

Chapter 5

Economic Freedom, Energy, and Development

Nicolas D. Loris

Access to dependable energy is an essential requirement for development, underpinning our ability to produce goods and services more efficiently, communicate more easily, and trade with other parts of the world. Moreover, energy markets are becoming increasingly more international, and the energy sector evolves dynamically as technological, economic, and political environments change.

It is common these days to talk about an energy revolution, by which many politicians and commentators mean a government-planned and government-subsidized switch from conventional fuels to renewable forms of energy. But all forms of renewable energy continue to account for a very small percentage of world energy production. The real revolution, unforeseen and unplanned by any government but nonetheless bringing energy and opportunity to billions around the world, is a market-driven technological revolution in exploration and exploitation that has seen investment in energy supply more than double since 2000.¹ Whether it is through

conventional energy supplies or renewables, the world's energy needs will be met best through free markets.

Governments of all stripes regulate the energy sector with measures ranging from outright state ownership or the direct government management of prices or supply to the more general maintenance of a system of laws and property rights. The energy sector is uniquely prone to government intervention because of energy's unique connection to an economy.

While the exact relationship between energy consumption and gross domestic product (GDP) can vary, it is clear that energy is a key ingredient in a nation's economic growth.² Consequently, many governments have sought to control energy supply, manipulate demand, and limit competition through feed-in tariffs, preferential tax treatment, renewable energy quotas, regulatory structures, trade barriers, targeted stimulus investments, and other such market manipulations that artificially increase access to and perhaps lower the price of politically pre-

ferred energy or, conversely, decrease access and increase price of other energy sources.

Both experience and data show that policies designed to engineer energy markets through state interference hamper economic growth rather than stimulate it. Conversely, both experience and data show that whether a country is rich in natural resources or deprived of them, policies that sustain the four pillars of economic freedom—rule of law, limited government, regulatory efficiency, and open markets—are more successful not only in stimulating economic growth and innovation, but also in using energy more efficiently.

ECONOMIC FREEDOM AND ACCESS TO ENERGY

There are 1.3 billion people around the world without access to reliable electricity. More than 2.5 billion people use biomass for cooking, meaning that they cook their food and heat their homes with animal waste, leaves, wood, and charcoal.³ Without access to reliable, affordable energy—something the developed world has enjoyed for a century or more—these people have little chance to improve their lives.

Economic and technological realities make conventional coal, nuclear, oil, hydroelectric, and natural gas the most affordable and reliable energy-dense sources of power. For example, Tanzania is hoping to switch increasingly from environmentally destructive charcoal to natural gas, and it recently built infrastructure to deliver offshore natural gas to the homes of Dar es Salaam.⁴ While renewable sources like solar and wind may one day play a larger role, they cannot be relied on for the far-reaching or baseload power that fuels economies and reaches the average citizen.

Regrettably, too many special interests are pursuing political and environmental agendas that interfere with the effort to meet basic energy needs in developing countries. When Greenpeace India installed a solar micro-grid in Dharnai, an Indian village surviving without electricity since 1981, the villagers had one message for them: “Hamen nakli nahin, asli bijli chahiye (We do not want artificial energy, give us the

real one).” Young villagers carried signs demanding the “real source of energy” and “not the fake solar powered” one.⁵

In fact, the environmental concerns that drive such projects, while admirable in theory, are sadly misdirected when they hold back development. Arguably, advances in traditional energy production and use are the single most important factor in achieving the societal wealth that enables advances in health, pollution control, and higher standards of living.

Improved Efficiency and Environment. As economies develop and become richer, they also tend to be more capable of adopting greater energy efficiency through innovation. Both small and large innovations that improve energy efficiency add up to big savings for businesses as well as families, and the accumulation of these innovations and efficiency improvements can dramatically enhance a country’s energy use per dollar of GDP.

