EIR Online gives subscribers one of the most valuable publications for policymakers—the weekly journal that has established Lyndon LaRouche as the most authoritative economic forecaster in the world today. Through this publication and the sharp interventions of the LaRouche Movement, we are changing politics worldwide, day by day.

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From the Editors

In mid-July, as the planet was being wracked by growing war horrors in eastern Ukraine, Iraq, and Gaza, and by economic depression caused by the death throes of the entire trans-Atlantic financial system, heads of state representing half of humanity gathered in Brazil and took the first steps toward creating a New World Economic Order.” So begins the Feature of this issue of EIR, which brings you the story of the world-historical BRICS summit, whose outcome will determine your future in the short period ahead.

Ibero-American Intelligence Director Dennis Small cuts to the core of the issue as Lyndon LaRouche defined it: What is the standard of value in an economy? What the BRICS summit concentrated on was a standard based on raising the productive powers of labor—as opposed to the money standard of the dying trans-Atlantic system. A new, just economic system based on such a standard of increased energy-flux density has been the rallying cry of the LaRouche movement for more than 40 years, as we review. But it remains for the U.S. and Europe to decide to make the same change in values.

LaRouchePAC’s current drive to make this change in the United States leads our National section. LaRouche’s “Four Laws,” which start with Glass-Steagall, and the impeachment of Barack Obama must be achieved before Congress takes its Summer recess, LaRouchePAC insists. There is motion in this direction, as we report, but it will take a new quality of uncompromising resolution to achieve victory.

We see signs of that quality in support for Argentina in Europe, as our interview with Fabio Porta, an Italian parliamentarian, reflects.

Complementing the dramatic BRICS development is our Science & Technology feature by nuclear engineer Ramtanu Maitra, who presents in detail the requirements for achieving real progress with investment in high energy-flux-density power, starting with nuclear fission.

The British Empire’s threat to destroy this exciting potential is nothing less than genocidal war, as Jeffrey Steinberg reports in our International lead. Every day brings new escalations against Russia and China, regardless of the facts, as befits the evil intentions of the Anglo-Dutch financial Empire.

Fortunately, that Empire’s days are numbered, presuming we revive the principles of the American System of economics, which Lyndon LaRouche has championed, and which now nearly half of humanity has begun to adopt as their own.
The BRICS Summit: Half of Humanity Launches a New World Economic Order

The leaders of the BRICS nations (Brazil, Russia, India, China, and South Africa), met on July 16 in Fortaleza, Brazil for the VI BRICS Summit, joined the next day, by the heads of state of South America in the capital city Brasilia. These nations adopted a project premised on rejecting the current casino financial system, and replacing it with one providing credit for high-technology development projects; on educating and training youth to meet the growth challenges of the future; on full respect for national sovereignty, banishing the imperial policy of regime change and wars; and on explicit promotion of the common good among nations—the Westphalian principle.

Fortaleza Declaration: New Development Bank

China, Latin America, Caribbean Forum Founded

Narendra Modi: We Are Nations of ‘Future Potential’

Vladimir Putin: Russia Offers Plan for Multilateral Economic Cooperation

Xi Jinping: We Work in the Spirit of ‘Said and Done’

Cristina Fernández: A New Global Financial Order Is Indispensable

LaRouche’s 40-Year Record: Fighting for International Development

Operation Juárez: Steps for a New Monetary Order

BRICS Nations: The Future Is Nuclear

A New Vista for Africa: South Africa Bucks British Opposition, Goes Nuclear

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July 22—In mid-July, as the planet was being wracked by growing war horrors in eastern Ukraine, Iraq, and Gaza, and by economic depression caused by the death throes of the trans-Atlantic financial system, heads of state representing half of humanity gathered in Brazil and took the first steps toward creating a New World Economic Order.

The leaders of the BRICS nations (Brazil, Russia, India, China, and South Africa), met on July 16 in Fortaleza for the VI BRICS Summit, and the next day they were joined by the heads of state of South America in the capital city Brasilia. The BRICS account for 43% of the world’s population and 27% of the planet’s land area; when Ibero-America is added in, they jointly represent 48% of the human race, and one third of the Earth’s land area (Figure 1).

At the summit and its numerous associated bilateral and multilateral meetings, that half of humanity adopted a project that is premised on rejecting the current casino financial system, and replacing it with one providing credit for high-technology development projects; on educating and training youth to meet the growth challenges of the future; on full respect for national sovereignty, banishing the imperial policy of regime change and wars; and on explicit promotion of the common good among nations—the Westphalian principle.

“History tells us the law of the jungle isn’t the way of human coexistence,” Chinese President Xi Jinping stated on July 16. “Every nation should obey the principle of equality, mutual trust, learning from each other, cooperating and seeking joint benefits … for the construction of a harmonious world, sustained peace, and joint prosperity.”

The British Queen was not pleased by these developments, seeing in
them an existential threat to the Empire. Lyndon LaRouche was pleased—for the same reason. For 40 years, the renowned American statesman has devised programs, and organized for them internationally, of global financial reform and great development projects—most recently his “Four New Laws To Save the U.S.A. Now!”—of precisely the sort that have now been placed on the agenda by the BRICS.

“The BRICS and allies are building a world system based on real value, not phony paper value,” LaRouche stated July 18. “They are deciding what real value is, and they are imposing it, which is the cost of the productive powers of labor in a changing situation.”

The underlying problem that we have to deal with today, LaRouche elaborated, is the “asymmetry of value in the world,” which is coming from two distinct systems that are operating with a different logic and different metrics: They are totally incompatible.

The first system is the trans-Atlantic system. “These bastards,” LaRouche stated, “who hold pieces of paper that they say are worth quadrillions, and they’re prepared to kill for that,” as the case of Argentina’s battle against the vulture funds shows, as does the pro-vulture ruling of the Aristotelian idiot otherwise known as Justice Antonin Scalia of the U.S. Supreme Court. What these people are holding, this paper, LaRouche added, is absolutely worthless. “It’s like taking rags out of a bucket and trying to sell them”; or even worse, it’s just the promise of future delivery of derivatives on those rags, that they’re saying actually has value.

This is the dead hand of the past, trying to stop humanity from creating any future for itself.

On the other side, we have an emerging system, incompatible with the first, which is building a market based on real value. And real value, LaRouche elaborated, comes from, and is measured by, the development of the productive powers of labor—that is, through the introduction of scientifically created new technologies, implementing productive processes which increase the energy-flux density through the physical economy in such fashion as to immensely increase the productive powers of labor. That new system will create a process whereby the increase in energy-flux density will itself increase at an accelerating rate.
This role of technological progress and scientific advance, LaRouche specified, is what the human species uniquely does. Such creativity is actually the source of value in an economy, and it is the way in which our action to create the future defines present value. It is the central concept of the American System of Political Economy, on which the United States was founded.

The decisive strategic question today, LaRouche concluded, is whether the United States will join that emerging New World Economic Order, or will remain joined at the hip to the British Empire—as it is under the impeachable President Barack Obama—and bring destruction down upon itself and the rest of the world. The same existential issue faces Europe.

**Building a Nuclear Future**

The BRICS Summit issued a 72-point *Fortaleza Declaration* (see below), which announced the formation of a New Development Bank (NDB), initially capitalized at $50 billion, to fund infrastructure projects in BRICS and other countries; as well as a Contingent Reserve Arrangement (CRA) with $100 billion to help nations deal with capital flight and other forms of financial warfare.

Most international commentators have engaged in endless contortions, dissecting sentences from the *Fortaleza Declaration* and speeches at the summit, to try to determine whether these new BRICS institutions are meant to merely complement the British Empire’s International Monetary Fund and other institutions, or to replace them with a new financial architecture. But the answer to that question lies not in parsing written or spoken words, but in the intent behind the creation of the new institutions, which is best reflected in two fundamental issues which were pervasive throughout the discussions: the future and youth, and nuclear energy.

Indian Prime Minister Narendra Modi was most eloquent on the first of these, emphasizing to the plenary session of the Summit “the uniqueness of BRICS as an international institution. For the first time, it brings together a group of nations on the parameter of ‘future potential,’ rather than existing prosperity or shared identities. The very idea of BRICS is thus forward-looking.” He urged the BRICS to now go beyond “being summit-centric,” proposing that the youth of the BRICS nations should take a lead in expanding people-to-people contact between their nations. He suggested establishing a BRICS Young Scientists’ Forum, setting up BRICS language schools “to offer language training in each of our languages,” and exploring the creation of a BRICS University.

Modi concluded: “Excellencies, we have an opportunity to define the future—of not just our countries, but the world at large…. I take this as a great responsibility.”

Russian President Vladimir Putin struck a similar note in comments to the press on July 17, evaluating the results of his trip: “The BRICS are all young states, and the future belongs to the young.”

As for the issue of nuclear energy, discussion of it and conclusion of numerous concrete deals permeated the summit and related bilateral meetings, especially those of Russia’s Putin with Argentina’s Cristina Fernández de Kirchner and Brazil’s Dilma Rousseff. This, despite the fact that the *Fortaleza Declaration* itself—in many ways a “consensus document” typical of such international gatherings—does not mention the matter, other than to defend Iran’s right to develop peaceful nuclear energy.

The true measure of value in an economy, LaRouche has emphasized, is the impact of science and technology in continually increasing the energy-flux density of the productive processes. Although the required science-driver for the world economy is the development of thermonuclear fusion energy, the current insistence on nuclear fission energy, the current insistence on nuclear fission among the BRICS and allied countries is highly significant, as it reflects a commitment to raising the economy’s overall energy-flux density.

Far better than any monetary or GDP-based measure, energy-flux density and other physical economic parameters best indicate the BRICS’ direction.

Figure 2 shows nuclear energy as a percentage of total electricity generation—which is an indicator of overall energy-flux density—in a number of BRICS countries (Russia, India, and Brazil), as compared to representative European countries (Germany and Spain), looking at both current and projected levels. In the case of Germany, for example, the British Empire’s criminal green policy of de-nuclearization has already led to a drastic collapse of nuclear from 28% of total electricity in 1990, to 15% today. The German government of Angela Merkel has adopted a policy of reducing that to zero by the year 2020! Spain is almost as bad.

Compare that to what Russia has done, increasing
its proportion of nuclear from 11% in 1990 to 18% in 2013, with a policy of raising that proportion to some 27% by 2030. Other BRICS countries have smaller proportions of nuclear to total electricity today, but they are defiantly committed to a nuclear future. Brazil, for example, plans to increase nuclear from 3% to 15% by 2030. As President Rousseff stated just before the summit began: “Our countries are among the largest in the world, and they cannot be content, in the midst of the 21st Century, with any kind of dependency. Recent events demonstrate that it is essential that we seek for ourselves our scientific and technological autonomy.”

South Africa has also just announced that it is resuming its nuclear program, with plans to build six new nuclear plants (see article in this section).

It is of note that China has the largest nuclear construction program in the world today—a distinction which in the 1970s went to the Roosevelt-created Tennessee Valley Authority. In fact, of the 66 nuclear plants currently under construction worldwide, 50 of them are in the BRICS countries. In other words, 43% of the world’s population is constructing 75% of the world nuclear plants; or, the rate of nuclear construction is 4.3 times greater per capita in the BRICS than in the rest of the world.

The reality is, of course, much starker than those simple numbers indicate, because nuclear energy is being actively destroyed in much of the trans-Atlantic sector (and Japan), as a direct result of the British Empire’s suicidal green policies. The BRICS and allies have made it clear that will have none of it: They have taken the British Queen’s green agenda, as reflected in the Copenhagen Resolution, and thrown it in the trash can.

LaRouche put a fine point on it: “What about Frau Merkel of Germany?” he asked July 18. She represents the worthless view of value; she’s tearing down nuclear energy, destroying her economy and making it absolutely worthless, he said. “What’s the value of her opinions? Not much.” The BRICS and Ibero-America are building a world market based on real value, and they are already far more productive than Europe and the United States, which insist on values being set by some crazy judge—Scalia in the Argentine case.

**Great Infrastructure Projects**

Also reflective of the BRICS’ focus on real value, was the emphasis placed on creating a credit system to fund major infrastructure investment. Two important such projects moved forward in and around the BRICS Summit.

The first was the idea of fulfilling the centuries-old dream of building a transcontinental railroad to connect the Atlantic and Pacific coasts of South America (Figure 3). This took shape in the discussion between Chinese President Xi and Peruvian President Ollanta Humala, and then with Brazil’s President Rousseff. An agreement was reached to open bidding for foreign, including Chinese, companies, to participate in the construction of one critical segment of that project: the “T”-shaped Palmas-Campinorte-Annapolis/Campinorte-Lucas route in central Brazil.

The importance of that segment within the overall project is clear from Figure 4, a schematic map first published by *EIR* back in 1988. The northern terminus of Palmas is a stone’s throw from the famous Carajás project in the middle of the Amazon jungle, the world’s largest (and purest) iron ore deposit, which is now connected by rail only to the Atlantic port of São Luis. Once built, the western rail terminus of Lucas would...
then be halfway to the Brazil-Peru border, where the projected rail line would link up with a Peruvian branch that would cross the Andes at Saramirisa—the lowest pass in that giant mountain range—and from there, to one or more Peruvian ports for shipment across the Pacific Ocean. This would drastically cut shipping time and costs from Brazil (and other Southern Cone countries like Argentina) to Eurasian powerhouses like China, India, and Russia.

Even greater efficiencies and growth and productivity can be achieved as this South American Transcontinental Railroad is able to connect directly by rail with Asia, as high-speed maglev rail lines are constructed and opened up through the Darién Gap and the Bering Strait (Figure 3).

There are various possible routes for a South American Transcontinental Railroad. (The one under discussion among China, Brazil, and Peru centers on São Paulo-Santa Fé do Sul-Cuiabá-Porto Velho-Pucallpa-Saramirisa-Bogotá-Panamá. Another viable option is São Paulo-Santa Fé do Sul-Santa Cruz-Desaguadero-Saramirisa-Bogotá-Panamá, which has long been studied.) In fact, earlier versions of precisely this project were drawn up by the Intercontinental Railway Commission, started by U.S. Secretary of State James Blaine, which employed U.S. Army engineers to survey and project lines tying the United States through to Argentina and Brazil, presenting a completed map of the intended route project to President William McKinley in 1898 (Figure 5). The strongly pro-American System McKinley commemorated Blaine’s plans as the future of humanity, speaking in 1901 at the Pan-American exposition in Buffalo—where McKinley was shot dead in a British-run operation.

Another great project, the construction of an Interoceanic Canal through Nicaragua (Figure 6), was announced on July 9 by Nicaraguan President Daniel Ortega. The massive project will be carried out by the
Chinese company HKND, but President Putin also made an unannounced stopover in Nicaragua on July 12, on his way to the BRICS Summit, to offer Russia’s support. The canal will run 173 miles from the mouth of the Brito River on the Pacific Coast in southeastern Nicaragua, to the mouth of the Punta Gorda River on the Caribbean side. It will include two locks, and 65 miles of it will pass through Lake Nicaragua, and have a projected passage time of 30 hours, coast to coast, for the 5,100 of the largest ships in the world that will be able to use this canal.

Project engineers report that over 50,000 construction workers will be required, and that once in operation it will generate 200,000 jobs, including its sub-projects (airport, two ports, tourist center, etc.).

President Ortega, in announcing the selected route, stated that the country’s entire educational system was being revamped to produce the engineers and skilled workers that the project will require. He also held up a book containing the feasibility studies for constructing such a canal produced by the United States government and adopted by the U.S. Congress 118 years ago, in 1896, detailing the benefits such a canal would bring.

The irony was lost on no one. China is actively involved in massive job-creating economic projects in Central America—the United States’ proverbial “back yard”—while the U.S. under Obama has helped destroy that area with his policy of drug legalization, on top of decades of the British Empire’s free-trade economic devastation. Today, one-third of the population of El Salvador has been forced to emigrate to the U.S., in a desperate search for the means of survival; while official unemployment in neighboring Honduras now surpasses 60%.

The broader commitment to infrastructure development was emphasized in the last of the multiple historic summits which took place in Brasilia in mid-July, that of the heads of state and special representatives of the Community of Latin American and Caribbean States.
(CELAC), who met with Chinese President Xi and the Unasur heads of state on July 17. Their joint declaration (see below) emphasized the “important opportunity for mutual development” which exists, announcing “the establishment of a broad partnership of equality, mutual benefit, and common development between China and Latin America and the Caribbean.”

