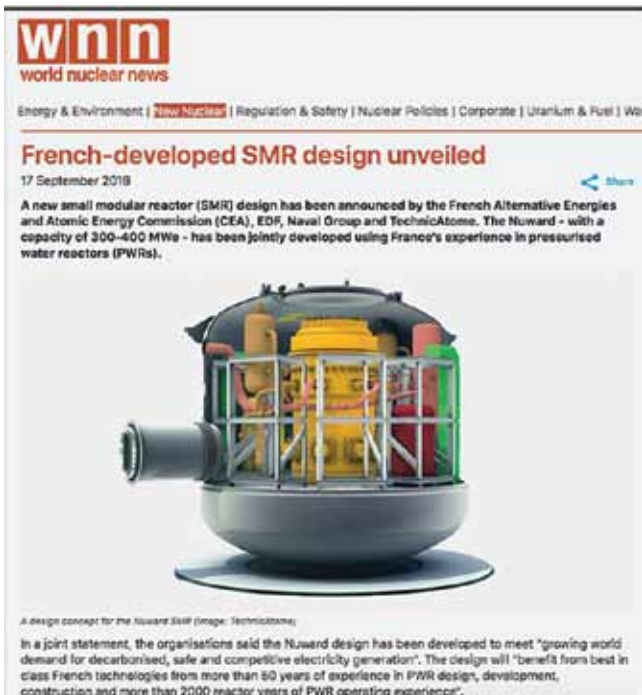
For more discussion of this topic, [see](#) “Puerto Rico Group Seeks SMRs for Island Electric Power,” cited above.

France

It is evident from media reporting that more and more countries are now “seriously” thinking of investing time and money in developing SMRs. A September 17, 2019 [article](#) in *World Nuclear News* carries the announcement by a French consortium—composed of the Alternative Energies and Atomic Energy Commission (CEA), EDF, Naval Group, and TechnicAtome—of its plans to build a small modular reactor they are calling the Nuward, in the 300-400 MW range, based on French pressurized water reactor (PWR) technology and an SMR design by Westinghouse. The consortium aims to complete the basic design between 2022 and 2025, with a demonstration unit by 2030. In other words, as of now, the announcement is more of a statement of intent but may bear fruit in another decade.

Russia and Its Customers

Russia, a leader in the large, economy-of-scale nuclear power plants, possesses a small nuclear power plant manufacturing capability, but has not revealed its intentions concerning SMRs. From what can be



gleaned, however, Russia will soon opt for developing SMRs of its own design.

Following Jordan's decision to abandon the plan, signed in 2015, to get two 1,000 MW nuclear power plants from Russia at \$10 billion each and to opt for an SMR, the Jordan Atomic Energy Commission (JAEC) and Russia's state-owned Rosatom Overseas signed a deal to conduct a joint feasibility study for building a Russian-designed SMR in Jordan. In a joint statement with the JAEC, Evgeny Pakermanov, president of Rosatom Overseas, stated: "The SMR technologies will certainly become one of our top priorities on the way to develop the world energy market." His statement and more about the deal were [covered](#) by the *Jordan Times*.

It is not surprising that Russia is planning to give the SMRs a real go. In recent years, Russia has met with setbacks selling their large Water-Water Energetic Reactors (VVERs) since these pressurized water reactors require large amounts of capital. In November 2016, Vietnam abandoned plans to build two multi-billion-dollar nuclear power plants with Russia, as did Japan, after officials cited lower demand forecasts, rising costs and

safety concerns.

In Turkey, where Russia has begun construction of the first of four VVER-1200 reactor-based power plants at \$20 billion each (estimated), which had been in limbo for years, funding is in short supply. Sberbank, Russia's state-owned banking and financial services company, has recently come up with a \$400 million loan to keep the project going, albeit at a slower pace.

China and Argentina

On the other hand, China has reportedly started building its first small modular reactor project on the southern island province of Hainan, the state-owned China National Nuclear Corporation (CNNC) said last July, as part of the country's efforts to diversify its nuclear sector. The project was originally scheduled to go into construction in 2017. The company did not say when the project was likely to be completed.

A setback has been reported from Argentina, where the construction of a prototype of the 25 MW CAREM (Central Argentina de Elementos Modulares), an SMR that has excellent export potential, has been suspended, reports said last August. NBN.media, a Cyprus-based outlet, had reported that Techint Engineering & Construction informed the workers from the CAREM project that they would halt the civil engineering work of the



experimental reactor. The primary reason cited by Techint was the unwillingness of the Argentinian Government to reconsider the budget for civil work, after the devaluation of the currency. At the same time, China National Nuclear Corp., which is owned by the state, has signed to finance and build Argentina's fourth and fifth conventional nuclear power plants, in a deal estimated to be valued at nearly \$15 billion.



Since most of the reports of SMRs across the world are not transparent, in this article we will focus on the developments in three countries—United States, Canada and South Korea.

Canada

World Nuclear News (WNN) [reported](#) on November 18, 2019 that Canadian Nuclear Laboratories (CNL), Canada’s premier nuclear science and technology organization, had announced the first recipients of support under an initiative launched earlier this year to accelerate the acquisition and deployment of SMRs in Canada, selecting Kairos Power, Moltex Canada, Terrestrial Energy Inc. and UltraSafe Nuclear Corporation (USNC).

According to *WNN*:

The four projects that have been selected are: Moltex Canada and the University of New Brunswick’s test apparatus to explore the potential of converting used CANDU reactor fuel to power their stable salt reactor design; Kairos Power’s tritium management strategy for its high-temperature fluoride salt-cooled reactor; USNC’s resolution of technical issues for its Micro Modular Reactor (MMR), including fuel processing, reactor safety, and fuel and graphite irradiation; and Terrestrial Energy’s evaluation of nuclear safety,

security and non-proliferation technologies for its integrated molten salt reactor (IMSR400) and other SMR designs. The Terrestrial Energy project will also look at opportunities to use CNL’s existing facilities, notably the ZED-2 reactor, as well as develop new experimental capabilities related to molten salt reactors.

In 2018, Canadian Nuclear Laboratories (CNL) set a goal of siting an SMR on its Chalk River site by 2026, and co-hosted an SMR Vendor Roundtable as part of the G4SR (Generation 4 Small Reactor) conference.

It is evident that the Canadian program is at an early stage and the whole cycle of SMR development has not been laid out yet. At the same time, a connection has developed between the leading American SMR developer, NuScale Power, headquartered in Portland, Oregon, and Ontario Power Generation, Inc. (OPG), Ontario, Canada’s public electricity generator.

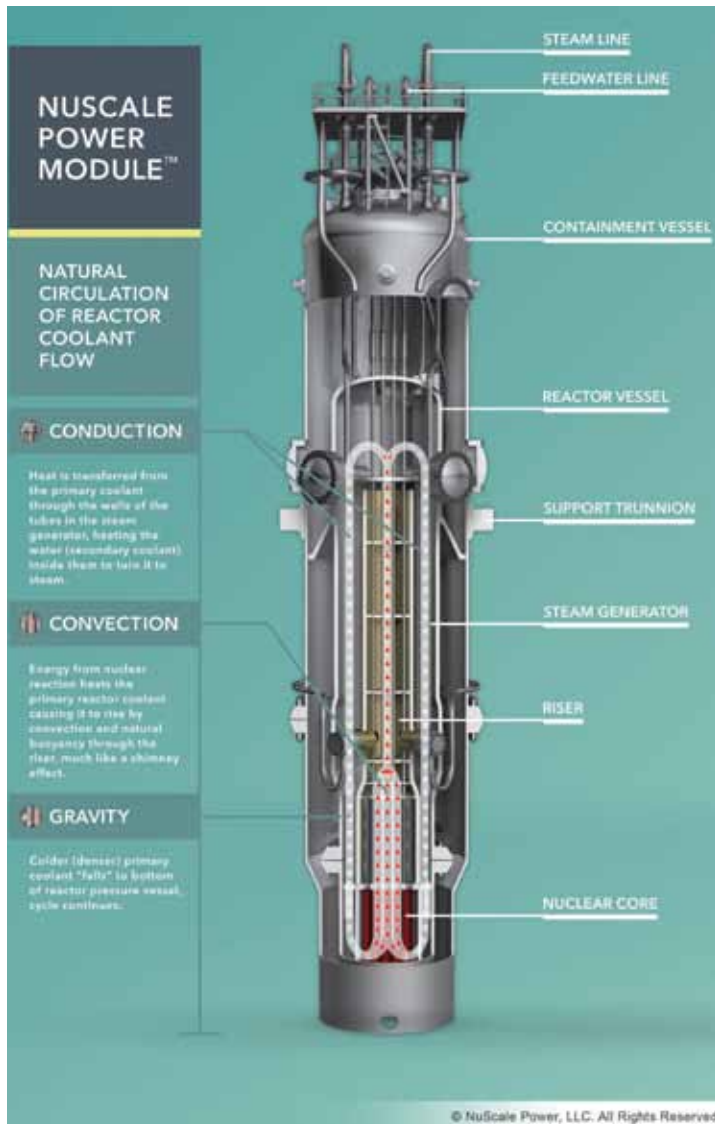
According to a [press release](#) by NuScale in the *Financial Post* on November 7, 2018, NuScale and OPG have signed a Memorandum of Understanding, in which OPG has agreed to support NuScale in its SMR vendor design review (VDR) with the Canadian Nuclear Safety Commission. The agreement, according to NuScale Chairman and CEO John Hopkins, was an “important milestone” in the company’s efforts to bring its reactor to Canada.