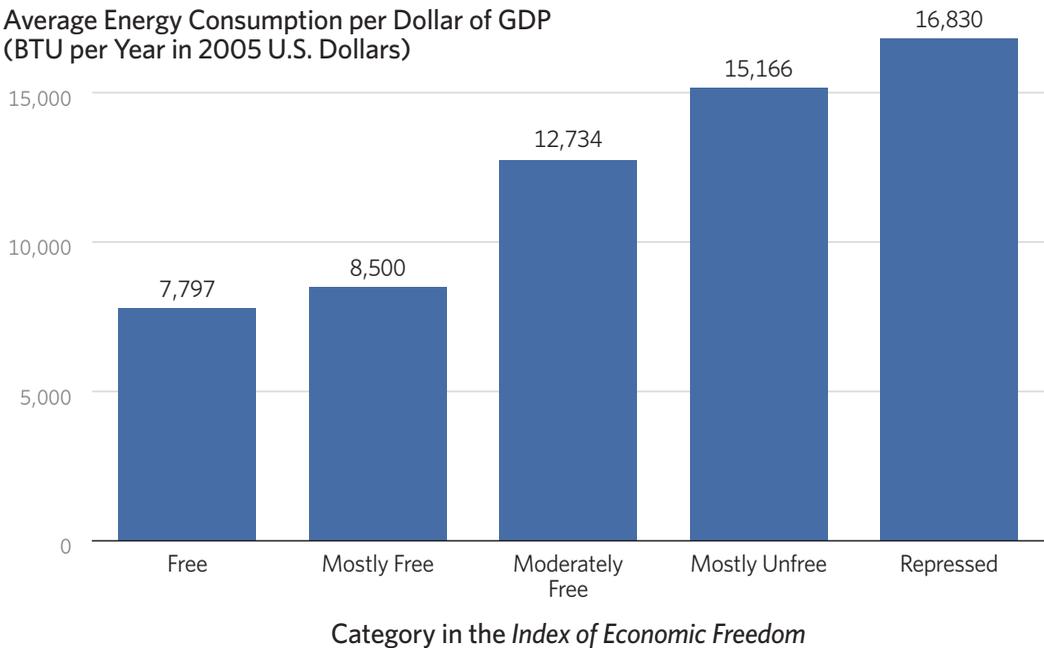
As shown in Chart 1, economically freer countries tend to consume energy more efficiently. Granted, there are unfree countries that have both extremely low electrification and high rates of energy efficiency, but on average, free and mostly free countries use energy more efficiently than do mostly unfree and repressed economies.

Economically freer countries also enjoy cleaner environments and greater environmental sustainability. Freer economies have access to more products and technologies that make our lives healthier and the environment cleaner. For instance, the availability of simple products like soaps, cleaners, and detergents makes our homes dramatically cleaner and healthier. The development of sanitation systems and availability of garbage collection greatly reduce many types of diseases and reduce toxins in the air and water. As a country grows economically, it increases the financial ability of its citizens and businesses to care for the environment and reduce pollutants emitted from industrial growth.

One measure of different countries’ environmental status is the Yale Center for Environmental Law and Policy’s Environmental Performance Index (EPI), a joint project of the Yale Center for Environmental Law and Policy (YCELP) at

Freer Nations Use Energy More Efficiently

Average Energy Consumption per Dollar of GDP
(BTU per Year in 2005 U.S. Dollars)



Sources: Terry Miller and Anthony B. Kim, *2015 Index of Economic Freedom* (Washington, DC: The Heritage Foundation and Dow Jones & Company, Inc., 2015), <http://www.heritage.org/index>, and U.S. Department of Energy, Energy Information Administration, International Energy Statistics, <http://www.eia.gov/cfapps/ipdbproject/iedindex3.cfm?tid=92&pid=46&aid=2&cid=regions&syid=2011&eyid=2011&unit=BTUPUSDM> (accessed October 6, 2014).

Chart 1  heritage.org

Yale University and the Center for International Earth Science Information Network (CIESIN) at Columbia University. The EPI ranks countries based on a number of environmental indicators including agriculture, health impacts, air quality, biodiversity, climate, water and sanitation, and other measures.⁶ It provides comprehensive analysis and important measurements of 178 countries' environmental performance.⁷

As it turns out, there is a highly positive correlation between a country's environmental performance as measured by the EPI and its economic freedom. (See Chart 2). The EPI is not without its faults; for example, the index places unwarranted and subjective weight on carbon emissions and climate change relative to more basic environmental measures. But even with the index's bias toward government command-and-control environmental regulation, it is striking that countries with greater economic