The New Development Bank
There is little question that the New Development Bank (NDB) and Contingent Reserve Agreement (CRA) are the seed crystals of an entirely new, international financial architecture—although a major political battle lies ahead in order to force this policy through, over the violent objections of the City of London and Wall Street, including their agents within some of the BRICS countries. The founding document of the NDB cautiously sticks to the idea that the NDB and CRA are only meant to “complement” existing institutions like the IMF; but the principles on which they were founded not only contradict those of the IMF, but mutually exclusive.

Most significant, the NDB is clearly geared to lend money for real development, without the hated austerity conditionalities and green policies associated with the IMF and World Bank. For example, the CELAC-China joint declaration contains a radical departure from IMF/World Bank conditionalities, calling “to make good use of the concessionary loans granted by China, in accord with the necessities and priorities of the recipient countries…. We stress the importance of building and modernizing infrastructure.”

Argentine President Fernández, who was given featured billing (after host Rousseff) at the BRICS-Unasur Summit, issued the clearest call for a new world financial order: “We, sirs, are posing then, a new global financial order, one that is not just fair and equitable, but indispensable…. What we demand from the world, is precisely the creation of a new global financial order which will permit sustainable and global economic growth…. Thus, the appeal to all nations is to join forces in this real crusade for a new global political, economic and financial organization that will
have positive social, political, economic, and cultural consequences for our nations.”

President Putin—who, like Argentina’s Fernández, is no stranger to being the target of economic warfare—presented a complementary proposal: “BRICS nations should cooperate more closely in commodities markets. We have a unique resource base: Our nations hold 30-50% of global reserves of various resources. Therefore, we believe it is imperative to develop cooperation in mining and processing, and organize a center for training experts in the metals industries in BRICS nations.”

Such an agreement would break the British Empire’s stranglehold on world commodities, and their ability to speculate with nations’ livelihood and their very existence.

To be viable for these purposes, the NDB and CRA would have to function with a firewall against the cancerous dollar-denominated system. It is noteworthy that the NDB is authorized to both receive additional capitalization in non-dollar currencies in the future, as well as to issue loans to BRICS and other nations in non-dollar currencies.

Once three, four, or more countries are involved in great projects receiving such non-dollar loans, a new currency will have in effect been created, in which fixed exchange rates among the national participants will also follow. That step alone would instantly bring about a return to the pre-1971 Bretton Woods system of fixed (predictable) exchange rates, wiping out, with the stroke of a pen, trillions of dollars of speculation on currency futures.

But for the NDB to be able to truly take on the tasks of global reconstruction, the United States must become a full partner in its capitalization and functioning as the centerpiece of a global Hamiltonian credit system, of the sort specified in LaRouche’s *Four Laws*. Today’s “dollar,” which is no longer the sovereign currency of the United States, but rather a supra-national betting instrument under the control of the British Empire, must also return to its proper role as the Treasury-issued “greenback.”

In short, the central strategic question posed by the mid-July BRICS Summit, is: When will the United States rid itself of President Obama, and return to the American System policies it was founded on, and which half of humanity, led by the BRICS, is now implementing?
Fortaleza Declaration: New Development Bank

July 15—The heads of State of the BRICS nations (Brazil, Russia, India, China, and South Africa), meeting today in Fortaleza, Brazil, for the VI BRICS Summit, issued a 72-point Fortaleza Declaration which includes the historic announcement that they agreed to form the New Development Bank (NDB) to fund infrastructure and other development projects in BRICS and other developing economies, and that it would be headquartered in Shanghai, China, with the first (rotating) Presidency held by India. The NDB will be initially capitalized at $50 billion, with equal contributions from each of the five countries.

The Fortaleza Declaration also announced the establishment of the BRICS Contingent Reserve Arrangement (CRA), with an initial size of $100 billion, to “help countries forestall short-term liquidity pressures.”

The relevant three paragraphs read:

“11. BRICS, as well as other EMDCs [Emerging Market Economies and Developing Countries] continue to face significant financing constraints to address infrastructure gaps and sustainable development needs. With this in mind, we are pleased to announce the signing of the Agreement establishing the New Development Bank (NDB), with the purpose of mobilizing resources for infrastructure and sustainable development projects in BRICS and other emerging and developing economies. We appreciate the work undertaken by our Finance Ministers. Based on sound banking principles, the NDB will strengthen the cooperation among our countries and will supplement the efforts of multilateral and regional financial institutions for global development, thus contributing to our collective commitments for achieving the goal of strong, sustainable, and balanced growth.

“12. The Bank shall have an initial authorized capital of US$100 billion. The initial subscribed capital shall be of US$50 billion, equally shared among founding members. The first chair of the Board of Governors shall be from Russia. The first chair of the Board of Directors shall be from Brazil. The first President of the Bank shall be from India. The headquarters of the Bank shall be located in Shanghai. The New Development Bank Africa Regional Center shall be established in South Africa concurrently with the headquarters. We direct our Finance Ministers to work out the modalities for its operationalization.

“13. We are pleased to announce the signing of the Treaty for the establishment of the BRICS Contingent Reserve Arrangement (CRA) with an initial size of US$100 billion. This arrangement will have a positive precautionary effect, help countries forestall short-term liquidity pressures, promote further BRICS cooperation, strengthen the global financial safety net and complement existing international arrangements. We appreciate the work undertaken by our Finance Ministers and Central Bank Governors. The Agreement is a framework for the provision of liquidity through currency swaps in response to actual or potential short-term balance of payments pressures.”

Elsewhere, the Fortaleza Declaration criticizes the IMF’s unresponsiveness to the economic crisis, and states: “We call for an international financial architecture that is more conducive to overcoming development challenges. We have been very active in improving the international financial architecture through our multilateral coordination and through our financial cooperation initiatives, which will, in a complementary manner, increase the diversity and availability of resources for promoting development and ensuring stability in the global economy.” But the document also notes that “We will continue to pursue our fruitful coordination and to promote our development goals within the international economic system and financial architecture.”

The Declaration also has a strong condemnation of unilateral military interventions and economic sanctions:

“27. We stress our commitment to the sustainable and peaceful settlement of disputes, according to the principles and purposes of the UN Charter. We condemn unilateral military interventions and economic sanctions in violation of international law and universally recognized norms of international relations. Bearing this in mind, we emphasize the unique importance of the indivisible nature of security, and that no State should strengthen its security at the expense of the security of others.”
China, Latin America, Caribbean Forum Founded

July 18—In the last of the multiple historic summits which took place in Brasilia this week, heads of state and special representatives of the Community of Latin American and Caribbean States (CELAC), and Chinese President Xi Jinping, met July 17 to discuss deepening their relations on the basis of “equality and mutual benefit, reciprocal cooperation, and common development.”

Represented were the Presidents of Brazil and China, current members of CELAC’s leadership Quartet (Costa Rica, Cuba, Ecuador, and Antigua and Barbuda), and the rest of South America.

The Joint Declaration issued from their private meeting reaffirmed the principles upon which the United States was founded, but which it has betrayed, under the successive Bush/Cheney and Obama governments.

Announcing their agreement to found a Chinese-Latin American-Caribbean Forum, with a mandate to draw up a 2015-19 Chinese-Latin American-Caribbean Cooperation Plan, these nations opened with a forceful statement of their commitment to play an active role together in establishing a world order based on the premises which underlie the Treaty of Westphalia. They declared:

“Reaffirming our unrestricted respect for the objectives and principles of the United Nations Charter, international law, the peaceful solution of controversies, international cooperation for development, the prohibition of the use and threat of use of force, self-determination, sovereignty, territorial integrity, non-interference in the internal affairs of countries, the State of Law, and the protection and promotion of all human rights….

“Reiterating steadfast mutual support in exploring development paths appropriate to national conditions….

“1. We agree that our relationship is an important opportunity for mutual development, since Latin America and the Caribbean and China, as developing countries, confront common development tasks and global challenges. We announce the establishment of a broad partnership of equality, mutual benefit, and common development between China and Latin America and the Caribbean, looking to increasing the level of cooperation on diverse matters.”

Brazilian President Dilma Rousseff reported in a press conference following the meeting that Xi had proposed three different funding mechanisms:

• A specific fund to finance infrastructure projects, to start at $10 billion and rise to $20 billion; this is intended to be functional by next year;
• A preferential credit line for CELAC, from within a Chinese bank, which could be as large as $10 billion; and
• A Sino-Latin American-Caribbean Cooperation Fund of $5 billion for investment in areas as yet to be defined.

The declaration’s formulation on these funds and projects marks a radical departure from IMF/World Bank conditionalities. For example, they wrote:

“3. …We take note that China invited the countries of Latin America and the Caribbean to play an active role in establishing the China-Latin America and Caribbean Development Fund, and to make good use of the concessional loans granted by China, in accord with the necessities and priorities of the recipient countries.

“4. …We stress the importance of building and modernizing infrastructure, such as railroads, highways, ports, airports, and telecommunications, and the efforts to make good use of the Sino-Latin American-Caribbean Special Loans for Infrastructure.”

The declaration also contains a statement of support for Argentina, in its fight with the vulture funds:

“14. We emphasize that guaranteeing agreements reached between debtors and creditors, in the context of sovereign debt restructurings, is essential for the stability and predictability of the international financial architecture.”
Indian Prime Minister Narendra Modi addressed the Plenary Session of the VI BRICS Summit. Below are excerpts of his speech.

...This Summit takes place at a crucial juncture. The World is facing a high level of economic and political turmoil. Conflict and instability are growing in many key regions.

This increases the challenges of tackling poverty, making growth more inclusive, and evolving a sustainable model of development.

Restoring a climate of peace and stability is an urgent global need. This calls for newer avenues of cooperation and collaboration.

I believe BRICS can answer this call. This I do because of the uniqueness of BRICS as an international institution. For the first time it brings together a group of nations on the parameter of ‘future potential’; rather than existing prosperity or shared identities. The very idea of BRICS is thus forward-looking.

I therefore believe it can add fresh perspectives and mechanisms, to existing international institutions.

Thus, we must ensure that the future development of our partnerships, and institutions, stays true to this original idea.

BRICS must provide a united and clear voice in shaping a peaceful, balanced, and stable World.

We should intensify our cooperation in confronting global challenges; like terrorism, cyber security, and climate change.

BRICS must also play a proactive role in shaping the global discourse on growth and development. This includes shaping the post-2015 Development Agenda to keep the central focus on tackling poverty.

We must seek urgent reforms of global institutions of governance like the UN Security Council and international financial institutions.

We must help shape the WTO regime. An open trading regime is critical for strong, balanced and sustainable global economic growth.

This must address the development aspirations of the developing world.

It must also accommodate the special needs of the weak especially in areas such as Food Security. . . .

The vision of a New Development Bank, at the Delhi Summit two years ago, has been translated into a reality, in Fortaleza. It will benefit BRICS nations. But will also support other developing nations. And, it will be rooted in our own experiences, as developing countries.

The BRICS Contingent Reserve Arrangement gives BRICS nations a new instrument for safeguarding their economic stability. This is an important initiative at a time of high volatility in global financial markets.

The MoU on Cooperation between Export Credit Guarantee Agencies, and the inter-Bank Cooperation Agreement on Innovation are other tangible steps that will spur cooperation among BRICS countries.

I believe we have now reached a level where we should be even more ambitious. We should focus on more such tangible mechanisms and outcomes. Make BRICS a platform of impact.

Excellencies, we have an opportunity, to define the future—of not just our countries, but the world at large. Coming from a land where the idea of Vasudhaiva Kutumbakam—the “whole world being one family”—is rooted deep in our ethos; I take this is as a great responsibility.

Our steps must reinforce the hopes, aspirations and confidence, of the developing world.
Russia Offers Plan for Multilateral Economic Cooperation

Russian President Vladimir Putin addressed the plenary session of the BRICS Summit July 15. Below are excerpts from his speech.

...Our summits are always held in a constructive, business-oriented setting. We have a common interest in broadening multidimensional cooperation, strengthening trust, and mutual understanding.

BRICS holds a unique place in the global economy. It is the largest market in the world. Moreover, our combined gross domestic product has reached 21% of the global volume and continues to grow steadily.

Our nations play an increasingly significant role in the global political arena as well. It is thanks to Russia and China’s firm stance in the UN Security Council, with support from other BRICS participants, that we were able to rally most international dialogue participants—including the European Union and the United States—and prevent a foreign invasion in Syria, achieving the elimination of Syrian chemical weapons.

It is important that we are united by a desire to act from unified positions in all issues of global development and the formation of the global financial and economic architecture. BRICS nations are cooperating constructively within the framework of the G20, actively contributing to substantively enhancing the G20’s agenda, developing agreements aimed at accelerating global economic growth and trade and resolving employment problems. We are working together to move forward on one of the most difficult problems in global governance: IMF reform.

In the time that has passed since the Durban summit [March 2013], we have been able to achieve significant successes. I want to stress that all the plans we set for ourselves a year ago have come to fruition. I am referring, first and foremost, to our plans to create a new Development Bank and a Currency Reserve Pool for BRICS nations. Today, we have confirmed their founding documents.

The BRICS bank will become one of the largest multilateral financial development institutions in the world. Its stated capital will be $100 billion.

The scale of possible operations within the framework of the Currency Reserve Pool may also reach $100 billion. This mechanism creates the prerequisites for effectively protecting our countries from financial market crises.

The bank and the Currency Pool, with combined resources of $200 billion, lay the foundation for coordinating a macroeconomic policy between our nations.

BRICS Energy Association Proposed

I am confident that closer economic and financial cooperation between BRICS countries will allow us to implement truly large-scale joint programmes with the aim of securely developing our nations....

In the conditions of increased international competition, the challenge of activating trade and investment cooperation between our nations becomes particularly important. This will allow us to realize the advantages resulting from the complementary nature of our economies, and to reduce the vulnerability of each BRICS nation to adverse global trends.

Russia, Brazil, India, China, and South Africa already account for 11% of accumulated investment and nearly 20% of global trade. Trade between BRICS nations is growing. In the last five years, this indicator has nearly doubled.

The Russian side has prepared a draft BRICS Strategy for Multilateral Economic Cooperation. We are
submitting it for discussion. We feel it would be useful to create a special high-level working group to work in depth on developing the draft Strategy.

The Strategy’s key positions are specified in another document prepared by the Russian side: the Roadmap for Investment Cooperation. It includes 37 projects in various areas, from high technologies to the humanitarian sector. Please allow me to highlight just a few of the most important ones.

We propose the establishment of the BRICS Energy Association. We could create a Fuel Reserve Bank and a BRICS Energy Policy Institute under its roof. These steps would allow us to strengthen our nations’ energy security and prepare us for the creation of new instruments and new institutes to trade energy resources.

The joint use of the Russian global navigation system, GLONASS, in a wide range of areas—transport, public safety, and agriculture—seems very promising. According to expert assessments, the use of the GLONASS system in agriculture alone will allow for a 30-50% increase in crop capacity. A similar effect, and even better, is expected in other areas.

BRICS nations should cooperate more closely in commodities markets. We have a unique resource base; our nations hold 30-60% of global reserves of various resources. Therefore, we believe it is imperative to develop cooperation in mining and processing, and organize a center for training experts in the metals industries in BRICS nations.

We believe it is important to broaden humanitarian contacts and form parliamentary, civic, trade union, and youth dimensions within BRICS. We propose signing an Agreement on cooperation in culture and creating a BRICS network university that will include our nations leading schools.

Assessing the Trip

On July 17, Putin answered questions from Russian journalists following his trip to Cuba, Nicaragua, Argentina, and Brazil. Asked for his assessment of the trip, he replied, in part:

...I would like to remind you of something we have already mentioned: the BRICS states account for over 40% of the world’s population and 21% of the global GDP. However, it is not the share that is so important, but the fact that these countries have been posting very significant growth rates.

In the past 10 years the GDP of countries with developed economies grew by 60%, while that of the BRICS states increased four-fold. We have to bear in mind, of course, that the 60% growth was in comparison to a large volume, a large starting point, while our four-fold growth was in regard to a smaller base; however, such are the rates.

These are all young states, and the future belongs to the young. Naturally, we should restore our presence in this fascinating and very promising part of the world.

What we have done is we signed some very important documents, and all this was implemented in a very short period, within a year. I am referring here to the creation of the New Development Bank. Each participant will contribute $2 billion. I believe this will be a very good, efficient, new, modern market tool for the development of our economies.

The Currency Reserve Pool is also a very good instrument that can influence the macroeconomy of our states to a certain extent. Russia intends to invest up to $18 billion. I believe, as I have said, that this may be a good instrument for the stabilisation of our economies and, of course, for the rational distribution of our states reserves.
We Work in the Spirit Of ‘Said and Done’

Chinese President Xi Jinping made the following remarks July 16 in appearances around the BRICS Summit in Brazil. The first comment comes from his statement after his bilateral meeting with Russian President Putin; the second from his address to the Brazilian Congress.