The United States

In the United States, the leading SMR developer, NuScale, announced in a December 12, 2019 [press release](#) on its website, titled “NuScale’s SMR Design Clears Phase 4 of Nuclear Regulatory Commission’s Review Process,” that,

The U.S. Nuclear Regulatory Commission (NRC) has completed the fourth phase of review of the Design Certification Application (DCA) for the company’s small modular reactor. NuScale reached this milestone on schedule, marking yet another significant achievement along its path to commercialization. The entire review of NuScale’s SMR design is now in Phases 5 and 6.

Phases 5 and 6 of the NRC review remain. Phase 5 entails a review by the NRC’s Advisory Committee on



Reactor Safeguards (ACRS). The ACRS is an independent advisor to the NRC that reviews and reports on safety studies and reactor facility license applications and renewals.

Phase 5 “will be completed on or ahead of the original schedule in June 2020,” according to NuScale Vice President of Regulatory Affairs Tom Bergman. “Phase 6 is preparation of the Final Safety Evaluation Report (SER), which will incorporate confirmatory items from the Phase 4 advanced SER, and comments raised by ACRS in Phase 5.”

In a September 26, 2019 [press release](#), NuScale Power announced that it had signed a Memorandum of Understanding (MoU) with ČEZ Group, a leading Czech utility conglomerate, “to explore applications for NuScale’s small modular reactor (SMR) as a long-term energy solution in the Czech Republic. The agreement calls for a sharing of nuclear and technical expertise between the two companies as they examine applications for NuScale’s SMR. Specifically, NuScale and ČEZ will exchange information relating to nuclear supply chain development, construction, and operation and maintenance.

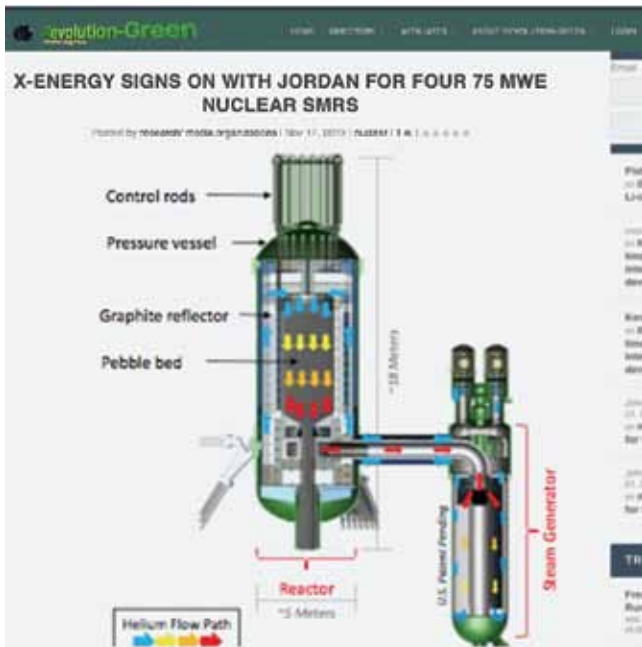
Another American firm, X-energy, a private nuclear reactor and fuel design engineering company based in Rockville, Maryland, entered into an MoU with the Jordan Atomic Energy Commission (JAEC) to assess X-energy’s SMR—the Xe-100 high temperature helium-cooled pebble bed modular reactor—and its potential for deployment in Jordan.

The Xe-100 is a 200 MW thermal (MWt), 75 MW electric (MWe) reactor, which X-energy envisages being built in a standard “four-pack” plant generating about 300 MWe. All of the components for the Xe-100 are intended to be road-transportable, and will be installed—rather than constructed—at the project site, to streamline construction.

The reactor will use “pebbles” of fuel containing TRISO (TRistructural ISOTropic) coated fuel particles. Each TRISO particle has a kernel of uranium oxycarbide (also known as UCO) enriched to 10% uranium-235, encased in carbon and ceramic layers



Artist’s rendering of a cross-section of a NuScale SMR power plant, showing five reactor modules installed in a below-grade pool of cooling water: NuScale’s 60 MW reactor modules are designed to be installed individually or in arrays of up to 12 units in a single plant.



South Korea

In South Korea, Mun Mi-ock, first vice minister of Korea's Ministry of Science, and Khalid bin Saleh Al-Sultan, president of Saudi Arabia's King Abdullah City for Atomic and Renewable Energy, [signed](#) an MoU on Sept 17, 2019 during the International Atomic Energy Agency conference in Vienna, to work on developing an SMR in Saudi Arabia using technology developed by the Korea Atomic Energy Research Institute.

South Korea brands its SMR technology "SMART," an acronym for System-integrated Modular Advanced Reactor Technology. Korean scientists have been developing it for 22 years. The pressurized water design is able to generate 100 MW, or enough energy to supply a city with a population of 100,000 with 90 MW of electricity and 40,000 tons of fresh water a day. The unit has a 60-year design life and a three-year refueling cycle. ("South Korea signs deal to develop small modular reactor in Saudi Arabia," *Global Construction Review*, Sept. 23, 2019)

Although the SMART does not contain any U.S. technology, concerns have been expressed in the United States about allowing Saudi Arabia to own a 100 MW plant that could violate the NRC rules on export licensing of fuel element fabrication plant equipment. In order to enable such a transfer, some non-proliferation experts claim, Saudi Arabia will have to sign the 123 Agreement with the United States.

Departed Brethren

While many experts have consistently promoted SMRs in industry conferences, lack of capital has already killed off a number of SMR development projects, leaving NuScale Power virtually the sole survivor. Babcock & Wilcox (B&W), which once partnered with the Tennessee Valley Authority (TVA) to design and license two 180 MW mPower SMRs at TVA's Clinch River site in Tennessee, initially received about \$111 million from the Department of Energy (DoE), but DoE reduced subsequent payments until finally halting all payments at the end of 2014. The B&W project is as good as dead now. B&W (now BWXT) claims it lacks a customer and is unwilling to invest any more of its own money in SMRs without one.

Westinghouse's 25 MW SMR, in partnership with the St. Louis-based Ameren Corp, a holding company for several power and energy companies, did not fare any better. Failing to qualify for DoE funding, Ameren, now owned by Toshiba, exited the SMR field in early

which prevent the release of radioactivity. The layers provide each particle with its own independent containment system, while the graphite surrounding the particles moderates the nuclear reaction. Such fuel cannot melt down. X-energy sent its updated design and licensing submittal information to the U.S. Nuclear Regulatory Commission on January 16, 2018.

Reportedly, X-energy is working to design, finance, and license its TRISO-X Commercial Fuel Fabrication Facility, scheduled to begin commercial-scale fuel production in the 2023-2024 timeframe.

On December 2, 2017, the *Jordan Times* had [reported](#) that work on selecting a site for an SMR was proceeding in the Qusayer region near Azraq, about 60 km east of Amman. X-energy has an advantage in desert areas such as Jordan, since a helium-cooled reactor would not need the supplies of water required by a PWR (pressurized water reactor), but would need water only for the steam cycle. Jordan has a tiny, 4 GW electrical grid, which can support at most 40 MW of power input from a single source.

On November 15, 2019, according to a [statement](#) released by X-energy, JAEC and X-energy have moved on to the second stage of their relationship by signing a letter of intent (LOI) to build four 75 MWe high-temperature gas-cooled reactors that burn TRISO fuel. [See](#) also "X-Energy Signs on with Jordan for Four 75 MWe HTGR," in *Neutron Bytes*, November 15, 2019.

2014. Efforts by Warren Buffet’s MidAmerican Energy to pursue an SMR in Iowa met a similar fate in 2012 when Buffet pulled the plug on that one.