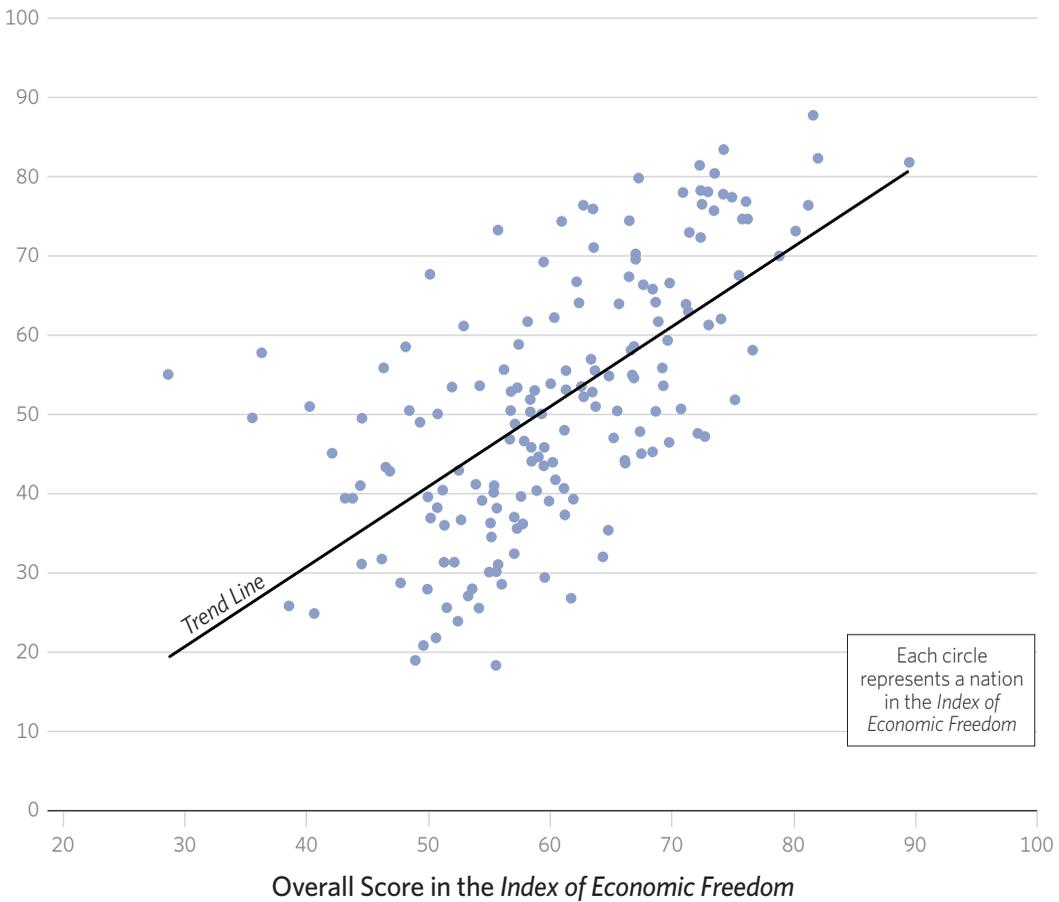
freedom achieve the best results in protecting the environment.

The principles driving economic freedom and their importance to environmental improvements are unmistakable. Private property rights incentivize owners to take care of their belongings rather than abuse the land and water. As the economist's adage notes, "Nobody washes a rental car."

A sound rule of law ensures that polluters cannot violate the rights of others without accounting for externalities or providing just compensation for any damage inflicted. Free trade promotes competition and creates opportunities for businesses to adopt newer and more innovative technologies. When countries increase their economic prosperity by advancing economic freedom, their capacity to increase overall well-being and protect the environment also increases.

As Economic Freedom Rises, So Does Environmental Performance

Environmental Performance Index Score



Sources: Terry Miller and Anthony B. Kim, *2015 Index of Economic Freedom* (Washington, DC: The Heritage Foundation and Dow Jones & Company, Inc., 2015), <http://www.heritage.org/index>, and Yale University, Environmental Performance Index, <http://www.epi.yale.edu/downloads> (accessed October 6, 2014).

Chart 2  heritage.org

BENEFICIAL ENERGY POLICIES EMANATING FROM ECONOMIC LIBERTY

Many of the benefits the United States and other countries are experiencing from energy production stem from factors that promote economic freedom. Policies that open access to markets and secure private property rights broadly expand energy development opportunities and economic gains. Even some countries with centralized autocratic governments and weak legal foundations are implementing the necessary

free-market reforms to encourage investment and energy development.