Chinese President Xi Jinping remarked that in the two months since he and Russian President Putin reached “a whole set of historical agreements,” when they met at another summit in Shanghai, there have been intensive contacts between local and central government officials of both countries, making progress on “nearly all collaboration projects.… I tell everyone that in our collaboration with Russia, it is important to work in the spirit of ‘said and done.’ Your side has given an even more positive signal: At a major meeting of ambassador, you called for the all-around enhancement of Russian-Chinese relations. I hope the two sides will full carry out our agreements—striking while the iron is hot, so to speak.”

In his address to the Brazilian National Congress, President Xi laid out a perspective for Ibero-Americans to free themselves from the straitjacket of the London-dominated financial system. Xi praised the 40-year relationship that China has had with Brazil, and lauded the countries of Latin America for their determination to develop their economies.

Xi said that development in the world is generally pointing in the right direction, toward greater technological development, greater cooperation, cultural diversity, the creation of a multipolar world, and the general desire in the world for peace. “At the same time,” Xi warned, “the world is full of instability. The international financial crisis has a profound global influence. The uncertain, unstable elements in the world economy are increasing. The imbalance in global development is escalating. Hegemonism, power politics, and a new interventionism are increasing. Regional turbulence occurs frequently. Global issues such as food security, energy resources security, and cyber-security cannot be ignored.

“Pushing for multipolarization, democracy in international relations, realizing sustainable development of the world economy, and maintaining diversification of the world’s cultures have become important global issues. Fairness and justice are the uppermost goals for all people in the world in the pursuit of international relations. However, fairness and justice are far from being realized in international relations nowadays.…”

“Human beings have only one Earth. All countries share one world. History tells us the law of the jungle isn’t the way of human coexistence. Military aggression can’t bring us a wonderful world. Every nation should obey the principle of equality, mutual trust, learning from each other, cooperating and seeking joint benefits. They should jointly safeguard and protect international fairness and justice and push for the construction of a harmonious world, sustained peace, and joint prosperity.”

At this point his speech was met with resounding applause from the Congress.

He went on to stress the importance of the two countries—China, the largest developing country, and Brazil, the largest Ibero-American country—working together to achieve a better future for both nations, and to advance peace and progress.
A New Global Financial Order Is Indispensable

Here are excerpts of the July 16 speech by Argentine President Cristina Fernández de Kirchner, before the meeting in Brasilia of heads of state of the BRICS nations with heads of state from the Union of South American Nations (Unasur).

[It is with great pleasure that we salute this decision of the BRICs to create a development bank, focused on trade, infrastructure and also—why not?—on bringing order to international finances which are absolutely out of control. Often, we have demanded, in this forum and in broader ones, such as the United Nations Organization and the G-20 as well, the indispensable reform of multilateral credit agencies and multilateral political agencies, such as the United Nations or the Security Council, etc.

These demands, however, were really not heeded, and I think it is a very positive sign—no one can interpret this BRICS initiative as something negative, but rather as an alternative proposal related to the lack of response that all the citizens of the world should have already had.

That is why we feel that the BRICS’ decision to create a development bank is a more than appropriate response.

And perhaps Argentina, more than anyone, can speak of this issue at a time when we’re under a very strong speculative attack by the so-called vulture funds.

We’re talking about sustainable development, about investments to create jobs and employment. We’re talking about investments in trade.

So, we’re faced with a situation that goes far beyond global financial questions. We’re asking if this isn’t a matter of geopolitics … or issues of domination, and of not understanding that there is a multipolar world different from the one that existed in 1989, when some believed that history had come to an end. But history doesn’t end. History continues because nations continue, and the emerging nations here in South America, and those of other regions, were able to emerge from their own situations and incorporate millions of their compatriots, [providing them with] health, education, housing and fundamental rights.

We, sirs, are posing then, a new global financial order, one that is not just fair and equitable, but indispensable. And we are saying that Argentina is not going to default, because Argentina is going to pay its debt as it has done, and it is not Argentina that is preventing the legitimate bondholders from receiving their money, because once Argentina deposited that money, it was no longer the owner of those resources; they are the legal and legitimate property of the bondholders from 2005 and 2010.

Therefore, Argentina is not going to default on its debt. Argentina pays, and what we demand from the multilateral organizations, what we demand from the world, is precisely the creation of a new global financial order which will permit sustainable and global economic growth.

We congratulate the BRICS on this initiative, and we should also say that we are also net payers to the World Bank, and now the Inter-American Development Bank. What does that mean? [It means] that we are paying more than what we receive in loans.

We call on all those of us here who have a commitment to our people and our history, to promoting their welfare—countries which for so long had the most severe difficulties, some due to indebtedness, others as a result of their own historical avatars, but which had sufficient strength to overcome that indebtedness and those historical avatars or lack of democracy, which many of us in this South American region have lived through, and in democracy and peace were able to guarantee, not just economic growth, but economic growth with social inclusion.

Thus, the appeal to all nations is to join forces in this real crusade for a new global political, economic, and financial organization that will have positive social, political, and cultural consequences for our nations.
LaRouche's 40-Year Record

Fighting for International Development

From 1970 to this day, physical economist Lyndon LaRouche has an unparalleled record of proposals for reforming international financial institutions, and for launching the great development projects that can uniquely reverse the decline of the world economy. Leading instances of those initiatives are listed below. The impact of these ideas, and the political fight on their behalf, can be clearly seen in the current dramatic moves by the BRICS nations to create a new financial architecture.

Financial Reform

1975: At a press conference April 24 in Bonn, Germany, LaRouche presents his plan for “the immediate establishment of an International Development Bank as an agreement among the three principal world sectors—the industrialized capitalist sector, the so-called developing sector, and socialist countries.” He specifies that the immediate concentration of the investment thus made possible should be industrial development and expanded food production worldwide.

1976: The Group of 77 Developing Countries, meeting in Colombo, Sri Lanka in August, issues a call for a new world economic order, based on respect for sovereignty, technology transfer to the Third World, and mutually advantageous economic development proposals between the developed and developing world. This is followed in September at the United Nations, by a call for “new development banks” by Guyanese Foreign Minister Fred Wills.

1982: LaRouche addresses the exploding international debt crisis with his proposal for Operation Juárez, which outlines a specific Ibero-American plan for financial reorganization for development (see article below).

1988: Under the title “Development Is the Name for Peace,” the Schiller Institute, founded by Helga Zepp-LaRouche, holds a conference in New Hampshire on Jan. 30-31, dedicated to elaborating the need to establish a “just new world economic order.” Lyndon LaRouche addresses this conference on how the U.S. Presidency could establish such a new order, which he later dubbed a “New Bretton Woods.”

1997: At a Jan. 4 webcast, LaRouche issues a rallying cry for a New Bretton Woods, based on bankruptcy reorganization of the world economy, followed by establishment of
The LaRouche movement organizes a global movement of prominent political leaders and economists demanding this reorganization.

2008: In the face of the devastating global financial collapse, LaRouche, in the Fall, demands an urgent application of FDR’s Glass-Steagall principle to banking systems throughout the world, but starting in the United States.

2014: On June 8, LaRouche issues his “Four New Laws to Save the U.S.A. Now!,” which defines the urgent measures required to be taken by the U.S. Congress. These include:

“(1) Immediate re-enactment of the Glass-Steagall law instituted by U.S. President Franklin D. Roosevelt, without modification, as to principle of action. (2) A return to a system of top-down, and thoroughly defined as National Banking.

“The tested, successful model to be authorized is that which was, under the direction of the policies of national banking which had been successfully installed under President Abraham Lincoln’s superseding authority of a currency created by the Presidency of the United States (e.g., ‘Greenbacks’), as conducted as a national banking-and-credit-system placed under the supervision of the Office of the Treasury Secretary of the United States…..

“(3) The use of a Federal Credit-system is to generate high-productivity trends in improvements of employment, with the intention to increase the physical-economic productivity and standard of living of the persons and households of the United States…,” and (4) “Adopt a Fusion-Driver ‘Crash Program.’”

Development Projects

1970—United States: “How to Lick a Depression in a Single Day” is the first reconstruction program issued by LaRouche for the United States. It emphasizes the need for investment in high-technology infrastructure development, including fusion power. This program is elaborated through LaRouche’s Presidential campaigns, which focuses on developing U.S. scientific capabilities as part of a world development program.

1979—Africa: LaRouche’s Fusion Energy Foundation releases a book-length program for the Industrialization of Africa, based on developing transportation infrastructure, as well as nuclear energy development. This is followed up in 1981, by LaRouche’s own “Lagos Plan of Action” for Africa.

1979—India: EIR issues a study on “The Industrialization of India,” commissioned by LaRouche, which defines how it can go “From Backwardness to Industrial Power in Forty Years.”

1983—Asia/Pacific: LaRouche issues an EIR Special Report entitled “A Fifty-Year Development Policy
for the Indian-Pacific Oceans Basin,” which presents the conceptual basis for large-scale infrastructure projects, including water development in the Indian Subcontinent, the Mekong River Basin, the Kra Canal Project, the Hangzhou-Beijing Canal, and a second Panama Canal. These projects represent the “motor for development,” LaRouche says.

1988—Ibero-America: The Schiller Institute issues a book-length study on “Ibero-American Integration, 100 Million New Jobs by the Year 2000!,” which outlined the basis for an integrated agro-industrial modernization of the continent, including projects on water management, high-speed rail, increasing agricultural productivity, nuclear energy, and other investments in high-technology development.

1989—Europe: Lyndon and Helga LaRouche put forward the “Productive Triangle” development plan, in the face of the collapse of East Germany. It builds off LaRouche’s October 1988 proposal for Western Europe to provide high-technology aid to deal with the food crisis in the East, and advancing to the development of high-technology development corridors between Moscow, Paris, and Vienna—an area which encompasses the most productive industrial centers in Europe.

1990—Southwest Asia: LaRouche releases his “Oasis Plan,” as a basis for lasting peace between Israel and the Arab world, based on programs of nuclear desalination and industrial development for the entire region.

1990s—Eurasia: With the collapse of the Soviet Union in 1991, the LaRouches expand the concept of the Productive Triangle to become the Eurasian Land-Bridge, linking all of Eurasia through development corridors. One of the high points of this organizing occurs in 1996, during a conference sponsored by the Chinese government, which features plans for a “New Silk Road.” This event is followed by many others dedicated to the Eurasian Land-Bridge over the following years.

2007—Russia/U.S.: LaRouche puts a special emphasis on the Bering Strait Tunnel during a May visit to Moscow, where he is a featured guest at the Russian Academy of Sciences in celebration of the 80th birthday of Prof. Stanislav Menshikov, a prominent Russian economist.
Steps for a New Monetary Order

In August 1982, Lyndon LaRouche authored a book-length report entitled “Operation Juárez,” which proposed a comprehensive global debt-reorganization and follow-on measures required to establish a production-oriented new financial system. Given the enduring applicability of these principles to today’s crisis, we reprint below excerpts from the specific measures proposed.

Collective Negotiation of Debt-Reorganization

No matter how lacking in economic viability a nation may be, unless we are Adolf Hitlers, we never put a nation out of business “mercifully.” No matter how bankrupt a nation may be, we are morally obliged, under any and all circumstances, to make it economically viable at whatever cost. It is sufficient to rewrite a new series of debts, and debt payment schedules, to replace the previously existing debts and payment schedules. The new issues of debt will replace, or “buy up” the old.

“Common sense” may recommend to us that a great portion of the debt were better simply written off—a common condition among “least-developed nations” today. In negotiations of such matters, we must be guided by an eye to the principle of equity.

Many of the debtor nations were forced into refinancing debts at immorally usurious rates, and with other lunatic arrangements, at the point of a gun—sometimes, quite literally, Kissinger’s guns. Such features of the carried-forward debt of nations cannot be considered exactly a debt contracted in good faith.

Ibero-American Monetary Order

1) In no republic must any other issues of credit be permitted, as a matter of punishable violation of the law against immoral usury, excepting: (a) deferred-payment credit between buyers and sellers of goods and services; (b) banking loans against combined lawful currency and bullion on deposit in a lawful manner; (c) loan of issues of credit created in the form of issues of national currency-notes of the treasury of the national government.

2) Loan of government-created credit (currency-notes) must be directed to those forms of investment which promote technological progress in realizing the fullest potentials for applying otherwise idled capital-goods, otherwise idled goods-producing capacities, and otherwise idled productive labor, to produce goods or to develop the basic economic infrastructure needed for maintenance and development of production and physical distribution of goods.

3) In each republic, there must be a state-owned national bank.

4) No lending institutions shall exist within the nation except as they are subject to standards of practice and auditing by the treasury of the government and auditors of the national bank.

5) The treasury and national bank, as a partnership, have continual authority to administer capital-controls and exchange-controls and to regulate negotiations of loans taken from foreign sources.

6) The policies of taxation of the national government must be designed to expropriate ground-rent and usury income, to foster well-being of households, and to give preferential treatment to those classes of ventures which are established to be in the relatively greater national interest.

7) In a number of instances, it is simply desirable, or even indispensable, that a severe currency reform be implemented immediately.

8) Sovereign valuation of the foreign-exchange value of a nation’s currency must be established. The first approximation of the value of a nation’s currency is the purchasing power of that currency within the internal economy of that nation.
BRICS Nations

The Future Is Nuclear

July 19—The nations participating in the recently concluded BRICS Summit in Brazil inaugurated a new international economic policy and financial institution, which holds the promise of reversing decades of economic stagnation and destroyed potential. The success of that endeavor will depend upon support for advanced technologies which have been so far largely denied the so-called developing nations. Key among them will be the full-scale deployment of nuclear energy.

Before the Summit, in bilateral meetings with the top leadership of the Russian Federation’s nuclear energy agency, Rosatom, both Argentina and Brazil concluded far-ranging agreements for cooperation in nuclear energy. Both nations, which already operate commercial nuclear power plants, plan to build families of new reactors, and to extend their capabilities into a wide range of technologies, in order to become the economic powerhouses needed for the rapid development of all of Ibero-America.

On July 12, Rosatom Director General Sergei Kiriyenko and Argentina’s Minister of Planning, Investments and Services, Julio de Vido, signed a broad-ranging document on nuclear cooperation, during President Vladimir Putin’s visit to Buenos Aires. The agreement “will become a strong foundation for close cooperation” in nuclear energy, Putin said at a press conference, World Nuclear News reported. The new document replaces an agreement that expired in December 2012, and greatly expands the areas of bilateral nuclear cooperation.

The design, construction, operation, and decommissioning of nuclear power plants and research reactors are included, as well as “water desalination facilities.” There is also Russian support for the nuclear fuel cycle (which could include enrichment and reprocessing technology), radioactive waste management, and radioactive isotope production, important for medicine and agriculture. Russian Energy Minister Alexander Novak told reporters that Rosatom has submitted a technical and commercial proposal to participate in the construction of Argentina’s planned Atucha-III nuclear plant, and is expected to offer a commercial tender in the Fall. Argentina has also been in discussions with China and South Korea on nuclear plant cooperation.

Unlike past decades, it is not the U.S., Europe, or Japan that is primarily being looked toward for nuclear technology and cooperation. What may well tip the balance concerning which nation’s nuclear industry will be engaged to work on Argentina’s next nuclear power plant, is not only the quality of the equipment, but the options that are offered for financing. It will be state credit agencies, and the BRICS’ new credit mechanisms, rather than usurious private banks, that will vector new credit to nuclear projects.

Rosatom has been offering such arrangements to most of the nations that are in the market for nuclear plants. At his press conference, Novak said that Rosatom “is prepared to provide comfortable financial terms, among other things.”

As part of President Putin’s official visit to Brazil, preceeding the BRICS Summit there, Russian nuclear representative Dzhomart Aliyev and Brazilian company Camargo Correa representatives signed a Memorandum of Understanding (MoU) on July 15, to expand bilateral cooperation in nuclear power. According to the Russian press, a spent-fuel storage facility, the construction of engineering and other technical facilities at Brazil’s Angra operating nuclear power plant site, and a “partnership” in the construction of new nuclear plants in Brazil, are included in the MoU.

Similar to the agreement reached with Argentina, the new Russian MoU with Brazil is a follow-on to previous, more general, agreements. In 2008, a meeting between then-Russian President Dmitri Medvedev and then-Brazilian President Lula da Silva initiated the proposal for increased nuclear cooperation, which broadened a 1994 agreement. In 2009, the two Presidents discussed this again, at the first official BRIC (before South Africa joined) summit in Russia. A working group to determine areas of cooperation was created.