A Future in Flux

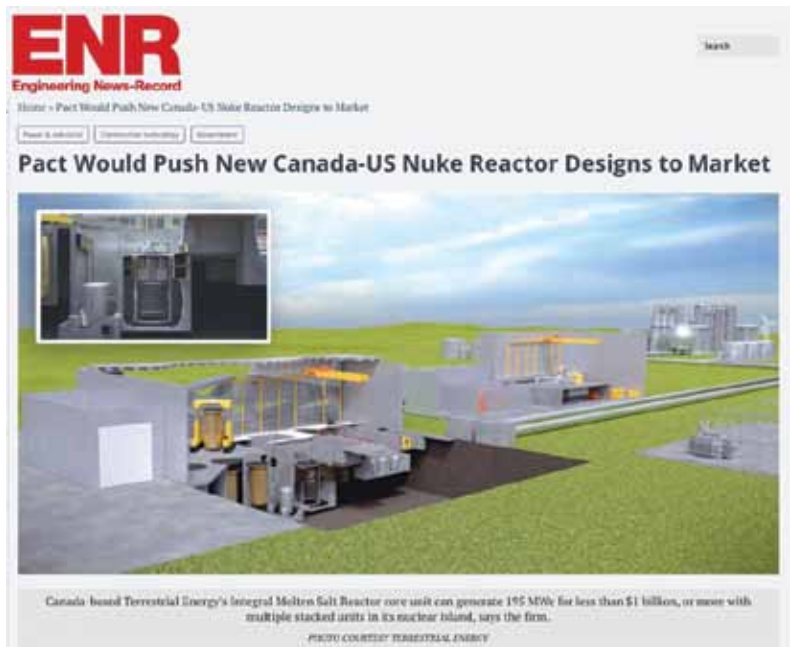
According to a March 1, 2015 [article](#), “Be Careful About Rose Colored Glasses When Viewing the Future of SMRs,” posted on *Neutron Bytes*, the problem could lie with the political leaders, such as then President Barack Obama, who had little interest in “re-booting” the nuclear industry via SMRs:

It [the Obama Administration] is continuing its politically driven infatuation with solar, wind, and other so-called “renewable” energy technologies. The “green” wing of the Democratic Party, whose support is needed to elect Hillary Clinton to be President in 2016, continues its hard over-opposition to nuclear energy despite the work of such pro-nuclear green groups as the Breakthrough Institute. Clinton has said little of any significance about nuclear energy other than some plain vanilla campaign rhetoric in 2008.

Policy makers in Washington must realize that development of SMRs could create a large employment base and a vast, new manufacturing industry, employing thousands as a skilled and semi-skilled workforce. According to a NuScale official, NuScale’s technology-based SMRs could potentially support 13,500 jobs across the country (based on manufacturing just three 12-module SMR plants per year).

The funding picture is no brighter in Canada, where thoughts of exporting SMRs are yet to develop. In a July 7, 2019 [posting](#), “No-One Wants to Pay for SMRs: U.S. and UK Case Studies,” *Nuclear Monitor* Editor Jim Green writes:

Canadian Nuclear Laboratories has set the goal of siting a new demonstration SMR at its Chalk River site [180 miles north of Ottawa in Ontario] by 2026. But serious discussions about paying for a demonstration SMR—let alone a fleet of SMRs—have not yet begun. . . . The CEO of Terrestrial Energy said in early 2019 that the Cana-



Artist's depiction of Canada-based Terrestrial Energy's Integral Molten Salt Reactor; employing Generation IV molten-salt technology, with a power output of 195 MW. Multiple reactor modules can be stacked in its nuclear island.

dian government “must . . . provide financial products which minimize commercial risks,” with options including loan guarantees, production tax credits, grants and offtake agreements.

U.S., Canadian Governments Not Interested

Despite the progress pointed out above, there is no indication as of now that the governments in the United States and Canada have really committed to make SMRs a success. NuScale Power has received about \$275 million from the U.S. DoE, (\$217 million in 2014, and \$40 million in 2018), while spending \$800 million of its own. However, that kind of funding to develop a new power generation system will simply not do.

As Jim Green rightly pointed out in the cited article:

No company, utility, consortium or national government is seriously considering building the massive supply chain that is at the very essence of the concept of SMRs—mass, modular construction. Yet without that supply chain, SMRs will be expensive curiosities. [In the United States,] government SMR funding of several hundred million dollars is an order of magnitude lower than subsidies for large reactors (several billion dollars for the AP1000 projects).

BACK TO THE MOON

The Unfinished Work of Fulfilling Mankind's Extraterrestrial Imperative

by Kesha Rogers

If God wanted man to become a spacefaring species, he would have given man a Moon.

—Krafft Ehricke

Dec. 19—More than a half million people converged on the National Mall at the Washington Monument this year to celebrate the 50th anniversary of the first Apollo Moon landing mission. Millions gathered in locations throughout the United States and around the world to mark the anniversary of the remarkable achievement of the first men to set foot on the Moon in peace for all mankind. The optimism of the space program and what it did to transform the lives of so many during the years of Apollo were well remembered this year.

Following the remarkable accomplishments of Apollo 11's successful Moon landing in 1969—making the astronauts Neil Armstrong and Buzz Aldrin the first to set foot on the lunar surface—there would be a total of six lunar missions with twelve astronauts who set foot on the lunar surface through the year 1972.

There is a saying, “All good things come to an end.” That certainly appeared to be the fate of the Apollo program: The final nail in the coffin of America's lunar landing program was being engineered by radical environmentalists and budget cut-

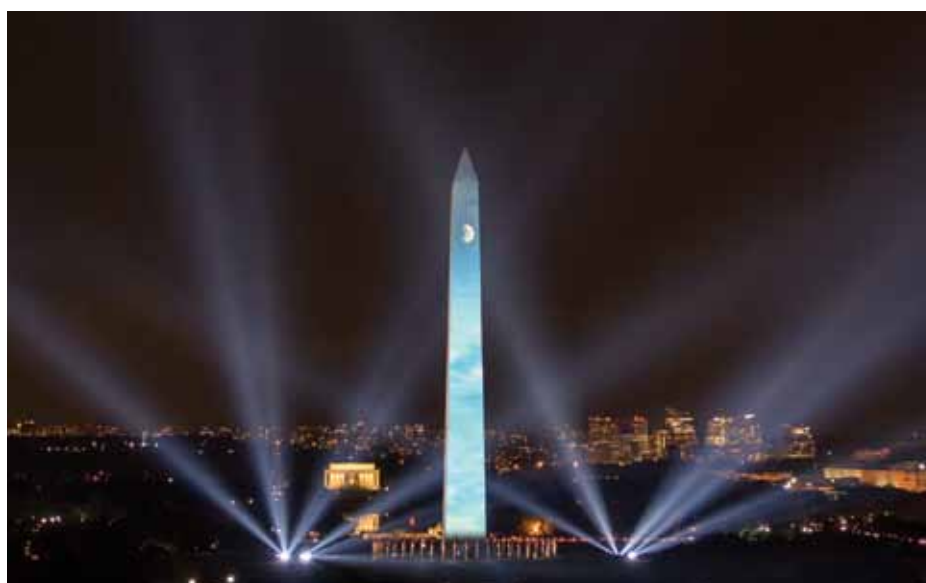


NASA/Connie Moore

ters long before Dec. 19, 1972, when the last Apollo mission touched down on Earth after completing humankind's last journey to the Moon. The crew of Apollo 17 included Ron Evans, command module pilot; Gene Cernan, Commander; and Jack Schmitt, the lunar module pilot. Cernan and Schmitt were the last astronauts on the surface of the Moon.

The Apollo 17 astronauts would [collect samples](#) of some of the oldest rocks on the Moon from the basin walls surrounding the Apollo 17

The 50th Anniversary Celebration on the Mall in Washington, D.C. of the Apollo 11 mission that brought man to the Moon, featured a full-scale mock-up of the Saturn V rocket, and an image of the Moon projected onto the Washington Monument. July 19, 2019.



NASA/Bill Ingalls

landing spot, the *Mare Serenitatis*, the Sea of Serenity. The study of these ancient rocks showed that some of them had been formed from the Moon's magma ocean 4.5 billion years ago and were brought up to the lunar surface when there was a huge impact event on the Moon 3.9 billion years ago, forming the Serenitatis Basin.

To Live and Work on the Moon

Now, forty-seven years after the last Apollo mission, America's lunar space mission has been given a new beginning. That which some said had to be brought to an end, was instead given new life with the [signing](#) of Space Policy Directive 1 by President Donald Trump on December 11, 2017. That directive calls for American astronauts—the first woman and the next man—to return to the surface of the Moon, with an updated timeline of 2024.