Private Ownership with Clearly Defined and Enforced Property Rights. The United States is now the world's largest producer of oil and natural gas and, as a result, is reaping the tremendous economic benefits that such large-scale production generates. This success emerged organically from innovation in the private marketplace to unlock energy resources formerly thought inaccessible rather than from any specific government policy to promote these technologies and processes.

Oil and gas production is booming in some regions of the U.S., while the rate of production in others has slowed or even decreased. The divergent trajectories in production primarily boil down to one word: ownership. Much of the growth is occurring on private and state-owned lands, while oil and gas output on federally owned or controlled lands has been in decline.⁸ In fact, because of U.S. government ownership and control, the U.S. is the only nation to prohibit energy exploration in a majority of its territorial waters.

The government of Canada, one of the world's economically freest countries and most successful energy producers, also upholds the strong enforcement of property rights when it comes to mineral and resources extraction.⁹ Chile, one of the world's 10 freest economies according to the *Index of Economic Freedom*, is well known for its free-market reforms for water use, which include secure private property rights and private investments in hydroelectric power.¹⁰

Although land use laws are exceedingly complex in different regions of the world, the fact remains that delineated and enforceable property rights along with decentralized land management will be essential for rural energy and economic development in places like Latin America, sub-Saharan Africa, and South Asia. Progress has been made in decentralizing land management and changing land use laws in countries like Burkina Faso, Kenya, Malawi, Mozambique, Rwanda, and Zambia.¹¹

Decentralizing and privatizing land use rights is a step in the right direction, but true reform will occur when the legal structure and rule of law protect those changes. Botswana and Cabo Verde, for example, have made enforceable reforms under which landowners' rights are truly protected.¹²

By contrast, in many countries around the world, not only are land and mineral resources state-owned, but entire supply chains of energy production are partially or fully state-owned or controlled. Fully or partially state-owned oil companies in Saudi Arabia, Brazil, Iran, China, Venezuela, Norway, Russia, and many other countries control much of the production and

distribution of oil and gas. The problems inherent in government ownership extend far beyond the mere holding of title to the land.

Government-controlled energy enterprises still respond to the profit motive in order to bring money into the government's coffers and often can attain high rates of production. However, because they do not have to make appropriate decisions in a true market environment, state-owned oil and gas companies suffer from economic inefficiencies, reduced foreign investment, higher rates of pollution, wasteful spending, less technological innovation, and aging infrastructure. Further, by relying on oil companies' profits to fund other sectors of the economy, governments divert resources that otherwise would be available to invest in new energy technologies or potential new areas of energy exploration and development.¹³

Venezuela, for example, over the past several decades has poured billions of dollars in oil profits into social and military programs, leaving the country with out-of-date, inefficient infrastructure and gaps in energy investment.¹⁴ As a result of former President Hugo Chávez's attempt to nationalize Venezuela's entire oil industry, oil production fell 30 percent, state-owned company PDVSA was underfunded to invest in infrastructure, and foreign investment practically vanished.¹⁵

Similarly, state-owned Petrobras in Brazil is facing massive delays and cost overruns because of failure to keep up with increasing domestic energy demand.¹⁶ Exacerbating the problem, the Brazilian government sets the price for gasoline, artificially stimulating demand, hampering competitiveness, and reducing investment, which cannot respond to the proper price signals.¹⁷

Declines in Iran's oil recovery rate and serious losses in efficiency and investment stem from an increasingly meddlesome government that exercises nearly complete control of that sector of the economy.¹⁸ Nigeria is another resource-rich nation that is plagued by restrictions on private investment as well as stringent regulations and fiscal stipulations for the oil industry.¹⁹

This is not to say that private-sector investments do not experience cost overruns or delays.

Many times, however, those obstacles can be traced to burdensome government regulations. The marked decline in the U.S. nuclear industry, even in the midst of significant international growth, is a clear case in point. Private businesses have the knowledge and expertise to respond to market signals and succeed or fail by taking risks with their own resources. Government intervention, no matter the form, interferes with that process.