In June 2013, Rosatom announced that it was ready to build Russian-designed nuclear power plants in Brazil, and to finance them. At that time, Brazil’s Electrobras stated its plan to build 4-8 new nuclear plants by 2030. The new agreement broadens nuclear cooperation between these two BRICS nations, to include a wider range of nuclear technologies.
South Africa Bucks British Opposition, Goes Nuclear

by David Cherry and Ramasimong Phillip Tsokolibane

July 18—South African President Jacob Zuma and his cabinet are now determined to build new nuclear power plants to generate an additional 9,600 megawatts (9.6 gigawatts) of electric power. South Africa currently has the only nuclear power plant on the African continent—at Koeberg, 20 miles north of Cape Town—which provides 1,800 MW, or about 5% of the country’s power. It was commissioned in 1984.

The decision to build more nuclear power plants is historic, both for South Africa and for the continent as a whole, because nuclear power—and soon nuclear fusion power—is the indispensable successor to fossil fuels. It is no coincidence that this decision comes at the moment of the founding of the New Development Bank (NDB) by the BRICS nations—Brazil, Russia, India, China, and South Africa. (All of the BRICS nations have nuclear power, and all are building more plants.) The new bank, which will make credit available to developing countries on terms favorable to them, will begin with dedicated capital of only $50 billion, but it can grow, and nations not members of BRICS can join the bank (see articles in this section). The two developments taken together—South Africa’s decision for more nuclear power and the BRICS decision to establish the NDB—open up a new vista for Africa.

The New Development Bank

President Zuma told the BRICS Summit plenary session, in Fortaleza, Brazil, July 15, that the founding of the new bank was a “historic and seminal moment.” Finance Minister Nhlanhla Musa Nene told the press just hours after his return from Brazil, that it was the “most exciting development in global development finance since the meetings in Bretton Woods … some 70 years ago.” He was referring to the founding of the World Bank and International Monetary Fund (IMF) in 1944. That, too, was an exciting time. But when U.S. President Franklin Delano Roosevelt died nine months after the Bretton Woods meeting, the World Bank and IMF came under the control of the private bankers. The New Development Bank is, therefore, long overdue. Indeed, the rigorous theory for a new bank, together with exemplary applications, was first published by Lyndon LaRouche as How the International Development Bank Will Work in 1975, and circulated to governments, policy makers, and scholars worldwide.

At the BRICS Summit, the South African team—including prominently Trade and Industry Minister Rob Davies—made a strong case for putting the headquarters of the new bank in South Africa, pointing to the urgent development needs of the African continent and South Africa’s qualifications to host the new financial institution. The decision was to put the headquarters in Shanghai, but also to create an Africa Regional Center in Johannesburg. South Africa had already been tasked with coordinating Africa’s interaction with BRICS.
South Africa’s Nuclear Decision

After a protracted factional attempt to derail South Africa from its nuclear path, President Zuma announced, in his State of the Nation address on June 17, that his government will indeed build new nuclear power plants. He also reiterated seemingly obligatory commitments to wind, solar, and shale fracking.

Nuclear power will not solve all of South Africa’s many problems, but without it, they cannot be solved. The decision brings with it enormous hope for the potential nuclearization of the entire African continent. In Africa, South Africa alone has a full-set economy, which could serve to drive development further north. Half of Africa’s 1 billion people have no access to electricity. More than half of sub-Saharan Africa’s electricity is generated and used in South Africa.

Conventional nuclear power is the bridge to the next step in advancing the density of the world economy’s energy-flux, namely nuclear fusion power, in which atomic nuclei are fused rather than split, without producing radioactive waste.

The government plans to take control of the full nuclear fuel cycle, largely through the existing South African Nuclear Energy Corporation. Eskom, the state electricity utility, will retain a majority stake in all nuclear-power-generating entities.

South Africa has 5.5% of the world’s known recoverable uranium deposits, and its neighbor Namibia has 5%. South Africa has been separating uranium from its gold (and copper) ores since commissioning a plant for that purpose in 1952 at the behest of the U.S. Atomic Energy Commission.

The model for the project involves full financing from an international partner such as Russia or China. The partner will also build and initially operate the plants, using South African components as much as possible, and training South Africans to master the necessary technical skills. Nothing so far has been said publicly about the NDB taking on a role in the financing, but it is conceivable.

Each of three sites will host two new nuclear reactors. Because South Africa has little freshwater, all three sites will be coastal, so that ocean water can be used as coolant. It is likely that one site will be at Duynefontein, near the existing nuclear power plant. Another, also in the Western Cape, may be at Bantamsklip, near Gansbaai. The third site may be at Thyspunt in the Eastern Cape near Oyster Bay.

Overcoming Factional Differences

Until now, the outcome of the fight in South Africa between proponents and opponents of nuclear power has seemed uncertain—the struggle has not been conducted in the open.

In 2009, Zuma organized a National Planning Commission with former Finance Minister Trevor Manuel as chairman and billionaire Cyril Ramaphosa (now Deputy President) as deputy chairman. The resulting National Development Plan (NDP) could have been written in London or Washington. It specified that South Africa needed a “less energy- and carbon-intensive economy,” and projected that the manufacturing sector should actually decline from 12% of gross domestic product in 2010 to 9.6% in 2030! At the time, the proposal to build more nuclear power plants had already been under serious consideration for years, but the NDP proposed a re-evaluation and possible scrapping of the nuclear proposal entirely. Zuma—in what now appears to have been a political maneuver—endorsed the NDP and obtained the endorsement of his cabinet and the ruling party, the African National Congress (ANC), in 2012.

In March 2013, however, at the BRICS Summit in Durban, South Africa, Zuma and Russian President Vladimir Putin met on the sidelines and discussed South Africa’s nuclear power needs. The Russian press then reported that Russia would bid for the contract to build the nuclear power plants if South Africa went ahead with the project. The two heads of state met again in Sochi, on the Black Sea, in May 2013, to continue their discussion.

The plan now endorsed by the Zuma government is similar in some respects to the one approved by the cabinet under President Thabo Mbeki in June 2008, but is
less ambitious. The Mbeki cabinet approved a plan for 40 GW of new energy by 2025, of which 20 GW would be nuclear; the current plan is for 9.6 GW of new nuclear by that date. In 2008, Areva (France) and Westinghouse (United States) were both willing to build, but depended on South Africa to find the financing, which it could not.

Finance was also a major obstacle to South Africa’s continuation of its Pebble Bed Modular Reactor (PBMR) project. The project was mothballed in 2010; some of its personnel are still working in South Africa’s nuclear industry. The South African PBMR would be the reactor of choice for deployment to much of Africa because its high operating temperature makes it highly efficient, and because it can be very small (80 MW electric). It is inherently safe, requiring no sensors and no shutdown mechanisms to respond to overheating. The physics of the fuel elements is such that nuclear fission simply ceases above a certain temperature.

China is currently working on a PBMR. Resumption of the South African project is not currently under discussion, but one can imagine a collaboration with China, possibly with funding from the BRICS bank, to get PBMR units coming off the assembly line in South Africa. These units are too small to be suitable for use within the relatively more developed economy of South Africa itself.

Russia has now made clear its readiness to meet the requirements laid out by the Zuma government, including the financing. Sergei Kiriyenko, CEO of the Federal Atomic Energy Agency (Rosatom), has said that “The Russian Federation is ready to provide concessional financing” for the plants if an agreement is signed for their construction. Russia’s willingness to finance is a major reason why it is getting the contracts to build new nuclear plants in a half dozen countries.

In anticipation of an actual contract, Rosatom and the South African Ministry of Energy initialed a broad agreement on Nov. 25, 2013, for a strategic partnership in nuclear power development. It included providing technology and the training of specialists. Local content (South African components and materials) was estimated at 30% for the first plant, and more than 50% thereafter. That would include localization of fuel production, through construction of a plant to assemble fabricated fuel elements. Rosatom has also opened a marketing office in Johannesburg.

On the sidelines of the BRICS Summit just ended in Brazil, Zuma had bilateral talks with both Putin and Chinese President Xi Jinping, and nuclear power was on the agenda. China’s nuclear power companies have organized a bid to build the six reactors by 2030.

A Hostile Press

President Zuma’s announcement that his government would build the new nuclear power plants, disregarding the NDP’s view, produced the expected reaction in the press. One imagines flashing red warning lights going off at the South African daily Mail & Guardian. On June 27, under the headline, “Nuclear Urgency Raises Alarm,” it wrote, “The state seems set on going the atomic route despite the huge financial implications,” adding, “The apparent urgency about nuclear procurement runs counter to key government policies. . . .”

The flak actually started years ago. The South African press, awash with propaganda of British origin, appears to be entirely hostile to nuclear power. (The British are building more nuclear power plants at home, but their oligarchs don’t want South Africa to have them!) The press has featured a series of arguments hostile to
nuclear power development by “experts,” sometimes citing the NDP’s erroneous projection of a decrease in the growth rate of energy demand—the projection could only serve the function of a self-fulfilling prophecy.

Access to abundant energy is an enabler of productive activity, which in turn, demands more energy. It is claimed that investing in nuclear power plants does not generate enough jobs. There will certainly not be many jobs if South Africa is constantly suffering blackouts. Windmills, imposed on South Africa by certain lenders, are like solar panels—they are a retreat to lower energy-flux density; these toys will never power an advanced industrial economy. South Africa’s coal and gas—of limited energy-flux density—are also going to run out. Nuclear power is a necessity.

It is claimed that South Africa needs a labor-intensive economy (creating many jobs at lesser skill levels), not a capital-intensive one (requiring higher skill levels and fewer workers per unit of output, as in a nuclear power plant). In fact, there must be employment for a continuum of skill levels if the workforce as a whole is to progress toward greater cognitive power. In South Africa today, large public works projects to provide large-scale employment, are urgently needed.

The Empire Goes for Regime Change

The British financial empire will seek all possible avenues to disrupt the implementation of South Africa’s nuclear plans and crush the assertion of sovereignty that made those plans possible. The empire has seen this moment coming. It has been laying the groundwork for another of its regime-change operations—as seen in Iraq, Libya, Georgia, Ukraine, and elsewhere. The cultivation of disrespect and often hatred for President Zuma throughout the press is a sign of worse to come. Mantashe correctly saw in this the possibility of eventual wider action to unseat the government. (While Mantashe did not identify the AIDC by name, the press made the connection, as did the AIDC.)

The AIDC is, in fact, supported by the Open Society movement run by George Soros, the vicious speculator who has played a large role in overthrowing governments and getting drugs legalized worldwide. The AIDC—which propagates the global warming hoax—also works with the World Wide Fund for Nature (WWF), which owed its founding to Prince Bernhard of the Netherlands (a member of the Nazi Party) and Prince Philip of Britain (all four of his sisters married Nazis, and three of them joined the party). After all, Hitler was himself a greenie. This is the crowd that wants to see the population of the planet reduced from 7 billion to 1 billion.

Another expression of Soros’s influence is the Mail & Guardian, which acknowledges that “Among the M&G Centre for Investigative Journalism’s funders are two entities that are part of George Soros’s Open Society network.” The Centre is also known as amaBhungane.

It has not escaped the notice of the ANC leadership that agitator and demagogue Julius Malema was working with the AIDC-Amcu strike. Malema has referred to billionaire Tokyo Sexwale—the darling of London and Wall Street—as “my leader.” Here again is the Soros influence—Sexwale has drunk the Soros Kool-Aid and frequently referred to “the open society” in the days when he was helping to launch Malema. But Soros seems to have cut Sexwale loose in 2010, when the M&G Centre published the first of two exposés of some of Sexwale’s dirty dealings—the exposés allege that he was involved in taking over assets in the Democratic Republic of Congo that belonged to others.

The Soros operations are a major part of the picture, but not the only one. There is also the combination of Earthlife Africa, groundWork (Friends of the Earth South Africa), and Greenpeace Africa. Internationally, Greenpeace and Friends of the Earth, like their forebears the Luddites, have a history of violence.

Africa is, literally, the dark continent. A satellite photo of the continent at night demonstrates it dramatically—there are very few concentrations of light. South Africa has a mission to revolutionize Africa—and only nuclear power can provide the spark.
RUSSIA TARGETED

Malaysian Plane Downing Heightens War Danger

by Jeffrey Steinberg

July 22—While it may take days or even weeks to reach a competent forensic determination of the cause of the crash of the Malaysian commercial airliner MH17 over eastern Ukraine July 17, the cries for a confrontation with Russia are growing louder, led by President Obama and his top aides, including American UN Ambassador Samantha Power. As far as Obama and the U.S. establishment media are concerned, the byword is: “Don’t confuse me with facts—my mind is made up.” In this case, the determination is that Russian President Vladimir Putin was either directly or indirectly responsible for the incident, and Russia is to pay a heavy price.

Washington’s snap judgment was matched July 21 by British Prime Minister David Cameron, writing in the London Times, who declared Putin guilty of shooting down the airliner, and demanded that Europe break decisively with Russia.

While the war cry from London, Washington, and the Netherlands, in particular, continues, the United Nations Security Council on July 21 was able to agree on a resolution mandating an international, independent investigation of the jet crash. Among other points, the text demands that “the armed groups in control of the crash site and the surrounding area refrain from any actions that may compromise the integrity of the crash site and immediately provide safe, secure, full and unfettered access to the site and surrounding area for the appropriate investigating authorities.”

In fact, the OSCE (Organization for Security and Cooperation in Europe) monitors declared on July 20 that they had been given full access to the main crash site. On July 21, before the UN resolution, Malaysian Prime Minister Najib Razak announced that he had reached an agreement with the prime minister of the self-declared Donetsk People’s Republic, whereby Malaysia would receive the remains of 282 people, which had been recovered and refrigerated by the militias, and would be given the two “black boxes” which the militias had taken custody of, in fear that they would be tampered with, if handed over to the Kiev authorities.

An official Pentagon statement—issued the same day as a phone call between U.S. Secretary of State John Kerry and Russian Foreign Minister Sergei Lavrov which appeared to agree on an impartial investigation—identified a Russian-made Buk/SA-11 missile as the weapon used in the downing, but offered no evidence as to who carried out the attack.

In contrast, the Russian Ministry of Defense on July 19 issued a statement, spelling out ten crucial unanswered questions, directed at Ukrainian authorities, over whose territory MH17 was flying at the time of the attack (see below).

On Sunday, July 20, Secretary of State Kerry appeared on a number of TV programs to bolster Obama’s own “blame Putin” rhetoric. Kerry’s appearance, reminiscent of Dr. Susan Rice’s now infamous TV appearances days after the Sept. 11, 2012 Benghazi attacks,
claiming they were the result of spontaneous demonstrations against an anti-Islam video, repeated the claims that the Russians had delivered SA-11 anti-aircraft batteries to rebels in eastern Ukraine and had trained them on the use of the sophisticated weapons. News leaks also claimed that CIA agents in Kiev had authenticated an alleged intercepted phone call between Ukrainian rebels and Russian military personnel right after the plane crash, taking credit for the incident.

‘A Doctor Strangelove Situation’

Some sane voices in the U.S. and around the world have warned that the escalating rhetoric threatens to trigger a great powers war. Col. Patrick Lang (ret.), former head of the Defense Intelligence Agency’s human intelligence division, posted a blunt warning on his widely read website on July 19: “The Yellow Media are creating a Doctor Strangelove situation. They do not seem to grasp the idea that the war between Russia and the U.S.A. toward which they are groping will destroy both countries altogether. Once more, a war between the U.S.A. and Russia will destroy both countries and much of the rest of the world.”

The BRICS nations (Brazil, Russia, India, China, South Africa) leaders have all called for an “objective probe” of the Malaysian Airlines disaster in Ukraine that, if carried out, would help to avoid the war that Lang is warning against. “I was shocked,” said Chinese President Xi Jinping at a joint press conference with Argentine President Cristina Fernández de Kirchner. “I hope that a fair and objective probe will be carried out to establish the truth as early as possible.”

In a separate statement, Indian Prime Minister Narendra Modi said he hopes “the circumstances of the disaster are established quickly.”

Brazilian President Dilma Rousseff has also urged a speedy investigation into the terrible tragedy. “First, it should be established what really happened. The Brazilian government will give no assessments until the circumstances are clear,” she said. Rousseff was echoed by South African President Jacob Zuma, who also called for a thorough, transparent, and independent investigation to determine the cause of the incident.