One of the last astronauts to walk on the surface of the Moon, geologist Harrison "Jack" Schmitt, was present at the White House during the signing of Space Policy Directive 1 and has been instrumental in promoting the importance of returning American astronauts to the Moon.

Schmitt was once quoted as saying, "By going back to the Moon, you accelerate your ability to go anywhere else—both in terms of experience and in terms of resources, and testing new hardware and navigation tech-



NASA/Aubrey Gemignani

President Donald Trump signing Space Policy Directive 1 on December 11, 2017, committing the nation to "lead the return of humans to the Moon for long-term exploration and utilization, followed by human missions to Mars and other destinations." Present, on Trump's left, are former astronauts Harrison "Jack" Schmitt, and Peggy Whitson. Not shown, but also present, were astronauts Christina Koch and Buzz Aldrin.

niques, communication techniques and things like that." He said further, "And it's only three days away."

On the subject of Mars, Schmitt said, "I don't think we'll go there until we go back to the Moon and develop a technology base for living and working and transporting ourselves through space."

This is exactly the mission intention of the Artemis program, beginning with the next human lunar landing slated for 2024—to learn to live and work on the Moon for the long term, to develop a sustainable presence on the Moon, to prepare us for human travel to Mars and other planetary bodies.

The development of lunar industrialization and settlement of the Moon was the vision and life work of the great space pioneer Krafft Ehrlicke, and it has been the continued life mission of the movement of Lyndon LaRouche, to advance the commitment to a Moon/Mars mission and fulfill the extraterrestrial imperative of mankind in the solar system.

See "[LaRouche: True Value of Apollo, and a 50-Year Moon-Mars Mission.](#)"



NASA/Bill Ingalls

A Saturn V rocket projected onto the Washington Monument, at T-minus zero before "lift-off."

III. The Beethoven Year

CARNEGIE HALL CONCERT

Beethoven's 2020 Vision for World Harmony Celebrated

by Dennis Speed

Dec. 29—Orchestral and choral directors Gerard Schwarz and John Sigerson, pianists Tian Jiang and Maryam Raya, a diverse 130-person chorus, 65-person orchestra and the Schiller Institute New York City Chorus participated in the program “Beethoven 250, Celebrated!” at Carnegie Hall’s Isaac Stern Auditorium on December 16. The Foundation for the Revival of Classical Culture, which presented and sponsored the event, assembled a near-capacity audience of 2,400, including more than 1,000 students, teachers and parents, as well as musicians, diplomats, and others. For the first time in more than a century, performances including Beethoven’s Piano Concertos Nos. 3 and 5, the fourth movement of the Ninth Symphony, and the Brahms *Nänie* for chorus and orchestra—were presented with a modern, full Beethoven orchestra at the scientific tuning of C-256, a goal pursued by musicians and the Schiller Institute for over thirty years.

‘Think Like Beethoven!’

The 250th anniversary of the composer’s birth is now being celebrated throughout the world, from now until December 16, 2020. The Schiller Institute, through its Schiller Institute New York City Chorus, led off this concert in honor of Beethoven—on the first day of that year-long commemoration,—at New York City’s famous Carnegie Hall. The Schiller chorus sang a work, not by Beethoven, but by Johannes Brahms, Beethoven’s musical successor, the *Nänie*. *Nänie* is a choral composition set to a poem by Friedrich Schiller, Germany’s greatest poet, also known worldwide as “the poet of freedom.”

From the beginning—including in the welcoming remarks made by Germany’s Ambassador to the United Nations, His Excellency Christoph Heusgen, and by Lynn Yen, Executive Director of the Foundation for the



Tian Jiang plays Beethoven's Piano Concerto No. 5 in E-flat major, the "Emperor," as part of the "Beethoven 250, Celebrated!" concert, December 16, 2019.

Revival of Classical Culture—Beethoven’s musical rendering of Friedrich Schiller’s “Ode to Joy” was acknowledged as the moving spirit of the momentous events that, thirty years ago, had reunified Germany with almost no violence, healing the wound physically represented from 1961 to 1989 by the Berlin Wall. As Ms. Yen told the audience:



Courtesy of Lynn Yen

A near-capacity audience of 2,400, including more than 1,000 students, filled the hall to hear Beethoven and Brahms, many for the first time, and performed at the scientific tuning of C-256.

The chairman of our Foundation, Elvira Green, has said, “The example of Beethoven teaches us that we can rise above our limitations, and we can sometimes express far nobler ideals than our times, and perhaps even our lives, might seem to predict. It was for that very purpose that the Ninth Symphony was written—not for the rich, but for the poor in spirit; not for the materially privileged, but rather, for the spiritually committed.

Beethoven completed his great Ninth Symphony despite the fact that he could not hear. Music is not located in sound, it is only transmitted through sound. Beethoven’s music came from his soul, and that is the miracle of the Ninth Symphony. It is a miracle, not only of musical performance, but of universal solidarity and brotherhood, expressed through a musical composition’s performance. It is just the sort of miracle that New York City, the United States, and indeed, this world, desperately need to see.

The German Ambassador to the United Nations, Christoph Heusgen, in addressing the 2,400-person audience, said:

As a German, of course it’s very special to stand here, tonight, on the day of Ludwig van Beethoven’s birthday, the most famous German composer. While what we are commemorating today is Beethoven’s 250th anniversary, it was almost 30 years ago that there was a big celebration of German unity. On the 12th of November 1989, after the fall of the Berlin Wall, when many compatriots from East Berlin and East

Germany went to the shopping mall of the Kurfürstendamm, there were also many who went to another fantastic concert hall and that is the Berliner Philharmonie, also an iconic building. . . . Daniel Barenboim played there where he invited all East Berliners to come to the concert hall and listen to him play, and he played Beethoven. Beethoven was a revolutionary; he was a revolutionary with regard to music . . . but he was also somebody who followed the revolution, the revolution in France. He followed its ups and downs. . . . You’ll understand tonight when you hear the “Ode to Joy.” That this is something very special.

Diplomats and United Nations representatives from 40 nations attended.

For Many, Their First Classical Concert

Notes for the concert program informed the audience that:

The compositions presented tonight—three by Beethoven, one by Brahms, and two poems by Friedrich Schiller that were set to music by the two composers—are exemplary of the best work of all three artists. Most notably, all are being performed at the “Verdi tuning,” where the middle “C” is at 256 cycles per second, resulting in an “A” in the range of 430 to 432, a much lower pitch than is commonly heard in many concert

halls today. Authenticity need not demand that one perform on late 18th century period instruments. Instead, this is a modern orchestra, performing with modern instruments, but at the proper tuning. In “retuning” we seek to present a program which, combining artistry with science, strives to reach as close to the intent of the composers as possible.

From April 8, 1993, when the Schiller Institute held its groundbreaking forum on registration and tuning at Carnegie’s Weill Recital Hall, featuring the renowned tenor Carlo Bergonzi and eight singers—decisively demonstrating the case for the tuning of instruments at C-256—and from even before, the name of Lyndon LaRouche has become synonymous with the campaign for returning concert performances to the tunings used by Mozart, Haydn, Beethoven and other Classical composers.

LaRouche, who initiated “the scientific tuning campaign,” has provided the means for the practice of Classical culture to be resurrected as a mass, indeed universal, practice, perhaps beginning in the concert hall, but extending to every classroom on Earth, in principle. Wherever people can be inspired to sing, using *bel canto* principles of voice-placement and armed with the ideas of Beethoven, Bach and others, a revolution in human consciousness can be advanced that can, as if instantaneously, cancel out even the most pernicious effects of the “information society,” of war, and of cultural despair.

The performance of the final movement of the Beethoven Ninth Symphony, conducted by Gerard Schwarz—best known to New Yorkers as the director of the Mostly Mozart concert series for over twenty years and one of the main proponents of Classical music education in the city—riveted many in the audience, especially the 1,000 junior high school and high school students and their parents who were attending their first-ever Classical music concert. One person who had listened to a recording of the symphony many times was struck by “how much more complex it is” when heard with full orchestra. Some members of the diplomatic community remarked to one another that the tuning of the orchestra “sounded darker” and that the voices of the chorus were particularly resonant.

Though the full Ninth Symphony could not be performed, the well-known “*Freude, schöner Götterfunken*” theme allowed the performers—orchestra,



Courtesy of Lynn Yen

Gerard Schwarz conducts the Beethoven Celebration Orchestra and Chorus at Carnegie Hall on December 16, 2019.

chorus and soloists—to deliver the spirit of Beethoven’s message of universal brotherhood to many, despite the truncation of the work. Chorus members, many of whom, as per the Schiller Institute policy, are not professional musicians, were thrilled to find themselves on stage at Carnegie with a respected professional conductor, demanding from them that they, despite their limitations, collaborate to communicate this greatest of symphonic and vocal works.