Open Markets. Opening markets to domestic private investment and foreign investment is crucial to developing energy resources and increasing economic growth. The countries where private actors own the mineral rights and reap the rewards from risk-taking typically have more efficient, economically competitive outcomes than do countries where the proceeds from energy production funnel back to the government or to corrupt special interests allied with the government. Opening markets to encourage foreign investment will not automatically eliminate the political corruption that is prevalent within the governments of many countries, but access to foreign capital will result in more competition, expanded energy supplies, more jobs, and higher standards of living for more people.

While many countries are already enjoying the economic benefits that flow from open energy markets, others are recognizing the need for change. Underinvestment and serious inefficiencies in Mexico's government-run energy sector, for example, have led to wasteful, out-of-date infrastructure and the underdevelopment of energy supplies. Unlike its North American neighbors, Mexico has largely been detached from the energy boom in oil and natural gas created by new technology. From 2000 to 2012, the world's major oil-producing countries increased their proven reserves; during the same period, Mexico's proven reserves fell 50 percent.²⁰

In recent years, however, Mexico has adopted a series of reforms that should open up investment for oil and gas production, refineries, power plants, and pipelines and enable it to upgrade existing energy infrastructure. Changes include ending the monopoly held by state-

owned Pemex, kept in place since 1938, and allowing private companies to compete in the energy sector. As a direct result, the U.S. Energy Information Administration now projects that Mexico's oil production will stop its 10-year decline, level off, and eventually begin growing again.²¹ An open, resource-rich Mexico is an extremely attractive new market for foreign investors, and reform of the power market will upgrade the country's energy infrastructure and provide both increased energy supplies and more economic opportunity.

Mexico is far from the only country implementing market-oriented reforms. India has signed civil commercial nuclear agreements with the United States and Australia, under which nuclear technologies can be traded freely and safely to bring electricity to energy-starved Indians. South African President Jacob Zuma is calling for more competitive pricing and encouraging foreign investment through increased private-sector participation.²² The United States' Anadarko, Italy's ENI, and India's Jindal Steel and Power are investing directly in Mozambique's wealth of coal and natural gas, and the doubling of foreign direct investment has sparked steady economic growth for the country.²³

Open markets can also foster the exploration and development of new and more efficient energy technologies. Innovation and increased access to energy spurred by competition have the ultimate effect of reducing energy costs. As energy becomes more affordable, both the expense of operating businesses and the cost of products decrease, benefiting consumers.

THE EROSION OF ECONOMIC LIBERTY AND HARMFUL ENERGY POLICIES

Many of the problems associated with accessing, producing, and consuming energy in countries around the world are a direct result of government intervention and policies that undermine economic liberty. Even in the freest economies, the energy sector is uniquely prone to government intervention. Governments have sought to control energy supply, manipulate demand, and limit competition. However, both

experience and data show that policies seeking to engineer energy markets end up hampering economic growth rather than stimulating it.

Government Subsidies. Using the political process to support the production or consumption of one energy source or technology over another misallocates labor and capital, wastes taxpayer dollars, and perpetuates stagnation among the very technologies that governments want to promote. Government support that targets one group or industry artificially props up that market and suppresses the real price signals that drive efficiency.

Rather than increase competition, a special endorsement from the government gives one technology an unfair price advantage over others. Further, subsidies reduce the incentive for that technology to become cost-competitive and encourage dependence on the preferential treatment that a government subsidy represents. Energy sources that need subsidies from the government are those that cannot compete economically without them. If a project makes economic sense, however, investments will occur without government subsidies.

For example, policies in climate-conscious Europe have attempted to engineer energy supplies around heavily subsidized renewable sources like wind and solar while driving up the costs of conventional fuels in order to cap or reduce carbon dioxide emissions. Western Europe, often touted as the model to follow when it comes to energy policy, is suffering serious economic consequences because of this subsidizing of expensive, intermittent energy sources.