Greatly adding to the danger, is that the Malaysian plane tragedy does not take place in a vacuum. President Obama, just days before the crash, announced harsh new sanctions against Russia—despite the fact that the European Union did not go along with Washington and London’s demands. NATO has announced an expansion of maneuvers in the Baltic countries and Eastern Europe on the Russian borders.

What is completely missing from the Washington and London rhetoric is any effort to determine cui bono—who would benefit from such a brutal act of terrorism. From that standpoint, Russia stands to lose the most as the result of the tragedy.

Furthermore, the Downing of the MH17 came at the conclusion of the world-changing BRICS Summit in Brazil, where the five nations agreed to establish a New Development Bank and a fund to protect against currency warfare (see this week’s Feature). These new institutions, while not formally replacing the IMF and World Bank, offer a clear alternative to the brutal conditionalities and debt blackmail of the “Washington consensus” system. They come at a time when even the Bank for International Settlements has been warning about an imminent debt blowout of the major trans-Atlantic banks as the result of their out-of-control gambling activities. In the second quarter of the year, derivatives contracts expanded by an annual rate of 19%,

Even before the smoke had cleared in the rubble from the downing of the Malaysian passenger airliner over eastern Ukraine (shown here on July 17), the British-U.S. warmongers were aiming their rhetorical guns at Russia.
with total global derivatives estimated at over $1.7 quadrillion.

Mervyn King, the former head of the Bank of England, recently noted that the biggest financial crash of the 20th Century took place in the Spring-Summer of 1914, and led directly into the Guns of August start of World War I. The parallels between then and now, exactly 100 years later, are stark. The major difference is that the great powers of 1914 did not have overkill arsenals of thermonuclear weapons, as the United States, Russia, and China have today.

Documentation

Russian Defense Ministry: 10 Questions on MH17 Crash

July 19—The Russian Ministry of Defense today issued a list of ten questions to the Kiev authorities on the downing of Malaysian Airlines flight MH17. These were announced in a televised interview by Deputy Defense Minister Anatoli Antonov with Rossiya-24 state TV. As of yet, they have not been answered.

According to Itar-Tass, Antonov accused Kiev of inaction on forming an international commission to investigate the July 17 crash of the Malaysian Airlines flight. Antonov said that some people are “already today trying to determine who is guilty in this situation: Either we hear it is the Russian Federation or its Armed Forces, or militiamen in the southeast of Ukraine.” He added, “It seems to be a continuation of the information war unleashed against the Russian Federation already for many months, and we feel the consequences of the war.” The deputy defense minister addressed ten questions to Kiev, saying that answers to them “would allow all of us, not only in Russia, but in Western states and the East, in Asia, to try to find an answer to the main questions: What happened in the sky over Ukraine and what must be done to prevent it from recurring.”

The ten questions are:

“1. The Ukrainian authorities instantaneously determined who was to blame in the tragedy. Of course, in their opinion, it is the militias. What is the basis of these conclusions?

“2. Can official Kiev give all details related to the use of Buk systems in the combat zone, and especially answer why these systems were deployed, given that the militias have no aircraft?

“3. What are the reasons for the inaction of the Ukrainian authorities on forming an international commission, and when will such a commission start to function? The international community wants to know.

“4. Are representatives of the Ukrainian Armed Forces prepared to submit to international experts’ documentation on the inventory of air-to-air and surface-to-air missiles installed on their anti-aircraft weapons? This is a very important question, which will help us determine what systems were used against the Malaysian Boeing.

“5. Will air control data be provided to the international commission on the movements of Ukrainian Air Force planes on the day of the tragedy?

“6. Why did Ukrainian air controllers allow the plane to deviate to the north, in the direction of the so-called anti-terrorist operation being conducted by official Kiev against the population of southeastern Ukraine.

“7. Why was the air space above the combat zone not completely closed to civilian aviation, especially since the region in question lacked a continuous field of radar navigation means? [This is a reference to the fact that the modern communications systems of Donetsk airport have been knocked out during fighting—ed.]

“8. Can official Kiev comment at this time on the report that appeared in social media, allegedly from a Spanish-national air traffic controller working in Ukraine, that the Boeing that was shot down was under escort by two Ukrainian military aircraft?

“9. Why has the SBU [Security Service of Ukraine] begun to work with the recordings of communications between air traffic control and the Boeing crew and with Ukrainian radar data, without the involvement of international representatives?

“10. In what way have the lessons of the previous, similar tragedy, the case of the Russian Tu-154 over the Black Sea, been taken into account? [This was the October 2001 crash of Tel Aviv-Novosibirsk flight of Sibir Airlines, which was downed by a Ukrainian missile during training, killing 78 people—ed.] In that case, the Ukrainian leadership denied, until the last minute, any role of the Ukrainian Armed Forces in that tragedy—until we presented incontrovertible evidence and proved who was the real culprit in that tragedy.”
Hon. Fabio Porta is member of the Foreign Affairs Committee of the Italian Chamber of Deputies and chairman of the Permanent Committee of Italians in the World. He is also the initiator of the Italian Parliamentary petition in support of Argentina. He was interviewed on July 14 by Claudio Celani. The interview was translated from Italian.

EIR: The Italian Democratic Party (PD) has started a petition in support of Argentina, after the decision of the U.S. Supreme Court in favor of “vulture funds.” How is the petition going?

Fabio Porta: The initiative was started by me and some friends in the Democratic Party, along with other members of Parliament such as Enzo Amendola, faction leader in the Foreign Affairs Committee in the Chamber of Deputies, Stefano Fassina, and Paolo Guerrieri, who are members of Parliament and economists, therefore, experts on the subject; and also the PD members responsible for Latin America and Italians in the World, Francesca D’Ulisse and Eugenio Marino.

We organized a seminar where other experts were invited, such as Donato di Santo, who has organized various Italy-Latin America conferences, and José Luiz Rhi-Sausi, the social-economic secretary of the Italy-Latin America Institute. We wanted to reflect on what was happening as a result of the American court ruling, which de facto tries to prevent Argentina from restructuring its debt, after a gigantic effort in which that country has succeeded in reaching an agreement with over 90% of its creditors, to solve a situation whose causes, as we know, go back many years.

We found it worrisome, even absurd, that 2% of the bondholders could jeopardize an agreement with 93% of the holders of Argentinian debt. So we got the idea of doing something, of writing a call—which we then proposed to legislators of all parties, and we collected over 100 signatures—in support of this Argentinian effort, but more generally, in support of a new world financial model, or in any case, an effort that leads the world to raise questions, to find a solution so that similar cases do not occur again; because today, it is Argentina that is threatened, but tomorrow, it could be emerging countries, or even European countries.

A Double Standard

EIR: Do you see this case as part of the general offensive against international law, as in the “regime change” wars?

Porta: I believe that at this moment, what is at stake, is not only international law, but the very equity and justice of that law. It is now clear at the financial level, but also at the political-economic level in general, that a double standard rules the world. On problems that concern the United States, not just one blind eye is turned away—many are closed. When problems con-
cern countries that are not dominant from the political and economic standpoint, other standards are applied. Therefore, what must be discussed is a new international balance, in which all countries are granted the same guarantees, and where not the financial or speculative powers, but the law and sovereignty of peoples, speak louder.

I think that this is the issue we wanted to put at the center of the call, and I believe that we are on the right path, because Italian Prime Minister [Matteo] Renzi himself wrote to the Argentinian President [Cristina Fernández] a couple of days ago, confirming Italian support for this Argentinian effort. I believe that at this moment, Italy has, in Europe and in the world, a responsibility to start to change those balances, those dominant lines of thought, which for too long have seen, in Italy and in the world, the rule of the markets speak louder than the rule of politics and the rule of law.

**EIR:** Seven years later, the world crisis has not been solved. The Pope says: This economy kills. In the United States itself, where we are active, political support for a shift is growing, whose reference is what the great President Franklin Roosevelt did in the 1930s, and the spearhead of it is an initiative in Congress to separate speculative finance from the real economy, through the reintroduction of the famous Glass-Steagall Act. Last week, 600,000 signatures of U.S. citizens were delivered to Congress, collected by trade unions and various associations, in support of the Glass-Steagall draft bill. We believe that through this reform, the United States can lead the change. Do you see it this way?

**Porta:** Certainly. The crisis started in the United States, precisely in the heart of that economy, of that country which claimed it could dictate financial rules to all other countries, starting with Latin America, where, in recent decades, they mostly suffered the imposition of certain international financial mechanisms. It is right and also wise that a new effort to reorganize the international banking and financial system starts from the United States itself, starting from the mechanisms in force in that country. Therefore I consider what is occurring to be very interesting. The fact that such a large part not only of Congress, but also of public opinion and of civil society, has mobilized around that proposal, shows that these seven years did not pass in vain. It is a bipartisan effort that must be pursued not only in the United States but also among countries, political systems, and civilian societies of all large countries. It seems to me that this is the right moment and we are on the right path, I hope.

**A Good Omen**

**EIR:** Returning to the Argentina initiative: If I understood correctly, you propose to reopen the negotiations that were held at the IMF at the end of 2003, to establish new procedures, new international rules, that prevent the minority creditors from blocking the restructuring of sovereign debt. Is that correct?

**Porta:** Yes. In the private system this common sense law exists, and when there is a large majority of shareholders who, inside a company, reach a consensus on a restructuring plan for a company, that agreement is valid for everyone. It is not clear why the same mechanism should not be applied to debt and sovereignty of states. A decade ago, we were close to an agreement that fulfilled this demand, but then, the negotiations collapsed.

Today, maybe, what is happening around Argentina can give us strength to again push this issue; and it seems to me that the endorsements, or at least the understanding, from the United States to France, to the IMF itself—that this discussion could be a good omen in this sense.

**EIR:** Your parliamentary initiative will not result in a legislative act, but it has already influenced the Italian government, as you mentioned earlier. You also mentioned the general action of Italy as rotating chairman of the EU. Do you have an idea of the concrete steps that can be taken?

**Porta:** As I said, Italy is the rotating chairman. Renzi wrote to Cristina Fernández de Kirchner. Beyond the Argentinian issue, Italy is already committed to bring a different direction in economic policy and in the internal organization of the financial markets, both for this EU semester [July-December 2014—ed.], and in the coming years.

As concerns Argentina, the next step, mentioned also in Renzi’s letter to Kirchner, will be Foreign Minister Federica Mogherini’s visit to Buenos Aires on Aug. 4. I believe that this visit will be consistent with, and provide additional impetus to Italy’s support for the Argentinian effort; but more than that, to this effort at the European and international level, which all of us must undertake in order to change a system that has shown itself to be unjust and also ineffective.
**Zepp-LaRouche Article Runs in People’s Daily**

July 17—The Chinese-language online edition of the official People’s Daily published a commentary by Helga Zepp-LaRouche on the West’s hypocrisy on the issue of “human rights.” The article was solicited by People’s Daily in order to respond to Western criticism of China’s human rights record. The text is as follows:

“China has done more for human rights than any other country on the planet, and through its own efforts has brought from tens of millions up to a hundred million people out of poverty and to a decent standard of living, maintaining a positive thrust of economic development for which the world has every reason to be optimistic about China’s future.”

China has done more for human rights than any other country on the planet. Ever since 1978, with the “reform and opening up” policy, a large part of the population has been able to shake off poverty and today can enjoy a comfortable life. This fact is obvious to everyone—that not only have the people in the coastal regions and in the south enjoyed the fruits of an economic miracle in their development accomplishments, which are admired by the whole world, but also poverty in the rural areas and in the interior and western regions has also been tremendously reduced. With the implementation of the visionary concept of the New Silk Road Economic Belt of President Xi Jinping and the 21st-Century Maritime Silk Road, China has every chance to eradicate poverty in the not-too-distant future.

Poverty is one of the most severe threats to human rights. Poverty means hunger, lack of adequate medical care, poor housing, lack of opportunities for personal development, and a shortening of life in general. China by its own efforts made it possible for several tens of millions to hundreds of millions of people to escape from poverty and attain today a decent standard of living. By maintaining the present direction of development, the world has reason to be optimistic about China’s future.

It’s not difficult to discover that the Western notion of “human rights” is greatly distorted, mixing up the narrow egoism of “freedom” with the notion of the common good. During recent years, “street revolts” have occurred in the northwest of China as well as in Ukraine, Thailand, and other places, by groups antagonistic to, and in revolt against, their societies. These are well financed by Western NGOs, which manipulated them, under the slogan of a “pluralistic society,” raising the banners of “democracy” and “human rights.” In fact, all of this has been the effort of Western countries to transform the regional situation in their own interest by bringing about regime change. Their declarations of a “pluralistic society” are merely a synonym for inciting domestic political forces against a country that disagrees with them.

Some Westerners, in their hypocritical “human rights” stance, show more clearly their true intention of preserving their own interests, in the many instances where they apply a double standard. For example, during the Ukraine crisis, the Western nations have clearly exhibited a double standard toward Russia.

Helga Zepp-LaRouche is interviewed on Chinese TV during a visit there in April.
GLASS-STEAGALL NOW

No Recess for Congress Until Obama’s Impeached!

Special to EIR

July 22—Diane Sare of the LaRouchePAC Policy Committee, in her opening statement to the group’s weekly webcast discussion of July 21 (www.larouchepac.com), defined the sharp focus of activity which Lyndon LaRouche has determined should be pursued singlemindedly until it is accomplished.

“What Mr. LaRouche wants made very, very clear,” Sare said, “is that the Policy Committee, in collaboration with him, is going to make sure that the organization is on a single, focused trajectory to get done in the immediate short term, the implementation of Glass-Steagall and the Four Laws…. Obviously, we can not rely on President Obama to do anything of the sort. He is absolutely dysfunctional and has to be removed from office.

“But given the state of the world at the current moment—and we are at the breakpoint—these Four Laws are the No. 1 priority, starting with the implementation of Glass-Steagall. And as soon as Glass-Steagall is passed, what immediately is put into question is, what do you do next? Which is the question of National Banking, credit, and a science-driver for thermonuclear fusion.

“But there can’t be any other secondary issues, side issues, lack of focus on this; this is absolutely the course of action that’s necessary in the United States for the future of mankind.”

Putting It to Congress

With this focus, elaborated in a leaflet that can be found at www.larouchepac.com, members of LaRouchePAC and citizen delegations from New York/New Jersey, Philadelphia, Baltimore, and Virginia began an intensive intervention into Washington, D.C. on July 22. Congress, which, with rare exceptions, has dragged its feet on all the life-and-death issues facing the nation and humanity, had just returned for what they intend to be the first of two more partial weeks before their August break. Without an uncompromising, successful offensive by LaRouchePAC, backed up by citizens from around the country, when the Congress leaves town, it will leave the country defenseless in the face of two mortal threats—financial blowout and possible thermonuclear war.

That the trans-Atlantic financial system is on the very edge of a new, more devastating blowout is patently obvious. Recent bank failures in Europe have put financial experts into a panic, and led various nations to rush to activate their “bail-in” mechanisms to try to deal with the insolvencies. In Austria, this led on July 8 to the confiscation of the life insurance policies of hundreds of thousands of its citizens, whose money had been invested in bonds of Hypo Alpe Adria bank, which got into trouble. At the same time, there have been prominent warnings, including by such as the Bank for International Settlements, of the unsustainable nature of the asset bubble which has kept the banking system on life-support over the past six years, that the next inevitable crash will be worse than the last.

The only way to stop this prospect is Glass-Steagall, which sequesters and cuts off the phony speculative debt—and permits a focus on saving the real economy.

The related threat, thermonuclear war, derives from...
the financial one—as the British imperium seeks to save its bankrupt system by fomenting wars. President Obama, just as he has followed the British line to block Glass-Steagall, is toeing the British line for war—as his provocations against Russia and China, and support for extremists on both sides in the perpetual genocidal war in Southwest Asia, demonstrate. Left alone, with Congress out of session, Obama’s next foreign policy step could be fatal for mankind.

Those two threats can only be eliminated by the measures LaRouche demands—impeachment of Obama, and implementation of LaRouche’s Four Laws.

Congress, therefore, must be forced to rise to its Constitutional responsibility to protect the nation. As the LaRouchePAC leaflet demands, Congress must not recess, until Obama is impeached and the first of the Four Laws, Glass-Steagall, is put through.

Glass-Steagall, or Die!

Legislation to restore Glass-Steagall has been before Congress since 2010—but has never come to a hearing, much less a vote. Wall Street control over both political parties has kept it off the agenda, even as the real economy’s collapse has taken a greater and greater toll on the American population. Meanwhile, support for the law’s restoration has grown exponentially, thanks heavily to the organizing by LaRouchePAC. The latest grassroots initiative was a petition by 162 organizations which was signed by 600,000 people, which urged the Senate to take immediate action on S. 1282, the 21st Century Glass-Steagall Act introduced last Summer by Sens. Elizabeth Warren (D-Mass.), Angus King (I-Me.), Maria Cantwell (D-Wash.), and John McCain (R-Ariz.).