Missa Solemnis

In the year to come, the Schiller Institute intends to work on performing Beethoven’s *Missa Solemnis* in D major, the very pinnacle of sacred Classical music, a piece that will require the utmost in study and concentration from even the most trained singers. This piece, commissioned by Nikolai Galitsyn, the Russian prince who was also responsible for subsidizing three of Beethoven’s late quartets, was first performed in St. Petersburg, Russia, on April 7, 1824. Beethoven thought of his Mass, his Ninth Symphony, and other of his works, as capable of bringing the leaders of the world to a higher level of deliberation, of humanity, that could end war. The insight of Confucius, “When music and courtesy are better understood and appreciated, there will be no war,” was clearly shared by Beethoven.

The Schiller Institute’s Helga Zepp-LaRouche, who suggested recently that the entire year of 2020 be devoted to the theme, “Think Like Beethoven,” has always seen the Institute’s emphasis on Classical cul-

ture as the most efficient means by which the United States, or any other nation, can pursue the most advanced diplomacy with all other nations. It is by emphasizing the best offered by each nation, as the true identity of that nation, that a universal shared understanding and “world harmony” among sovereign nations can yield a concert of peace through economic development.

Lyndon LaRouche’s musical writings, including his articles, “[Beethoven As a Physical Scientist](#),” “[The Substance of Morality](#),” and “[The ‘Florestan Principle’ In Art](#)” will not merely supplement, but transform that effort. Archival work on LaRouche’s writings, and his small-group discussions of Classical musical composition, as they are made public, will send shock waves through the Classical world, and will be welcomed by those who decide to take advantage, worldwide, of the occasion of renewal offered by Beethoven’s 250th anniversary, only six years from that of the American Revolution in 2026.

LaRouche’s 1999 [video documentary](#), “Storm Over Asia,” composed by him as a lesson on how to apply Classical principles to the study of *current history* from the standpoint of what historian Friedrich Schiller referred to as *universal his-*



Courtesy of John Scialdone

Above, an expectant moment before the performance. Left, the Beethoven Celebration Orchestra plays under the baton of Gerard Schwarz.



Courtesy of Lynn Yen

tory, opens with the first movement of Beethoven’s Sixth Symphony. The reader is invited, in viewing that presentation, to ask, “Why is this music not merely background, but essential to the presentation of this political forecast?” By answering that question, the true, life-and-death urgency of responding to the admonition, “Think Like Beethoven!” can begin to be palpably sensed, and then, with work and time, fully understood.

The Foundation for the Revival of Classical Culture is an independent non-profit organization which presented the December 16, 2019 concert at Stern Auditorium/Perelman Stage of Carnegie Hall, titled “Beethoven 250 Celebrated.” The Schiller Institute New York City chorus was invited to participate in the celebration, and it opened the concert with a performance of Brahms’ *Nänie*.

A Celebration of the Living Beethoven: The Path to Freedom Lies through Beauty

We present here an edited version of the program notes for the “Beethoven 250, Celebrated!” concert at Carnegie Hall’s Stern Auditorium, presented by the Foundation for the Revival of Classical Culture on December 16, 2019.

“To play a wrong note is insignificant; to play without passion is inexcusable.”
—Ludwig van Beethoven

For those who have perhaps never encountered the music of composer Ludwig van Beethoven in a live

performance—and we hope that many of you are here tonight—you could not have picked a better concert to attend than tonight’s program.

Beethoven Ennobles Us

Beethoven is one of the great friends of humanity, and all humanity deserves to hear—better, even to perform—his music. As the Chairwoman of the Board of the Foundation for the Revival of Classical Culture, the singer Elvira Green, said to the chorus while preparing this performance:

The example of Beethoven teaches us that we can rise above our limitations, and we can sometimes express far nobler ideals than our times, and perhaps even our lives, may seem to support or permit from us. It was for that very needing humanity that his Ninth Symphony was written—not for the rich, but for the poor in spirit; not for the materially privileged, but for the spiritually committed. And, as musicians, despite our constraints of time and our questionable ability, the heart with which we approach Beethoven’s message is the most important factor in delivering it.

For those who struggle against seemingly insurmountable odds, and dare to meet him on his own terms, Beethoven can be an unexpected ally and a brilliant source of strength. We repeat the seemingly outrageous proposal: All of humanity should find some way to perform some music written by Beethoven.

Some years ago, in the Democratic Republic of Congo, an airline pilot by the name of Armand Diangienda decided that he wanted to find a way to unite his country after decades of war and strife. He decided that he would bring people together, no matter what their musical backgrounds, to perform the Beethoven Ninth Symphony. And they did! This was done despite the limited musical training of most involved, and despite the fact that this also required even the building of many of the instruments—violins, cellos—that people did not possess.

The 2010 [documentary](#), *Kinshasa Symphony*, tells that story. In 2012, trumpeter Wynton Marsalis, talking about the orchestra in discussion with Bob Simon

of CBS’s *60 Minutes* and Charlie Rose, said of a video of the ensemble that they showed:

I feel that it shows something about music—people—another tradition. They speak another language now—the language of Beethoven. And the music can teach you so much, when you encounter it, wherever you are. Because it’s universal music, it’s a universal statement. And that type of love and joy that they play with—I got full—when I saw it the first time—the orchestra, with their instruments. I think somebody like Beethoven—it’s one guy in the room—somewhere in his culture. They knew he was a genius, and he had a thought of universal brotherhood. He has nothing to do with the Europe that went all over the world and took stuff from people. He was *giving* something to people. So that’s why, over time, he stands to represent that ideal.

An amazed Bob Simon, reflecting on the Congo orchestra, asked Marsalis, “Do think that Beethoven would ever have expected that his Ninth Symphony would be performed in the Congo?” Marsalis, with a smile, and without even a pause, said, “He would probably have said, ‘Yeah, they will.’”

Our concert opens with the Brahms vocal composition *Nänie* (Lament). Composed to the text of a poem by Friedrich Schiller, *Nänie* begins with a proposition that would seem to be the greatest apparent challenge to human freedom: “Even the beautiful must die.” As Schiller had argued in his essay “On the Sublime,” human beings cannot truly be called free, if they can find no way to triumph above their physical mortality. It is in the realm of music, however, and that form of music known as poetry—a form which Friedrich Schiller’s poetry represented in the highest degree, according to Beethoven—that immortality is most clearly contained.

Schiller’s “Lament” itself overturns its opening proposition, and Schiller, Beethoven, Brahms and we appear, clothed in the immortality that only Beauty, itself an expression of a principle that dwells “above the stars,” provides. The path to Freedom lies through Beauty, and Beethoven the pathfinder, will always lead the way.

Ludwig van Beethoven, American Composer

Today, Beethoven's admiration for Ben Franklin, including writing music for Franklin's musical invention, the armonica, is virtually unknown. That Beethoven once admired, and then denounced Napoleon, is often reported; his identification with Franklin and the American cause, however, has been conveniently allowed to fade from memory.

The modern idea of the freedom of the creative individual was created through the American Revolution, and in particular, its Declaration of Independence and the American Constitution. The man that personified that idea to the world was Benjamin Franklin. Benjamin Franklin's work on electricity made him the most celebrated scientist in the world, and his advocacy of the American Revolutionary cause in Paris and Europe between 1776 and 1783 won over its most forward thinking and prominent artists, intellectuals, and statesmen. This included Mozart, who famously wrote music in honor of Franklin and his musical invention, the armonica, and Beethoven, who did the same.

Both Friedrich Schiller and Ludwig van Beethoven admired the American Revolution, which had set into motion the hopes and aspirations of millions, that the entire world might soon become free



Joseph Karl Stieler, 1820



Joseph Siffred Duplessis, 1785

The revolutionary Ludwig van Beethoven admired the American Revolution, and in particular Benjamin Franklin, the American who personified to the world the idea of the freedom of the creative individual.

of tyranny. Schiller represented this concept by using the term *Götterfunken* (God's sparks) in his poem "To Joy," which begins with the words, "*Freude, schöner Götterfunken.*" Beethoven then wrote the most famous anthem in musical history, beginning with these same words.

The expression, *Götterfunken*, was invented by Georg Forster, a German scientist and revolutionary, in a eulogy for Benjamin Franklin. *Götterfunken* was a pun, on both Franklin's discoveries in electricity and its potential to uplift society above the brutal conditions of feudal serfdom and slavery, and the "divine spark of reason," the source of such discoveries. In his eulogy, Forster says of Franklin:

Reason—and only through reason is virtue possible, that is, only reason and nothing but reason—that is the magic with which Benjamin Franklin moved earth and the heavens. . . .