On July 17, Warren and her original co-sponsors published an opinion piece on CNN’s website that raised the urgency of the issue. It said, in its concluding paragraph, that five years after the bankruptcy of Lehman Brothers and the severe economic downturn that followed, “with another financial crisis a very real possibility, why isn’t this a more urgent issue? We urge our colleagues to support our bill.”

The article says at the outset: “The chances of another financial crisis will remain unacceptably high as long as there are financial institutions that are ‘too big to fail’. . . . But over five years after the crash, the big banks are more concentrated and more interconnected and their appetite for excessively risky behavior is unchanged. The biggest banks are substantially bigger than they were in 2008. In fact, the five biggest banks now control more than half the nation’s total banking assets.”

The Senators say that their bill, which they introduced a year ago last week, takes a “proactive, structural approach to reducing bank risk [which] should be far preferable to risk-management through over-regulation.” They note, “It’s been four years since Congress passed, and rule-making began on, the Dodd-Frank Act. The regulators have so far missed more than half of their statutory rule-making deadlines and many rules remain unwritten.” They say that Congress must step in to address the problem, as their resolution requires.

Officially, S. 1282 has 10 sponsors in all, and there are 13 sponsors for a companion bill (H.R. 3711) in the House. In addition, H.R. 129, a bill which also calls for reinstating Glass-Steagall, has 82 sponsors, plus 1 sponsor on a companion Senate bill (S. 954).

It’s not the numbers that are lacking, but the understanding of what’s at stake, and thus the willingness to go against the London/Wall Street moneybags who have fought tooth and nail to prevent Glass-Steagall from being restored.

Impeachment Ripe

Only a Rip van Winkle would not have noticed how the movement for impeachment of Obama has taken off over the recent weeks. From both sides of the political
spectrum, Obama’s determination to act in defiance of the Constitution—both its principles and its formal separation of powers—has become a rallying cry for action. Yet Congress has, for the most part, refused to act.

One exception is the move by Congressmen Jim McGovern (D-Mass.), Walter Jones (R-N.C.), and Barbara Lee (D-Calif.) to try to force the Congress to fulfill its constitutional responsibility, by discussing and voting on whether troops should be deployed to Iraq (see Documentation). Yet, not even these Congressmen, who are passionately opposed to the President’s unilateral decisions for war, in cases such as Libya, have been willing to put impeachment on the table.

The Republican House leadership is trying to staunch the tide for impeachment with an impotent lawsuit against Obama, for not “faithfully executing the laws,” as the Constitution requires. At a hearing before the House Rules Committee on July 16, witnesses debated the merits of the proposed lawsuit, but even that hearing made it clear that only impeachment would adequately address the President’s offenses.

George Washington University law professor Jonathan Turley presented the most principled and non-partisan view of Obama’s abuse of power, in a way that implicitly demanded impeachment, not a lawsuit.

“Today’s hearing is a historic step to address the growing crisis in our constitutional system—a shifting of the balance of power within our tripartite system in favor of a now dominant Executive Branch,” Turley’s written statement said. “While both Congress and the courts have lost authority over the decades, the Legislative Branch has lost the most with the rise of a type of über-presidency…. Our system is changing in a dangerous and destabilizing way. We are seeing the emergence of a different model of government in our country—a model long ago rejected by the Framers…. “The President’s pledge to effectively govern alone is alarming, but what is most alarming is his ability to fulfill that pledge,” Turley continued. “When a President can govern alone, he can become a government unto himself, which is precisely the danger that the Framers sought to avoid in the establishment of our tripartite system of government. In perhaps the saddest reflection of our divisive times, many of our citizens and Members [of Congress] are now embracing the very model of a dominant executive that the Framers fought to excise from our country almost 250 years ago.”

“What we are witnessing today is one of the greatest challenges to our constitutional system in the history of this country,” Turley declared. “It did not start with President Obama.”

Turley noted that one of the Democratic witnesses on the panel, former Solicitor General Walter Dellinger, had warned during the G.W. Bush Administration that the encroachment of Executive power had become a threat to the separation of powers, and had called upon the next President, Obama, to respect the Constitution’s safeguards. However, Turley noted, Obama has not followed Dellinger’s advice, and “the aggrandizement that we saw in prior administrations has continued unabated and, as I have previously stated, it has reached a constitutional tipping point that threatens a fundamental change in how our country is governed.”

While Turley made a clear case for impeachment on the broader issues of abuse of power, he acknowledged that the small-bore issue chosen by the House GOP for the lawsuit, does not merit what he termed “the extraordinary remedy” of impeachment. What does merit it, is the fact that Obama’s continuation in office, carrying out economic and foreign policies that represent a clear and present danger to both the Constitution per se, and the general welfare of the population, means the destruction of the United States, if not humanity as a whole.

Documentation

Troops in Iraq: Congress Must Uphold Constitution

July 17—Representatives Jim McGovern (D-Mass.), Walter Jones (R-N.C.), and Barbara Lee (D-Calif.) gave impassioned presentations in the House of Representatives today on their House Concurrent Resolution 105, filed July 11. The measure, which now has three additional signators—Sam Farr (D-Calif.), Keith Ellison (D-Minn.), and Raul Grijalva (D-Ariz.)—mandates that all U.S. troops be withdrawn from Iraq by the end of the year, except for those needed to defend U.S. diplomatic facilities and personnel.

The Congressmen stressed that they were not addressing the President with this resolution, but Congress, which has repeatedly ducked its constitutional responsibility for war and peace. Jones urged, “We want the American people to join in and contact their Congressmen” on this.
The resolution reads, in part: “Pursuant to section 5(c) of the War Powers Resolution (50 U.S.C. 1544(c)), Congress directs the President to remove United States Armed Forces, other than Armed Forces required to protect United States diplomatic facilities and personnel, from Iraq—(1) by no later than the end of the period of 30 days beginning on the day on which this concurrent resolution is adopted; or (2) if the President determines that it is not safe to remove such United States Armed Forces before the end of that period, by no later than December 31, 2014, or such earlier date as the President determines that the Armed Forces can safely be removed.”

**Bipartisan Effort**

The first speaker was Representative Lee, who noted that “many of the same voices who championed the unnecessary war in Iraq [are] once again beating the drum for a renewed war in Iraq today. So we must not let history repeat itself. We must remember history. We must not be dragged back into a war in Iraq.”

She continued: “Over 100 Members of Congress now from both parties have signed a letter, Congressman McGovern, myself—many, Scott Rigell from Virginia—we are calling for the President to come to Congress for debate on an authorization before any military escalation on Iraq.

“Last month, during the consideration of the 2015 Defense Appropriations bill, over 150 bipartisan Mem-
bers supported our amendment that would prohibit funds from being used to conduct combat operations in Iraq.

“Mr. Speaker, there is no military solution in Iraq. This is a sectarian war with longstanding roots that were inflamed when we invaded Iraq in 2003. Any lasting solution must be political and take into account all sides. The change that Iraq needs must come from Iraqis. They must reject violence in favor of a peaceful democracy that represents everyone and respects the rights of all citizens.

“The future of Iraq is in the hands of the Iraqi people…. “I will finally conclude by saying sooner or later—sooner or later—we have got to go back and repeal the Authorization for Use of Military Force which has become a blank check for this war this past decade. It sets the stage for perpetual war. We need to repeal it. The American people deserve a vote on this resolution, and they deserve a vote for repealing this authorization.”

**‘We Can’t Fix This’**

Representative McGovern then took the floor, underlining Iraq’s ethnic and religious divisions, and the fact that it is now facing simultaneously a crisis of governance and an invasion by extremist forces.

“In large measure,” he said, “Iraq is falling apart because of its sectarian government currently led by Prime Minister Maliki that excludes and represses most Sunnis, Kurds, and other ethnic and religious minorities; and an army that thinks more about saving its own skin than protecting the Iraqi people. This is what has laid the foundation for extremist forces, namely ISIL, to enter Iraq and take control of disaffected communities and territory.

“I do not believe we can fix this. Only the Iraqi people can fix this. And I certainly don’t believe our brave and stalwart military men and women can fix this.

“I believe that we should never have invaded Iraq. I also believe it is foolish to once again commit U.S. troops to try and save an Iraqi Government and army that cannot stand on their own….”

The reason for the resolution that the three Repre-
sentatives introduced, he said, was simple: “Congress has the responsibility to authorize the introduction of American troops where hostilities are imminent. In less than 3 weeks, in three separate deployments, the
U.S. has sent at least 775 additional troops to Iraq.

“We don’t know what might happen next to those troops or to yet another deployment of additional troops, but we do know that Congress should debate it. We do know that Congress should vote on whether to authorize it or not.

“That is what the Constitution of the United States demands of Congress. That is what the Constitution demands of us. Now is the time for Congress to debate the merits of our military involvement in this latest Iraq conflict—openly, transparently.

“Do we approve of these deployments and any future escalation? If so, we should vote to authorize it. If we do not support it, then we should bring our troops back home. It is that simple, Mr. Speaker. Congress has the responsibility to act on Iraq now….

“We introduced this concurrent resolution because we strongly believe that Congress has to step up to the plate and carry out its responsibilities when our service-men and -women are once again being sent into harm’s way.

“The time for debate is now, not when the first bodybag comes home from Iraq, not when the first U.S. airstrikes or bombs fall on Iraq, not when we are embedded with Iraqi troops trying to back an ISIL-held town, and, worst-case scenario, not when our troops are shooting their way out of an overtaken Baghdad.

“Now, Mr. Speaker, is the time to debate our new engagement in Iraq—before the heat of the moment—when we can weigh the pros and cons of supporting the Maliki government or whatever government is cobbled together should Maliki be forced to step down—now, before we are forced to take sides in a religious and sectarian war; now, before the next addition of more troops takes place—make no mistake, I firmly believe we will continue to send more troops and more military assets into this crisis—now, Mr. Speaker, before we are forced to fire our first shots, launch our first missiles, or drop our first bombs.

“Now, Mr. Speaker, is when the House should debate and vote on this very serious matter. For those who say it is too early, too premature for this debate, I respectfully disagree. The administration has tacitly signaled when it notified Congress that our troops have been sent to a place where the threat of hostilities is imminent.

“The longer we put off carrying out our constitutional responsibilities, the easier it becomes to just drift along, and this is what Congress has done, over and over. We just kind of drift along, and it has to end. It has to end, Mr. Speaker. Congress must speak. Congress must act….”

Shirking Our Responsibility

The third speaker was Representative Jones, who introduced a theme that he reiterated several times: his own vote for the Iraq War that began in 2003, which he deeply regrets.

“When we continue to not debate whether we should be sending our young men and women to die,” he said, “we are shirking our constitutional responsibility that we, in this Congress, have raised our hand to swear that we will uphold the Constitution of the United States, but we don’t do that, Mr. Speaker, when it comes to war. And I blame myself. In 2003, I bought the lie that was told by the previous administration about the weapons of mass destruction that Saddam Hussein had, and how he was going to use that against the American people.

“That misinformation that was given by the previous administration caused us to go into Iraq, and I voted to give the President at the time—President Bush—the authority to bypass the Constitution. It is
called the AUMF, the Authorization for Use of Military Force, and I regret that and will until the day I die, because I gave up my constitutional responsibility to debate and to vote on whether we should go to war or not, and that was the constitutional responsibility of this Congress and of me being a Member of Congress.”

Jones denounced “my own side”—the Republicans—for having become “the war party,” whereas during Vietnam, it was the Democrats.

He quoted Republican Patrick Buchanan’s column (“Tell the Imperial President: No More Wars!” July 1): “It is astonishing that Republicans who threaten to impeach Obama for usurping authority at home, remain silent as he prepares to usurp their war powers—to march us into Syria and back into Iraq. Are Republicans now prepared to sit mute as Obama takes us into two new Middle East wars on his own authority?”

Jones then invoked “those who wrote the Constitution,” to stress that they had plenty of experience with war, and they set out sound principles. In a 1796 letter to James Monroe, George Washington wrote that “no nation has a right to inter-meddle in another,” and James Madison wrote that “the power to declare war, including the power of judging the causes of war, is fully and exclusively vested in the legislature.”

Jones continued: “We are the legislature. It is our responsibility to meet our constitutional duties. Mr. McGovern, I have signed over 11,000 letters to families and extended families in this country since we went into Iraq because I have asked God to forgive me for listening to the misinformation and the distortions by the previous administration to go into Iraq. “That is my pain, and I will live with that pain.”

‘Big Issues’ Are Ignored

McGovern then intervened again, raising the issue of the war in Afghanistan.

“My colleague Mr. Jones and I had an amendment to the defense authorization bill a few weeks back, which said that President Obama had mentioned a couple of years ago that we would be out of Afghanistan by 2014. Clearly, that is not going to be the case. “The amendment said that the President had to notify Congress of what our military plans were going to be in Afghanistan, and that Congress should consider that and vote up or down on whether we should continue our military involvement in Afghanistan.

“That is hardly a radical bill. It is simply a bill that says: Congress do your job, you have an obligation—a constitutional obligation when it comes to war.

“This amendment, which was germane, it was in order—on the defense bill, no less—at the last minute, we were told we could not offer it, it would not be made in order because the leadership of this House didn’t want that debate, they were afraid it might pass.

“Well, that is the way democracy is supposed to work. If a majority in this place does not want to continue an endless war in Afghanistan or does not want to start another war in Iraq, then that ought to mean something.

“My criticism right now is not with the White House. I may have some disagreements with the President in terms of what his policy on Iraq might be, but he has done his job, he has notified us, he has sent letters up to Congress that have announced the deployments that he is making, and it says—consistent with the War Powers Resolution, so this is not a complaint about the White House. We may disagree with their policy, but they did what they were supposed to do.

“Our complaint is with this institution, that we are not doing what we are supposed to do.”
Later in the discussion, McGovern quoted several military and foreign policy experts about the possibility of reentering the Iraq civil conflict:

“Gordon Adams, a former senior White House budget official, said in mid-June: ‘What is happening in Iraq right now is both a cautionary tale and an unfolding tragedy. The caution is about the blithe American assumption that the United States is omnipotent, and that with enough money, goodwill, expertise, equipment, and training, Americans can build foreign forces and bring security to troubled areas around the world. The tragedy is that what the U.S. does, and has done, leads down the road to failure.’

“Retired U.S. Army Lt. Gen. Robert Gard, Jr., stated, on July 6: ‘The collapse of the Iraqi Army was not due to a shortage of trained Iraqi troops or the inferiority in firepower or equipment. The case was their lack of confidence in, and commitment to, Iraqi national institutions and leadership, both military commanders and political authorities. This intangible but essential element in combat effectiveness depends upon legitimate governance, not admonitions from foreign military advisers.’

“Retired Gen. Barry McCaffrey, on June 12, said: ‘At the end of the day, if your army won’t fight, it’s because they don’t trust their incompetent, corrupt generals, they don’t trust each other. This is an enduring civil war between the Shi’a, the Sunni, and the Kurds. So I don’t think we’ve got any options, and we’d be ill-advised to start bombing where we really can’t sort out the combatants or understand where the civilian population is.’”

McGovern summed up: “Mr. Speaker, I do not believe the United States should be involving itself militarily in a civil war, a sectarian war, a religious war, a struggle for power that has been going on for generations. We shouldn’t be taking sides in this conflict.

“I do believe that a region in turmoil is not in the best interest of the United States. But as so many have said, including the President, this requires a political solution and it requires the political will of all the key actors in the region, not just outside actors like the United States and the Europeans, but those in the region. The countries and leaders in the region need to step up to the plate and actually lead on finding a political solution or watch their neighbors go up in flames and hope the fire doesn’t jump to their homes and destroy them as well.

“This is why we need a full debate on what is happening in Iraq, in the region, what our options are, and whether or not we should keep sending troops to Iraq or not…

“That is what this privileged resolution that Mr. Jones, Ms. Lee, and I have suggested that we vote on. I don’t know why that is such a controversial issue, but for some reason, in this Congress, big issues like that don’t ever seem to make their way for debate on the House floor.

“This should not be a Democratic or Republican issue. In fact, there are Democrats who disagree with my position. There are some Democrats who believe we ought to continue to send more military aid and potentially more troops to Iraq, and there are Republicans who agree with me that we ought not to. So this is a bipartisan concern.