Benjamin Franklin! Noble shadow! Let your teachings move the peoples of the world, let them know your great, unforgettable example. I hear your voice, I hear your words, I will never forget them!:

You, children of Europe! Honor the divine spark of Reason within you. . . .



CC/Vince Flango

A modern glass armonica built according to Benjamin Franklin's design.

IV. Development Will Replace War

‘Ulysses Corridor’ Launched in Albania

by Claudio Celani

Dec. 28—“Ulysses Corridor” refers to the proposal to span the Adriatic Sea with a combination of bridges and tunnels, to make the connection between Italy, and Albania and Greece, in the geographic area travelled by Homer’s hero in the *Odyssey*. The intriguing name for this great infrastructure project comes from Italian engineer and architect Enzo Siviero, who proposes it as a critical link in an intercontinental corridor, which

Europe, and from there to Asia.”

Professor Siviero has been a teacher of bridge building at the University of Venice and is now Chairman of the eCampus University in Italy; he is also Vice President of the Réseau Mediterranean School of Engineers. This fall, broad discussion of the “Ulysses Corridor” was initiated by Siviero and colleagues at two policy events. On December 9, a public conference was held in Tirana, Albania, titled, “Italy and Albania: A Door to the Balkans,” jointly sponsored by the eCampus University, and the Albanian Ministry for the Diaspora. A month earlier, Siviero presented the concept in Germany, at an international Schiller Institute conference, Nov. 16-17, in Bad Soden, titled, “The Future of Humanity as a Creative Species in the Universe.” This gathering brought together representation from 30 nations, including delegations from the Mediterranean Basin from Spain, France and Greece, as well as from Italy and Albania.



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Attendees at the “Italy and Albania, an Open Door to the Balkans” conference sponsored by the eCampus University in Italy and the Albanian Ministry of the Diaspora, on December 9, 2019 in Tirana Albania. Front row (l. to r.): Dr. Nino Merola, Director, Italian Cooperation Agency in Tirana; Dr. Lucia Cucciarelli, Head of Desk, Education Cooperation, Italian Embassy in Tirana; Eng. Pandeli Majko, Albanian Minister for the Diaspora; and Prof. Enzo Siviero, Chairman of eCampus University in Italy.

should proceed west- and southward across Italy to Africa, via the proposed Messina Bridge, and thence a tunnel or bridge connecting Sicily to Tunisia. It should also proceed north- and eastward across Eurasia, by means of high-speed rail corridors. After all, Siviero points out, “the Mediterranean Sea is, in a way, a big lake,” but it can be traversed in a way “to link Africa to

Another conference on the Ulysses Corridor is now being planned for 2020 in Albania, considered in the largest context of constructing cross-Mediterranean Basin connectivity, for intercontinental benefit of all nations involved. This perspective coheres with the “World Land-Bridge” approach advocated for years by the late statesman Lyndon H. LaRouche, Jr., and his wife Helga Zepp-LaRouche, President of the Schiller Institute, who has commissioned recent books on the theme, [*The New Silk Road Becomes the World Land-Bridge*](#). The Chinese “Belt and Road Initiative” (BRI), first an-



The Ulysses Corridor: Albania-Italy-Tunisia.

nounced in 2013, is proceeding in this vision with nations in Africa and Eurasia, and also with key initiatives in Central and South America.

It is no happenstance that Albania was the venue for recent public discussion of this strategic corridor concept, and that the co-sponsors of this December’s conference, came together on the matter of crossing the Adriatic. The head of the Albanian Ministry of the Diaspora, Pandeli Majko, has spoken out on this before. In 2005, when Mr. Majko was Defense Minister, he arranged with his Italian counterpart to initiate a pre-feasibility study for a bridge that would connect Albania and Italy. Majko gave the welcome speech to the December Tirana audience, recalling that,

At that time, everybody laughed at it, thinking that I was crazy. But today, the idea no longer seems to be so crazy.

Moreover, Albania and Italy, as well as neighboring Greece, North Macedonia and other nearby nations, share an urgent interest in forcing a change in European fiscal and monetary policy, away from grinding austerity for the populations and bail-out for bankrupt mega-

banks, to instead, favoring credit for productivity-building development programs. This was addressed during the proceedings, in particular in the summation by this author, at the convenors’ request, and in informal discussion afterward.

The Two Sea Spans

Enzo Siviero opened the Tirana conference with a presentation on the Ulysses Corridor, whose most challenging parts, of course, are the two sea connections: GRALBeIT refers to the Greece-Albania-Italy link (Greece, ALBania, and ITaly); and TUNeIT refers to the Tunisia connection to Italy, as shown on the map. Whereas the Tunisia-Italy span is 150 km and the GRALBeIT is “only” 85 km, the latter is very deep. It has a maximum

depth of 895 meters.

Regarding TUNeIT, Italy’s national research center, ENEA, has already drafted a plan for an underwater tunnel to cross the Channel of Sicily, to consist of five sections connected by four artificial islands built with the excavated soil. Siviero, however, is in favor of a bridge connection (including for psychological reasons) which could be built in modules, using the proposed design for the Messina Bridge as a model.

Regarding GRALBeIT, the challenge is technically greater, given the depth of the sea—the Channel of Otranto, the southern edge of the Adriatic Sea. About this difficulty, Siviero said, “But in the year of Leonardo [da Vinci], we honor him exactly because he accepted the challenge of thinking the unthinkable.”

Siviero’s Ulysses Corridor also includes inland railway connections which, going eastward from the Adriatic, proceed through what is known in the European Union as Corridor 8—crossing Albania, North Macedonia and Bulgaria, and crossing Greece—to the port of Piraeus. And on the Italian side of the Adriatic, the rail route crosses Southern Italy and the Strait of Messina, to reach the western shores of Sicily, thence to Tunisia. Thus, in Siviero’s view, the Ulysses Corridor is a cru-

cial arc in the global Land-Bridge network, by which one can travel from Cape Town to Beijing.

Following Siviero’s overview of the entire concept, the proceedings in Tirana continued with presentations by Italian and Albanian institutional representatives, including former Albanian Finance Minister and Tirana eCampus Pro-Chairman Arben Malaj, and Kujtim Hashorva, engineer and head of the Transport Department of the Albanian Chamber of Commerce. Hashorva is former Chairman of the South East Europe Transport Observatory of the European Union.

Prof. Malaj raised the issue of the Belt and Road Initiative. He made the point that it offers opportunities as well as risks. Malaj expressed his concern that the BRI should be supported by international consensus, and not by imposed choices.

Mr. Hashorva addressed rail corridor questions. He said that, for a minor financial effort, certain priority inland rail routes could be completed, while the mobilization for the Ulysses Corridor is underway. Hashorva delineated the railway connection of Corridor 8, from Vlore, Albania to Varna, Bulgaria, connecting the Adriatic Sea and the Black Sea, and intersecting the Orient/East-Med Corridor going from Hamburg, Germany, to Athens, Greece through Eastern Europe and the Balkan countries.

The railway connection along Corridor 8—the ancient Via Ignatia—is almost completed, with the exception of two short sections in North Macedonia at its borders with Bulgaria and Albania. This stretch can be completed in a short period of time with an investment of less than one billion euros, to form a rail line with a commercial speed of 120 km/h. Such a line would fill a gap by accommodating the transport of goods in smaller sizes, and at a faster travel time than if the goods were sent on ships. In addition, the rail transport will foster local trades.



European rail transportation corridors as of 2003.

Courtesy of Enzo Siviero

A World Land-Bridge

EIR Strategic Alert editor Claudio Celani, who had been invited together with Feride Gillesberg as representatives of the Schiller Institute, was asked to conclude the conference with a short presentation on the Schiller Institute’s vision and its November Bad Soden, Germany conference. Celani picked up on Prof. Malaj’s reference to the BRI, endorsing his proposition that there should be a global consensus. That is what the Schiller Institute is working for. However, the current scepticism and opposition to the BRI in Europe is mostly due to lack of knowledge of both the BRI and of the Chinese mentality.

Celani described the campaign launched by Helga and Lyndon LaRouche to build development corridors to integrate Western and Eastern Europe back in 1989—referred to as the “Productive Triangle” [approach](#), radiating outward from Paris, Berlin and Vienna, which eventually evolved to become the “Eurasian Land-Bridge” proposal, the “New Silk Road,” and the “World Land-Bridge” concepts. If you put China aside for a moment, and think about the two corridors going from Southern Italy to Berlin, and from Athens to Hamburg, the Ulysses Corridor is put into proper context. A large infrastructure project such as the GRALBeIT is no longer utopian, or just a local connection, but acquires a regional and global strategic importance. This reflects

the global interest in proposing this as part of the BRI.