“I will close by simply saying to the Speaker of the House: Give us a vote. Let us debate this issue.

“To my fellow Members of Congress on both sides of the aisle: Live up to your constitutional responsibility. Demand a vote.”

“REVIVE GLASS-STEAGALL NOW!

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—Lyndon LaRouche, Feb. 11, 2013

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Expand Nuclear Power For the World’s Survival

Much of the world lives in virtual darkness, lacking the electricity essential for modern life; but world leaders are not prioritizing the solution to the problem. Ramtanu Maitra reports.

Over 1.2 billion people—20% of the world’s population—are today without access to electricity, and almost all of them live in developing countries. This includes about 550 million in Africa and over 400 million in India. It is incumbent upon all the world leaders to bring this number to zero at the earliest possible date, and thus provide these people with a future to look forward to within a span of 25 years. Can this be done with fossil fuels, wind, and solar power? The answer is a resounding “No!”

The only way world can meet the power requirements of one and all is by fully exploiting the highest energy-flux density power generation achieved through nuclear fission now, and by starting to move to an even higher level by using hydrogen as fuel in generating power through nuclear fusion. As of March 11, 2014, in 31 countries, 435 nuclear power plant units with an installed electric net capacity of about 372 GW were in operation, and an additional 72 plants with an installed capacity of 68 GW in 15 countries were under construction. Altogether, the existing nuclear power plants provide a shade over 11% of the world’s installed generating capacity. Most of the other 89% comes from the burning of fossil fuels.

What becomes evident from those figures is that almost no country—big or small—has made the essential commitment to generate power in the future entirely through nuclear fission. Why have world leaders refrained from fully using this cleanest and most efficient energy source? Instead, we see countries such as China and India, among the larger ones that are committed to greater agro-industrial growth, mining and hauling hundreds of millions of tons of coal on a daily basis to generate power to meet their developmental requirements.

It is widely recognized that coal-fired power generation not only makes the air less breathable, but also that the technology exists to overcome that problem. But the other problem that coal-based power generation systems cause is virtually unsolvable. To begin with, vast amounts of water are needed on a daily basis to clean these millions of tons of coal before burning. The polluted water from coal washeries needs to be cleaned up before it pollutes waterways and sub-surface groundwater. In addition, handling these vast amounts of coal is burdensome: Millions of tons of coal are shipped from ports or coal mines to the coal washeries. The rule of thumb suggests that an average coal plant burns the contents of approximately 200 coal cars a day, with 100 tons per car. This makes 73,000 cars per year, or 7,300,000 tons per year. The average nuclear plant uses about 0.005 of a rail car of fuel per day—20 tons per year.

The logistical nightmare that coal-fired power programs cause does not end there. Burning vast amounts of coal produces vast amounts of fly ash, which contains acidic chemicals ready to poison the land, clog the waterways, and kill all living things that inhabit the waterways. In the United States alone, coal-fired power plants on an average produce 130 million tons of fly
ash. All countries that are building up their power generation programs based on coal-fired plants encounter the same logistical nightmare. What that means is that a good part of a nation’s railroads remains clogged, hauling in coal from the ports and mines to inland destinations where the power plants are, and then hauling the fly ash out. That situation becomes worse as more such plants are built.

While it should be obvious to policymakers that this policy could lead to a long-term disaster, nonetheless these countries have not committed themselves to create the conditions whereby their future electricity generation will come entirely from a clean source, such as nuclear fission, which uses very little fuel and remains the most reliable and efficient source of power.

The World Power Scene, Briefly

Over the years, the two most populous nations in the world, China and India, have developed indigenous capabilities to manufacture a complete nuclear power plant, with the intent to provide hundreds of millions of their citizens with the electricity that is a vital requirement for living. But while China is making efforts to rapidly enhance its electrical power generation capacity, it is doing so by mining and importing more and more coal, while nuclear power remains a supplementary power source. It is evident that China has not geared up to change that situation in the foreseeable future. According to some analysts, China is expected to add coal-fired capacity of 36 GW in 2014, 42 GW in 2015, 45 GW in 2016, and 47 GW per year starting in 2017. In other words, between 2014 and 2020, China is expected to add about 310 GW of coal-generated electrical power.

By contrast, according to World Nuclear Association reports, while China presently produces about 20 GW, or 2% of its total electricity generation capacity, from nuclear fission, additional nuclear reactors that have been planned, including some of the world’s most advanced ones, will help the country to produce a total of 58 GW of electrical power by 2020 using fission.

That means that during the next six years, during which China wants to add 310 GW of electrical capacity from coal-fired plants, nuclear reactors will produce only 38 GW—less than 13% of new coal-based power generation capacity planned. That would bring up nuclear power-generated electricity capacity in China’s power-generation mix to 6%. More long-term plans for future capacity show that nuclear-based power generation is expected to rise to 200 GW by 2030 and 400 GW by 2050. The conclusion is that while China has realized the importance of nuclear fission, it has not yet made the necessary commitment to base its entire power generation on nuclear, even in the long term.

India’s power situation is much worse than China’s, although it has well-developed nuclear power generation capabilities, and has been building its own small nuclear reactors for a long time. But the commitment to
nuclear power as its only source of future power generation has remained wholly theoretical. At present, India has installed capacity to generate about 235 GW of electricity, and of that, only 7 GW comes from nuclear, or about 3% of the total. Since India has 400 million people without full access to electricity, it is evident that it needs another 250 GW of power in the short term to provide electricity, education, and productive work to fully exploit the inherent productive potential of its own people. Its short-term nuclear program suggests that it will have about 15 GW of electrical power generated from nuclear reactors by 2020, a negligible amount compared to what the gravity of the situation calls for. By 2030, India’s program calls for about GW from nuclear power, which would be much less than 10% of the total power generated.

What Commitment to Nuclear Means

To begin with, the installed electricity-generating capacity of today’s world is about 5,200 GW. Five countries (China, the United States, Japan, Russia, and India) account for about 2,900 GW. The rest of the world, which constitutes 55% of the world’s population of 7 billion-plus, has a generating capacity of 2,300 GW; much of this is in the European Union, which has a population of 500 million. In other words, much of the world lives in virtual darkness.

However, electricity produced per hour across the world is nowhere near the stated generating capacity. “Capacity” is the maximum electric output a generator can produce under specific conditions, whereas “generation” is the amount of electricity a generator actually produces over a specific period of time. Many generators do not operate at their full capacity all the time; they may vary their output according to conditions at the power plant, fuel costs, and/or as instructed by the grid operator.

The one major reason that the actual generation of electricity around the world is way below the generating capacity is that only 11% of world’s electricity comes from nuclear. Nuclear power plants, on an average, have an efficiency of 92-100%. Only one other power source, hydropower, reaches an efficiency of 90%. By contrast, coal-fired power plants, which constitute almost 45% of world’s generating capacity, operate at 50-55% efficiency, and natural-gas-burning power plants at about 60% efficiency. Solar and wind-based power plants operate at 20-30% efficiency.

In other words, only nuclear power plants, which can be set up almost anywhere on land, and even at sea, provide power reliably and at the stated generating capacity. By contrast, hydropower can be generated only where the water is flowing, and therefore has severe limitations.

Looking 30 years ahead, it becomes evident that the world’s electricity-generating capacity must double to 11,000 GW by 2050. Again, a large amount of this additional power will be required in China and India. It is expected that these two countries, between them, will require an additional 2,500 GW of installed capacity. A similar approach is required for Africa, South America, Central Asia, and parts of South, Southwest, and East Asia. A vast majority of this additional 6,000 GW of power, say 5,000 GW, in the next 30 years, needs to be generated from nuclear plants.

To generate 5,000 GW of nuclear power in the next 30 years means the world will have to manufacture 5,000 nuclear reactors of 1,000 MW capacity. Since it takes 4-5 years to construct one nuclear plant, during the next 25 years, the world will have to manufacture
5,000 plants with 200-1,000 MW reactors, and associated equipment, annually, ready for installation. As of now, world’s capacity to manufacture large reactors (1,000-1,100 MW) and the associated steam turbines, which together form the nuclear power plant (NPP) set, is limited to about 30 annually. India, where pressurized heavy-water reactors are used for power generation, has the capacity to manufacture a few 600-700 MW installed capacity NPP sets.

That means the world’s NPP manufacturers will have to quickly bring up their capacity from 30 to 200, to develop an economy based on the highest energy-flux density.

Another issue that has emerged with manufacturing of the new generation of reactors is metallurgy. Generation III+ plants can use existing metal alloys, but Generation IV plants, operating at higher temperatures, will require new materials. At 700°C, degradation problems are much more severe than at today’s operating temperatures. Gen IV reactors are being developed by an international task force. Four of these are fast neutron reactors, and all of these will operate at higher temperatures than today’s reactors. Fast neutron reactors have been designated particularly for hydrogen production.

What Rapid Expansion Entails

What, then, must China and India do? A critical issue for accelerating nuclear power plant construction, besides advanced materials, is the availability of heavy engineering plants to make the reactor components, especially for large reactor vessels. Although the world has seen some new investment in forges and steelmaking in recent years, the amount remains woefully inadequate, because no country, with perhaps the exception of France, has committed itself fully to nuclear power. The challenge is not confined to the heavy forgings for reactor pressure vessels, steam turbines, and generators alone, but it extends to other engineered components as well.

During the period in which the first- and second-generation nuclear power plants were built, they mostly came from integrated suppliers, such as Westinghouse, in each country, who required little help from external vendors. Today, most of a new plant comes from a range of international suppliers, while companies such as Westinghouse are focused on design, engineering, and project management.

For very large Generation III+ reactors, production of pressure vessels requires forging presses of about 14-15,000 tons capacity, which accept hot steel ingots of 500-600 tons. These are not common, and individual large presses do not have high throughput—about four pressure vessels per year appears to be common at present, fitted in with other work, though the potential exists to enhance these numbers significantly.

The very heavy forging capacity in operation today is in Japan (Japan Steel Works), China (China First Heavy Industries and China Erzhong), and Russia (OMZ Izhora). New capacity is being built by JSW and JCFC in Japan, Shanghai Electric Group (SEC) and subsidiaries in China, Doosan in South Korea, Le Creusot in France, Pilsen in the Czech Republic, and OMZ Izhora and ZiO-Podolsk in Russia. New capacity is at a planning stage in the U.K. (Sheffield Forgemasters) and India (Larsen & Toubro, Bharat Heavy Electricals, Bharat Forge Ltd). In China, the Harbin Boiler Co. and SEC subsidiary SENPE are increasing their capacity as well.

Nothing in North America currently approaches these enterprises. The changed position of the United States is remarkable. In the 1970s, both US Steel and Bethlehem Steel had 8,000 ton presses and could handle 300 ton ingots. U.S. forging capacity has not been significantly upgraded since. In the 1940s, it manufactured over 2,700 Liberty ships, each 10,800 tons DWT. In the 1970s, it had substantial heavy infrastructure. But today, China, Japan, South Korea, India, Europe, and Russia are all well ahead of it. Steelmaker ArcelorMittal, based in Luxembourg, now owns the American company which built the most U.S. reactor pressure vessels in the 1970s-80s.

It must be noted that the need for nuclear power reactors in China, India, and Russia is bound to grow at a faster pace than in the rest of the world. These three countries, when they increase their NPP sets manufacturing capacity to the desired level, they will find it difficult to export a large number of reactors to other countries that will be in need of nuclear reactors.

That means that many other nations in Asia, Africa, and South America have to prepare for rapid development of a nuclear future now. This entails training of manpower using a large number of research reactors, development of heavy engineering capability to forge NPP sets, and other basic infrastructure that would enable them to enhance their power generation. The focus on developing human resources is two-fold: 1) generic capacity-building at the national level in nuclear sciences and technology, to support the government and other
stakeholders in making informed decisions on nuclear power; and 2) developing personnel in stakeholder organizations to implement the nuclear power program.

Moreover, the commitment to nuclear power also entails developing manpower in all nations, including those that have nuclear power plants, or even just nuclear research reactors. There is already a significant gap between the number of nuclear engineers that are being produced and those that are retiring, which needs to be addressed just to keep the world’s existing nuclear reactors running. Therefore, in order to speed up nuclear generation, countries, one and all, require large-scale training programs to fulfill this need. Developing the right skills base is a priority for the industry to grow to the level that it demands.

Why Nuclear?

The world does not have any choice but to go with nuclear fission now and prepare to introduce nuclear fusion at the earliest possible date. Since nuclear power has the highest energy-flux density of all power-generating sources, it generates a vast amount of power using very little fuel. In addition, although the world will run out of other power-generating natural resources, it will never run out of nuclear fuel, because nuclear fuel is renewable: Fast Breeder Reactors (FBRs) produce more fuel than they consume, making nuclear fuel inexhaustible.

Under appropriate operating conditions, neutrons given off by fission reactions can “breed” more fuel from otherwise non-fissile isotopes. The most common breeding reaction is that of plutonium-239 (Pu-239) from non-fissionable uranium-238 (U-238). This becomes possible because the non-fissionable U-238 is 140 times more abundant than the fissile uranium-235 (U-235) and can be efficiently converted into Pu-239 by the neutrons from a fission chain reaction. Pu-239 is a fissile material that can be used to generate power.

For instance, the Liquid-Metal Fast Breeder Reactor (LMFBR) is a Pu-239 reactor, commonly identified as a fast breeder reactor. In this system, cooling and heat transfer is done by a liquid metal. The metals that can accomplish this are sodium and lithium, with sodium being the most abundant and most commonly used. Construction of this type of fast breeder requires higher enrichment of U-235 than a light-water reactor, typically 15 to 30%. The reactor fuel is surrounded by a “blanket” of non-fissile U-238. No moderator is used in the breeder reactor, since fast neutrons are more efficient in transmuting U-238 to Pu-239.

France’s Super-Phénix (SPX) was the first large-scale breeder reactor that was built; it was put into service in 1984, and ceased operation as a commercial power plant in 1997. It was the last fast breeder reactor operating in Europe for electricity production—as the result of Green protests.
sodium. The energy from the nuclear fission heated the sodium to about 500°C, and it transferred that energy to a second sodium loop, which in turn heated water to produce steam for electricity production. Such a reactor could produce about 20% more fuel than it consumed. Enough excess fuel could be produced over about 20 years to fuel another such reactor. Optimum breeding allowed about 75% of the energy of the natural uranium to be used, compared to only 1% in the standard light-water reactors.

India is now developing a fast breeder reactor which will produce fissile uranium-233, which will then be loaded to generate power through fission. Fuelled with uranium-plutonium oxide, these reactors will have a thorium blanket to breed fissile U-233. The plutonium content will be 21% and 27% in two different regions of the core. Initial Indian FBRs will have mixed oxide fuel, but these will be followed by metallic-fuelled ones, to enable a shorter doubling time.

By contrast with nuclear fuel, the most frequently used fossil fuels are not renewable. A 1,000 MW coal-fired power plant needs about 6,600 tons of coal daily—the amount varies slightly according to the quality of coal used. On the other hand, a nuclear power plant requires very little fuel—a tiny fraction of what a coal-burning power plant requires. Used nuclear fuel still contains an immense amount of energy—over 95% of the potential energy contained in that small amount of material is not even used. Advanced reactors will one day routinely recycle this waste.

In the case of thorium-fueled nuclear power plants, the fuel requirement will be even less. Why? Because, unlike the pressurized and boiling water reactors that burn about 1% of their fuel before going non-critical and require refueling once every 18-24 months, thorium-fueled power plants can burn more than 90% of the loaded fuel and would thus require refueling once every 30 years or so. This means that the overall waste in a reactor’s lifespan would be a fraction of what we have to deal with in the present generation of uranium-fueled reactors.

Other Benefits

But beyond its low fuel consumption, nuclear power provides mankind with a number of other benefits. Nuclear byproducts are used in some calibration devices, radioactive drugs, bone-mineral analyzers, imaging devices, surgical devices, teletherapy units, and diagnostic devices used in dentistry and podiatry. Some cardiac pacemakers are powered by nuclear batteries. Source material is also used for counterweights in medical devices and for radiation shielding.

Nuclear medicine, developed in the 1950s by physicians using iodine-131 to diagnose and treat thyroid disease, now uses radiation to provide diagnostic information about the functioning of many of a person’s organs, or to treat them. In most cases, the information is used by physicians to make a quick, accurate diagnosis of the patient’s illness. The thyroid, bones, heart, liver, and many other organs can be easily imaged. In
some cases, radiation can be used to treat diseased organs or destroy tumors. Over 10,000 hospitals worldwide use radioisotopes in medicine, and about 90% of the procedures are for diagnosis. The most common radioisotope used in diagnosis is technetium-99, with some 40 million procedures per year (16.7 million in the United States in 2012), accounting for 80% of all nuclear medicine procedures worldwide.

Diagnostic techniques in nuclear medicine use radioactive tracers, which emit gamma rays from within the body. These tracers are generally short-lived isotopes linked to chemical compounds that permit specific physiological processes to be scrutinized. They can be given by injection, inhalation, or orally. The first types are where single photons are detected by a gamma camera, which can view organs from many different angles. The camera builds up an image from the points from which radiation is emitted; this image is enhanced by a computer and viewed by a physician on a monitor, for indications of abnormal conditions.

Radiotherapy can also be used to treat some medical conditions, notably cancer, using radiation to weaken or destroy targeted cells. Rapidly dividing cells are particularly sensitive to damage by radiation. For this reason, some cancerous growths can be controlled or eliminated by irradiating the area.

Many radioisotopes are made in nuclear reactors, some in cyclotrons. Generally neutron-rich ones and those resulting from nuclear fission need to be made in reactors; neutron-depleted ones are made in cyclotrons. There are about 40 activation product radioisotopes and five fission product ones made in reactors. Tens of millions of nuclear medicine procedures are performed each year, and demand for radioisotopes is increasing rapidly. Sterilization of medical equipment is also an important use of radioisotopes.

**Food Preservation and Industrial Use**

Food irradiation is a technology that improves the safety and extends the shelf-life of foods by reducing or eliminating microorganisms and insects. Like pasteurizing milk and canning fruits and vegetables, irradiation can make food safer for the consumer. The process is important in all countries, particularly in the Tropics, where food perishes within a very short period of time, endangering health and raising health-care costs.

Food irradiation can serve many purposes. It can be used to effectively eliminate organisms that cause foodborne illness, such as salmonella and *Escherichia coli* (*E. coli*). It can be used to destroy or inactivate organisms that cause spoilage and decomposition, and to extend the shelf-life of foods. It can destroy insects in or on fruits and decreases the need for other pest-control practices, which might harm the fruit.

One of the methods widely used to irradiate food and enhance its shelf-life is the use of gamma rays. Gamma rays, which contain cobalt-60 and caesium-137, have been used routinely for more than 30 years to sterilize medical, dental, and household products. They are also used for radiation treatment of cancer. High-energy gamma rays can penetrate foods to a depth of several feet. They do not make anything around them ra-
dioactive. Both cobalt-60 and caesium-137 are produced in nuclear reactors.

Modern industry uses radioisotopes in very many ways to improve productivity and, in some cases, to gain information that cannot be obtained any other way. The continuous analysis and rapid response of nuclear techniques, many involving radioisotopes, mean that reliable flow and analytic data can be constantly available. This results in reduced costs, with enhanced product quality.

Neutrons from a research reactor can interact with atoms in a sample causing the emission of gamma rays which, when analyzed for characteristic energies and intensity, will identify the types and quantities of elements present. The two main techniques are Thermal Neutron Capture and Neutron Inelastic Scattering. TNC occurs immediately after a low-energy neutron is absorbed by a nucleus, NIS takes place instantly, when a fast neutron collides with a nucleus. A particular application of this is where a probe containing a neutron source can be lowered into a bore hole where the radiation is scattered by collisions with surrounding soil. Since hydrogen (the major component of water) is by far the best scattering atom, the number of neutrons returning to a detector in the probe is a function of the density of the water in the soil.

Since the amount of ash in coal is an additional headache, gamma ray transmission, or scattering, can be used to determine the ash content of coal on a conveyor belt. The gamma ray interactions are dependent on atomic number, and the ash is higher in atomic number than the coal’s combustible matter. Also the energy spectrum of gamma rays which have been inelastically scattered from the coal can be measured to indicate the ash content.

Radioisotopes are used as tracers in many research areas. Most physical, chemical, and biological systems treat radioactive and non-radioactive forms of an element in such a way that the system can be investigated with the assurance that the method used does not itself affect the system. An extensive range of organic chemicals can be produced with a particular atom or atoms in their structure replaced with an appropriate radioactive equivalent.

Desalination

Another major contribution to mankind from the waste heat generated by nuclear fission is the desalination of sea and brackish water. Freshwater makes up a very small fraction of all water on the planet. While nearly 70% of the world is covered by water, only 2.5% of it is fresh; the rest is ocean-based. Even then, just 1% of our freshwater is easily accessible, with much of it trapped in glaciers and snowfields.

The lack of clean drinking water is a major problem worldwide. The World Health Organization says that more than 1 billion people live in areas where renewable water resources are not available. The problem is especially serious in Africa, followed by Asia and the Pacific, according to a UN report. The lack of clean drinking water around the world forces millions of people to drink unsafe water. This leads to an increase in diseases like diarrhea, the second leading cause of death in children under five. Unsafe drinking water takes the lives of hundreds of thousands of children every year.

Yet we have the technology to desalinate sea and brackish water and provide each and every individual with potable water. But no real effort has been made to make water available to all.

Nuclear fission-created waste heat has been used...
sparingly for desalination. Nuclear reactors that help desalinate water will also produce electricity. An example of a nuclear reactor producing both electricity and desalinated water is the BN-350 fast reactor at Aktau in Kazakhstan, which supplied up to 135 MW of electric power while producing 80,000 m³/day of potable water for some 27 years, about 60% of its power being used for heat and desalination. Japan, Russia, and Canada all have experience with nuclear reactors employed in the desalination of water, and the International Atomic Energy Agency (IAEA) strongly promotes this use of nuclear energy.

Early in the 1960s, foreseeing a time when freshwater needs would outstrip supplies, the U.S. Department of the Interior’s Office of Saline Water (OSW) authorized funding for five research facilities to develop desalination technologies for the country. The Wrightsville Beach facility on Harbor Island, N.C., set up in the early 1960s, was dubbed the “world center for experimental development in saline water conversion,” by OSW director C.F. McGowan. It was non-nuclear. The plan did not move forward.

In essence, nuclear desalination uses the excess heat from a nuclear power plant to evaporate seawater and condense the steam into pure water. It can also make brackish inland water potable. The feasibility of integrated nuclear desalination plants has been proven with over 150 reactor-years of experience, chiefly in Kazakhstan, India, and Japan. Large-scale deployment of nuclear desalination on a commercial basis will depend primarily on economic factors. One obvious strategy is to use small reactors in clusters, running at full capacity, but with all the electricity applied to meeting grid load when that is high, and part of it used to drive pumps for reverse osmosis (RO) desalination when the grid demand is low.

In Japan, some ten desalination facilities linked to pressurized water reactors operating for electricity production yield some 14,000 m³/day of potable water, and over 100 reactor-years of experience have accrued. The water is used for the reactors’ own cooling systems.

India has been engaged in desalination research since the 1970s. In 2002, a demonstration plant coupled to twin 170 MW nuclear power reactors (PHWR) was set up at the Madras Atomic Power Station, Kalpakkam, in southeast India. This hybrid Nuclear Desalination Demonstration Project (NDDP) comprises a reverse osmosis unit with 1,800 m³/day capacity and a multi-stage flash (MSF) plant unit of 4,500 m³/day, plus a recently added barge-mounted RO unit. This is the largest nuclear desalination plant based on hybrid MSF-RO technology, using low-pressure steam and seawater from a nuclear power station. The plant incurs a 4 MW loss in power.

A low temperature (LTE) nuclear desalination plant using waste heat from the nuclear research reactor at Trombay, near Mumbai in India, has operated since about 2004, to supply water for the reactor.

Pakistan in 2010 commissioned a 4,800 m³/day multiple-effect distillation MED desalination plant, coupled to the Karachi Nuclear Power Plant (KANUPP, a 125 MWe PHWR) near Karachi. It has been operating a 454 m³/day RO plant for its own use.

China General Nuclear Power (CGN) has commissioned a 10,080 m³/day seawater desalination plant using waste heat to provide cooling water at its new Hongyanhe project at Dalian, in the northeast Liaoning province. Much relevant experience comes from nu-
clear plants in Russia, Eastern Europe, and Canada, where district heating for commercial and residential use is a by-product.

The best way to develop large-scale nuclear desalination along the world’s coastal areas will be manufacturing large numbers of small modular nuclear reactors of 100-200 MW capacity. These reactors, when put in a cluster, would provide adequate and reliable power to the burgeoning industry and commerce, while supplying the heat to desalinate abundant amounts of seawater.

South Korea has developed a small nuclear reactor design for cogeneration of electricity and potable water. The 330 MWt (thermal) SMART reactor has a long design life and needs refueling only every three years. The main concept has the SMART reactor coupled to four MED units, each with a thermal-vapor compressor (MED-TVC) and producing a total of 40,000 m$^3$/day, with 90 MWe.

Argentina has designed the CAREM, an integral 100 MWt PWR suitable for cogeneration or desalination alone, and a prototype is being built next to Atucha nuclear power plant. A larger version is envisaged, which may be built in Saudi Arabia.

China’s INET has developed the NHR-200, based on a 5 MW pilot plant.

Russia has developed a floating nuclear power plant (FNPP), with two KLT-40S reactors derived from Russian icebreakers, or other designs for desalination. The ATETs-80 is a twin-reactor cogeneration unit using KLT-40 and may be floating or land-based, producing 85 MWe plus 120,000 m$^3$/day of potable water. The small ABV-6 reactor is 38 MW thermal, and a pair mounted on a 97-meter barge is known as the Volnolom FNPP, producing 12 MWe plus 40,000 m$^3$/day of potable water by reverse osmosis. A larger concept has two VBER-300 reactors in the central pontoon of a 170-meter barge, with ancillary equipment on two side pontoons, the whole vessel being 49,000 DWT. The plant is designed to be overhauled every 20 years and have a service life of 60 years. Another design, PAES-150, has a single VBER-300 unit on a 25,000 DWT catamaran barge.

**Thorium Reactors**

The next wave of nuclear reactors that must emerge in large numbers are those fueled by thorium. Thorium has multiple advantages as a nuclear fuel. Thorium ore, or monazite, exists in vast amounts in the dark beach sands of India, Australia, and Brazil. It is also found in large amounts in Norway, the United States, Canada, and South Africa. Thorium-based fuel cycles have been studied for about 30 years, but on a much smaller scale than uranium or uranium/plutonium cycles. Germany, India, Japan, Russia, the United Kingdom, and the United States have conducted research and development, including irradiating thorium fuel in test reactors to high burn-ups. Several reactors have used thorium-based fuel.

India is by far the nation most committed to study and use of thorium fuel; no other country has done as much neutron physics work on thorium. The positive results obtained have motivated Indian nuclear engineers to use thorium-based fuels in their current plans for the more advanced reactors that are now under construction. It is therefore incumbent upon Indian policymakers to make thorium-fueled nuclear reactors their main workhorse and develop the engineering infrastructure to manufacture them in large numbers within a very short period of time.

In addition to thorium’s abundance, all of the mined thorium is potentially usable in a reactor, compared with only 0.7% of natural uranium. In other words, thorium has some 40 times the amount of energy per unit mass that could be made available, compared with uranium.

From the technological angle, one reason that thorium is preferred over enriched uranium is that the breeding of U-233 from thorium is more efficient than the breeding of plutonium from U-238. This is because the thorium fuel creates fewer non-fissile isotopes. Fuel-cycle designers can take advantage of this efficiency to decrease the amount of spent fuel per unit of energy generated, which reduces the amount of waste to be disposed of. In addition, the fissionable thorium-232 (Th-232) decays very slowly (its half-life is about three times the age of the Earth).

There are some other benefits as well. For example, thorium oxide, the form of thorium used for nuclear power as fuel, is a highly stable compound—more so than the uranium dioxide that is usually used in today’s conventional nuclear fuel. Also, the thermal conductivity of thorium oxide is 10-15% higher than that of uranium dioxide, making it easier for heat to flow out of the fuel rods used inside a reactor. Furthermore, the melting point of thorium oxide is about 500°C higher...
than that of uranium dioxide, which gives the reactor an additional safety margin, if there is a temporary loss of coolant.

The one challenge in using thorium as a fuel is that it requires neutrons to start its fission process. Thorium is not a fissile fuel like U-235; Th-232 absorbs slow neutrons to produce U-233, which is fissile. In other words, Th-232 is fertile, like U-238. Th-232 absorbs a neutron to become Th-233, which decays to protactinium-233 (Pa-233) and then to fissionable U-233. When the irradiated fuel is unloaded from the reactor, the U-233 can be separated from the thorium, and then used as fuel in another nuclear reactor. Uranium-233 is superior to the conventional nuclear fuels, U-235 and Pu-239, because it has a higher neutron yield per neutron absorbed. This means that once it is activated by neutrons from fissile U-235 or Pu-239, thorium’s breeding cycle is more efficient than that using U-238 and plutonium.

Here is a summary of the advantages of using thorium as nuclear fuel:

1. Thorium fuel generates no weaponizable material in its waste profile; the waste consists of the radioisotope U-233, which is virtually impossible to weaponize;
2. Unlike uranium, thorium does not possess any fissile isotopes in its naturally occurring form; consequently, there is no material that can be enriched to weaponizable levels;
3. Thorium fuel can be used to safely incinerate the world’s unwanted stockpile of plutonium waste and generate electrical power and heat to desalinate water;
4. Thorium fuel cycle waste has a radio-toxicity period of less than 200 years, which compares favorably with the more than 1 million-year radio-toxicity period estimated to exist for uranium fuel-cycle waste;
5. Thorium fuel has superior fuel economy in various respects; it will generate more energy per unit of mass than uranium fuel by a factor of approximately 30, which means thorium fuel-based power plants do not require re-loading for dozens of years;
6. Thorium fuel-cycle waste can be reprocessed and used as fissile material in a closed fuel cycle, meaning that eventually no new fissile material will be required to power the reactors; however the reprocessing technology (to separate U-233) does not yet exist.

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Now that nearly half of humanity has said “no!” to the British imperial looting system, the populations of the U.S. and Western Europe have to make a choice: Will they join the resistance to tyranny, and form a new monetary system based on principles of justice and progress? The choice now stands before them.

There are crucial lessons to be learned from what the nations of Argentina, China, Russia, India, and others have done in the last weeks. Argentina is the clearest example, as it had been chosen by the vulture funds of Wall Street as the bloody example. Scavenging hedge funds, who had picked up Argentine debt at the equivalent of pennies on the dollar, are demanding full face value on their “investments,” with the clear intent to crush this sovereign nation and grab its physical assets. The U.S. courts, and the U.S. government, have backed them up, playing a chicken game with the whole world monetary system. “You must pay your debts!” they scream.

But those debts are fraudulent, replies Argentina. They are pieces of paper obtained by chicanery, and representing no real investment at any point. Your paper is worthless, paying it will kill our people—and we won’t pay!

Proud Argentina has exhibited such resistance before, but there is a major difference today. This time, the planet’s most populous nations—China, India, and Russia—have come to their own sovereign decision that Argentina’s fight is theirs as well. The governments of these nations have rallied around Argentina, and echoed her principled stand: The vultures will not be paid!

The reasons for such a unified resistance should be clear enough. The trans-Atlantic financial system has reached a breaking point, where its bankruptcy has become as obvious as the lack of the “Emperor’s new clothes.” The attempts by that system, nominally dominated by a dollar which has been totally taken over by Wall Street and London, to sustain itself are increasingly murderous. To capitulate to the demands of these global speculators and thieves is the equivalent of suicide—and the Eurasian world, now joined by South America, is not going to commit suicide.

The leading historical model for what these nations are doing is nothing less than the American Revolution itself. It was then that Americans told the Empire that they would not submit to their demands for loot. That is the spirit that must be revived in Americans today.

Just as in Argentina, and the BRICS countries, Americans must say “No!” to the vultures of Wall Street now. Why are the Western states of the United States dying for lack of water? The vultures killed NAWAPA. Why are the citizens of Detroit being cut off from all basic human services, even water? The vultures who hold those pieces of paper called derivatives have demanded their blood-money. Why is a whole generation of youth facing the horror of a culture of drugs, violence, and degradation? The vultures of Wall Street rely on those drugs and pornography to feed their coffers—and the “market” is soaring!

The time for no compromise has come. The vultures of Wall Street and London cannot be paid without mass murder. They’ve earned nothing—they should be bankrupted now! Their accumulation of paper claims should be taken out and burned. All it takes is passing Glass-Steagall, to cut off the parasites, and let them die.

As Americans, we value human life, not paper. Join the resistance to the vultures’ tyranny. Pass Glass-Steagall now!
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