Celani announced that the Schiller Institute intends to organize an international conference on this issue next year in Tirana.

Schiller Institute representative Feride Gillesberg was interviewed by the popular “Dite e mbare” television program on RTSH, the Albanian public broadcasting channel, by the well-known journalist Suzana Zyrakja, who had participated in the conference.

After the formal closing of the conference, discussions continued privately between the Schiller Institute delegation and representatives of Albanian institutions and civil society. Albania is at a crossroads, the representative of a prominent think-tank told us. For years, the country has submitted to harsh fiscal policy (austerity) conditions in the hope that the European Union would fulfill its promise of starting an admission process for Albania. These hopes were swept away last October, when France vetoed the negotiations. Now, the push for a “Plan B” or “Plan C” is growing stronger, which means forgetting the EU and looking toward China and/or Russia.

If cooperation with China/Russia, however, means breaking with EU member Italy, this would be a painful proposition for Albania, whose ties with Italy are geographically, economically and historically very deep. Albanian communities in Italy have existed since the 15th century, when many Albanians escaped from the Ottoman Empire invasion. Since the fall of the communist regime in Albania in 1991, more than half a million Albanians have newly emigrated and settled in Italy, many acquiring Italian citizenship. This was part of a larger emigration wave, creating a European diaspora as large as the 2.8 million people presently still living in Albania.

Italy has responded to Albania in time of need. When the severe earthquake hit the coastal region around Durres last November 26, Italy sent the crucial help of hundreds of Civil Protection Corps specialists, who brought in equipment, tents and other supplies. Within only a few hours after the quake, Italy sent and deployed specially trained dogs to help locate and rescue survivors under the rubble. The Italian government has promised reconstruction help and support for an international donors’ conference.



EIRNS

Attendees at the Italy and Albania conference. Author Claudio Celani is in the front row, right.

Prosper with the BRI

This brings us to the core of the matter: Albania is a poor country, whose potential for development has been crippled by a self-imposed fiscal austerity policy. Even for earthquake emergency aid, the government was compelled to ensure that the money allocated (about euro 50 million so far, in the face of a required euro 1 billion) does not produce new indebtedness, meaning budget deficit.

But Italy is crippled by the very same policy. Fiscal austerity has so far prevented the Southern Italy region—the Mezzogiorno—from being developed, in terms of building out the EU TEN-T infrastructure corridors. What is involved, is upgrading the railway connections south of Salerno, the Sicily grid, the Messina Bridge, and the ports—not to mention the TUNeIT and the GRALBeIT connections. And yet, Italy is an industrial nation—the second largest manufacturing economy in Europe after Germany. Italy has a large capital potential and productive credit potential to finance all of these infrastructure projects.

So it is that Italy and Albania, as well as Greece, North Macedonia, and other nations of the region, all share a common interest in forcing a shift in European policy, both in economic policy, and in foreign relations with China. The alternative is between joining the Belt and Road-driven recovery, or accepting an inevitable decline.

The Fraud of the European Stability Mechanism

Marco Zanni, Italian Member of the European Parliament and Chair of the Identity and Democracy Group in the parliament, granted the following interview to EIR's Claudio Celani on December 18, 2019. Zanni was a [featured speaker](#) at the Schiller Institute Conference, "The Urgent Need for a New Paradigm in International Relations," on July 1, 2018. Sub-heads have been added.



Marco Zanni, Member of the European Parliament.

EIR: Marco, my idea was to explain to our international audience, and the American audience in particular, the debate going on in the European Union about the so-called Banking Union, especially the European Stability Mechanism (ESM). This is a fund which is supposed to bail out banks and governments. There has been quite a debate in Italy, and your party was opposed to it. Can you explain to us what this fund is, and why you are against it?

Zanni: Thank you for your question. Actually, the debate around the reform of this so-called bailout fund has been one of the main political topics in Italy and the European Union in the past weeks, so it is a very important issue.

We must go back to the sovereign debt crisis of 2010, which strongly affected the Eurozone and the individual Eurozone countries, especially the so-called PIGS, Portugal, the Republic of Ireland, Greece, and Spain. At that time, the Eurozone was really in danger because of the common currency's unworkable architecture and the fact that this architecture was not able to give member states the instruments and flexibility needed to respond to the challenges of the financial

crisis and the sovereign debt crises that erupted in the European Union in 2010.

So, in 2012, European governments decided to set up a fund—the European Stability Mechanism—not to bail out banks, but to support the sustainability or refinancing of troubled Eurozone countries' public debts. The aim of the ESM in 2012—or at least that's how the European institutions marketed it—was to support member states in trouble. At the beginning, the fund took over some bilateral loans made by member states to the Greek government,

but the main action of the fund in 2012 was to buy back Greek government debt from French and German banks, which were heavily exposed to Greek government debt.

Steal from the People to Prop Up the Banks

In 2012 we set up the ESM, which was supposed to bail out states, primarily to support Greece, to support the Greek people in a very difficult moment. But in the end—and this was confirmed by *Il Sole 24 Ore*, the main financial newspaper in Italy—the fund bailed out French and German banks. Only 5% of the money committed by the ESM to Greece went to the Greek people; the rest was used to buy back Greek government debt on the balance sheets of French and German banks. That is what the fund did. It functioned not as a fund to support countries in trouble but it was instead a fund to transfer the losses incurred by private banks—mainly German and French banks—from their balance sheets to government balance sheets. The ESM, the bailout fund, was financed by member states' contributions.

Italy at that time committed 15 billion euros and later, in 2013, a total of 60 billion euros to support the fund, to bail out French and German banks. This was in a historical period in which the story being told in the Eurozone was that Italy was unable to pay its debt, to pay Italian pensions, or to pay public administrative salaries. That was the narrative spread by Mr. [Mario] Monti [the technocrat who was imposed on Italy as a Prime Minister by the European Central Bank (ECB) and the European Commission (EC) in 2011-2012].



Mario Monti, Prime Minister of Italy (2011-2013).

EU/Alain Rolland

When Mr. Monti's government implemented its pension reform, cutting retirement checks for the Italian people, the Italian government paid out fifteen billion euros to the ESM to bail out German and French banks. That was the reality of the ESM.

Soon thereafter, the ESM went on to "support" Spain, Portugal, Ireland, Cyprus, and other Eurozone countries. The problems in the Eurozone became evident to the common people. In response to that growing awareness, a package of policies to discuss the reform of the Eurozone and of the European institutions was put forward in 2017. Mainstream parties and politicians, along with Brussels bureaucrats decided to offer a proposal to transform the European Stability Mechanism into a sort of European Monetary Fund, similar to the IMF. That didn't work due to a lack of agreement in the council of member states, so it was decided to put forward a different path, for a reform of the ESM.

The Eurogroup, composed by the Finance Ministers of the 19 Eurozone member states, started to work on a plan to reform the ESM following two principles: The first principle was to allow "bailing-in" or restructuring of the government debt of Eurozone member states, keeping the member states in the Eurozone. That meant a [bail-in](#) [taking the funds] of government debt holders, i.e., savers and institutions that were invested in the government debt of Eurozone countries.

The second part of the reform was the creation of a backstop for the Single Resolution Fund (SRF), a fund created under the umbrella of the Banking Union to intervene if a banking crisis were to breakout. The SRF is one of the pillars of the Banking Union, which includes the Banking Supervisory Mechanism at the Eurozone level, a common resolution mechanism attached to the SRF, and the third pillar, which has not yet been agreed upon, the Common Deposit Insurance

Fund.

So, the backstop's function was supposed to be a sort of safety net for Eurozone banks.

EIR: If I understand correctly, in the case of Greece, they were against the bail-in of private banks because this would have penalized French and German banks. But now, if Italy needs aid, Italy will have to bail-in [take the funds of] its creditors first, which are mostly Italian banks?

Zanni: That is more or less what happened in the past. Investors in Greek government debt incurred losses but not the full losses they should have incurred. So, French and German banks speculated on Greek debt because before 2010, with the common currency, it was very profitable for them to borrow money, considering the French and German interest rates; and invested this money in profitable financial instruments—Greek debt was offering higher interest rates than the German Bund or French treasuries. Basically, the difference is that at that time we, the Italian taxpayers, had to indirectly contribute to bail out German and French banks. Now, with the current reform, we would be forced to bail-in our citizens who have invested their money in Italian Treasury notes.

EIR: Let me address another aspect which, in my view, is the big change: The ESM is officially becoming a safety net for banks. Before, it was officially a safety net for states—while in reality, it bailed out private

banks. But now it is officially to protect banks with this backstop thing. So, first they will use the Single Resolution Fund, which I think is not even fully funded; it has only a few million euros.

Zanni: It should be replenished by 2024. It is a bank-funded fund that should support the resolution of failing or ready-to-fail banks and, according to EU regulations, the total amount of the fund should reach 55 billion euros in 2024. The backstop should intervene if this fund is not sufficient to support the resolution in the European Union.

But it is just a fake fund: Look at the huge amount of money committed by the European governments for restructuring banks during the big financial crisis of 2008 and 2010. Just in Germany, the direct recapitalization and guarantees that the German government issued for the banks—we are talking about approximately 400 billion euros! In France, 250 billion euros; and for the entire European Union, we are talking about one trillion euros at that time. Do you think that a 55 billion euro fund with an additional 63 billion euro safety net will be sufficient to stabilize our banking system or to function as a safety net for our depositors? I don't think so.

EIR: Let us remember that the global financial system, including the European system, was bailed out ultimately by the U.S. Federal Reserve with an estimated \$28 trillion. This leads me to the real motivation for the urgency of these reforms: Of the two dangers, the private and the government risks, it is the private risk that is up front. The international financial system is in a comatose state, as our readers know; the repo market, the system that banks use for overnight refinancing, has been dead since September. The U.S. Federal Reserve Bank is pumping billions of dollars into the system every day. The entire financial bubble *is* going to burst and the ESM will have to face this.



The European Central Bank building in Frankfurt, Germany.

CC/Eric Chan

ECB—Teetering on the Edge

Zanni: Neither the ECB nor any other European institution is aware of the huge risks inside our financial system. There are strong signs of stress. You mentioned the repo and liquidity crisis in the U.S. We have also seen problems in the EU because the ECB has been refusing to properly assess the real value of illiquid assets (Level 3) on the balance sheets of European banks. So, European institutions are failing to assess the real risk in the financial system. They are again putting emphasis on the sustainability of government debt. European and especially Italian government debt is perfectly sustainable; we have big risks in the private sector and the EU and ECB are refusing to properly assess or consider actions to tackle the huge risks that are now evident to everyone.

They will not react; they will not put concrete proposals on the table for this. You know, the ESM is a complicated, and useless mechanism, which is typical of the EU decision making process. We have an instrument that is already in place and could guarantee financial stability to the financial system: it is the ECB. We don't need the ESM as a safety net; the ECB should do it.

Another problem is banking regulations. In 2010, we had a flood of new regulations, but those regulations do not address the problem. It is an attempt to create buffers, capital buffers, which are not sufficient to guarantee stability in our financial system. We are now setting up mechanisms that could absorb a financial crisis, but history shows that it is impossible to calculate in advance the consequences of a financial crisis. Whatever capital buffers we impose on banks, it still won't be enough to face the next financial crisis.

The right thing to do is to act to prevent the financial crisis. That is the only safe way to make our financial system sustainable. We have worked since 2014, I have worked in the European Parliament and in the European institutions, to protect the healthy part of our banks and separate out what we don't need—the specu-



Drifting away from traditional banking activities and into speculative instruments, and under poor supervision from the Italian central bank, Banca Popolare di Bari got into trouble and was bailed out at Italian taxpayers' expense.

lative debt, which is just feeding the big financial bubble in our system. History shows that in the end, this bubble will burst, and taxpayers will have to pay for the mistakes and the bankers' speculative activity.

EIR: You are referring to bank separation, the famous Glass-Steagall Act, which we have promoted for years. Indeed, we helped start a debate after the financial crisis in the United States and in Europe. I am surprised that now nobody comes up with this solution, especially facing the new crisis of the system that you just described. We have the case of the troubled bank in Italy, the Banca Popolare di Bari (BPB), which is perhaps the type of crisis in which one could bring up the issue of bank separation. Is that correct?

Zanni: We have had several banking crises in the European Union and in Italy that were badly managed. We have two problems with Banca Popolare di Bari: One problem is related to supervision. A huge responsibility rests with the supervisory authority for BPB, the Italian central bank, [Banca d'Italia]. Something went wrong with that supervision. I hope the judiciary will, in fact, ascertain the role of the central bank in carrying

out, or not carrying out, its proper responsibilities as pertains to BPB. In the European Union, central banks usually hide themselves behind the concept of "independence" and say: "We are independent, so you cannot attack us because of our supervisory mistakes." But that is not correct.

I don't agree with central bank independence, but that is not the issue here. We have that concept of central banking in the world and also in Italy. But independence does not mean irresponsibility; independence does not mean that central bankers are not responsible for their mistakes. That's the point.

The other point is that banks, in order to increase payouts to shareholders and bonuses for their managers, are moving away from their traditional banking activities while investing more in speculative instruments. That is not safe; that is not something that banks should do; and that is something that public authorities should address with proper banking separation, which is a very important pillar of a safe financial system.

EIR: Our time is running out, but I have two more questions for you. The first is whether under EU law, bank separation can be introduced at the national level. The EU drafted, and eventually all member states implemented, in 1989, what is called the "universal bank" model. Despite that, could a member state introduce a bank separation system at the national level? The second question is about the authorities that have oversight and regulate bank activity, but instead seem to be in a flight forward. They do not want to regulate; they want to launch a new bubble to save the old bubble. This is what I think the European Commission's proposal for a Green New Deal is about. The big international financial companies are saying this openly. Yesterday, the CEO of Goldman Sachs wrote an article saying his firm wants to invest in the transition to the Green Economy, but it must be profitable. This is going to be made profitable through government subsidies. So, these big financial players want the taxpayers to bail them out, they want to transfer money from the taxpayers to a new bubble. Is that correct?

Green New Deal—Financial Bubble Bailout Scheme

Zanni: You know, Claudio, green is the color of money. This green schizophrenia is something we should assess better. It is not based on concrete data; it is not based on a pragmatic approach; it is just danger-



The 25th United Nations Climate Change Conference (COP25), held December 2-13, 2019 in Madrid, Spain, targetted the U.S., Russia, China, and India for destruction via “decarbonization.”

are all experiencing a lack of growth.

EIR: I agree with you, and it was striking to see that the COP25 conference, which just took place and failed in Madrid, targeted four countries, the United States, Russia, China, and India for “decarbonization”—exactly the four powers that Lyndon LaRouche, whom you have met, indicated as being the key partners to make an agreement to rebuild the world economy and secure world peace.

ous propaganda. Last week the EU Commission President presented her Green New Deal, which is one of the pillars of her program for the next five years. I was not surprised—this is just speculative finance hiding behind a sort of green wall.

What will happen with this? Banks will speculate on these new instruments, will make profits, will feed the financial bubble, and in the end, someone will have to pay the bill of this speculation. The question for the EU today is, will it put the burden on our businesses, on our small and medium-sized businesses, on our agricultural sector, on our energy companies, and on all our progress, because of this fake propaganda.

What is the EU facing with this Green New Deal and the proposal for a “Just Transition Fund,” which is expected to be capitalized at 100 billion euros to help banks make profits and help government and private business invest in so-called green projects? That, for me, is something similar to the ESM. When Germany was in trouble with its banks greatly exposed to Greek debt, the decision was to set up a bailout fund, which collected taxpayers’ money from all member states and bailed out those German banks. That will happen with this Just Transition Fund. Germany today needs to revert to its industrial system. This proposed fund will once again collect money from taxpayers around Europe to pay for Germany’s industrial conversion. That is what will happen, and that is something we want to block.

We have the duty to bring the debate about climate change back to reality. This is dangerous propaganda, dangerous schizophrenia, which will hurt not just Europe but the entire world—and the progress of our continent and our countries in a moment in which we

What about the other question? Is there any room for an EU member state to implement bank separation reform under EU law?

Zanni: Since 2008, all banking regulation has been drafted at the EU level. The EU does not have exclusive authority on banking and financial regulation, but de facto in the European single market, it is the European Union which has the power and the initiative to regulate the banking system. Member states can legislate and draft banking and financial regulations. In Italy, the Lega party had banking separation in its 2018 program. Unfortunately, due to the short life of the last government, we have not been able to propose this reform.

However, the reform should not be limited to the national sectors; it should be developed at the European level for all EU countries. This will make our financial system safer, because our banks are deeply interconnected.

EIR: In the last European Parliament, you did not have a majority to force through bank separation, but you successfully blocked a fake reform. How do things look in the new parliament?

Zanni: The situation has not changed in regard to the so-called banking structural reform bill that was discussed in 2014 in the European institutions. But I think that at some point in the next five years [the legislative tenure of each European Parliament] the coming financial crisis will force European legislators to consider banking separation as a strong action to stabilize our financial system and make it safer.

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