Europe's energy policies are not success stories; they are cautionary tales. For instance, between 2000 and 2010, Germany spent over \$100 billion subsidizing solar and wind power. The result has been a higher tax burden, costlier electricity forced into the grid, and an unsustainable market propped up only by the government's support.²⁴ Even worse, electricity has become a luxury for more Germans who are unable to afford to heat their homes.²⁵ Consequently, German lawmakers have voted to scale back the government's "green" subsidies. Although Germany is maintaining an aggressive renewable policy

with subsidies, the new law reduces the amount and availability of subsidies and opens the energy market to more competition.²⁶

Spain has suffered a similar fate. According to an Institute for Energy Research report:

Spain's feed-in tariffs have created a "rate deficit" amounting to \$41 billion (about \$850 per Spaniard) as of February 2014. This deficit exists between the price that utilities are obligated to pay for renewable energy and the price that they are allowed to pass on to consumers, creating the impetus for **high electricity prices and high taxes** to fund the gap.²⁷

Denmark has experienced similarly poor results from the government's spending on renewable projects.²⁸

Although Germany, Spain, and Denmark have relatively high levels of economic freedom overall, their governments' energy policies, which are often driven by politically charged environmental agendas rather than by market realities, are characteristic of less free economies and are undoubtedly holding back economic growth.

Excessive Regulation and Energy Taxes. Much of the world's demand for energy is met by carbon-emitting conventional fuels; in fact, nearly 80 percent is met by coal, oil, and natural gas, and that situation is expected to continue at least for the next several decades.²⁹ Out of concern that man-made carbon dioxide emissions will result in catastrophic warming, many countries and sub-national jurisdictions have implemented or are planning carbon reduction policies.

The European Union, New Zealand, South Korea, Australia, and provinces in Canada each have their own carbon-emission trading schemes.³⁰ France, Costa Rica, Ireland, the United Kingdom, Switzerland, Sweden, Norway, Finland, Iceland, Denmark, and Japan all impose carbon taxes,³¹ and South Africa plans to implement a carbon tax of its own.³² Other countries such as Brazil, Chile, and Thailand have considered their own carbon-restricting plans, and the United States Environmental Protection Agency is attempting to regulate carbon emissions

from motor vehicles and both new and existing power plants.

Carbon dioxide (CO₂) and other greenhouse gas (GHG) emissions do not have direct adverse health impacts. In fact, CO₂ is critical to enhancing plant growth and improving ecosystems, providing a number of agricultural and broad human health benefits. Countries around the world are implementing schemes to reduce CO₂ because, it is claimed, its contribution to global warming negatively affects human health and the environment. While a near-universal consensus exists among climatologists that man-made emissions have some warming effect, a large community of scientists have serious reservations about the rate of warming, the magnitude of climate change induced by GHG emissions, and the ability of climate models to predict conditions several centuries into the future.

More important, no matter what one believes regarding climate change, one thing is clear: Collectively, the proposed carbon-emissions reduction policies will cost billions of dollars in higher taxes³³ and trillions of dollars in lost economic opportunity while likely having little if any noticeable impact on global temperatures.³⁴ When energy prices are artificially increased, higher costs reverberate throughout the global economy as affected industries pass these costs onto consumers. Simply put, consumers are constrained to consume less as producers are forced to raise prices. This results in lower incomes, fewer jobs, and lost economic output.

Recognizing the high costs that a carbon tax was imposing on its citizens and businesses to achieve insignificant climate benefits, Australia abolished the tax in July 2014.³⁵ No doubt other countries are watching the Australian about-face with significant interest.

Carbon regulations and taxes are merely one example of how governments impose stringent regulations on the energy industry that achieve little in the way of meaningful environmental benefit. Many governments impose controls on exploration, exploitation, and trade in oil and natural gas.

Restrictions on Trade. With a wealth of natural resources and a recent surge in domes-

tic energy production, the United States should be in a position to gain significant economic benefits by exporting energy. Rather than treating energy like other goods traded freely around the world, however, America bans exports of crude oil and places needless restrictions on the exporting of other energy sources and technologies.³⁶ It even hampers imports, as shown by its failure to approve construction of the Keystone XL pipeline that would facilitate imports of crude oil from Canada.

In other cases, governments have resorted to restrictions on energy trade in pursuit of strategic or tactical advantages. The government of Venezuela, for example, has subsidized oil exports to Cuba, other nations of the Caribbean and Central America, and even the United States in pursuit of political support for its foreign policy goals. Russia, by contrast, has restricted or threatened to restrict the flow of natural gas to European countries to mute their objections to its expansionist policies in Ukraine and Georgia.

The most famous case of the attempted use of energy export controls for strategic advantage is probably the 1973 Arab oil embargo enforced by the Organization of Petroleum Exporting Countries (OPEC) against the United States and others who were supporting Israel in the so-called Yom Kippur War. The result was a quadrupling of oil prices and a global recession. The link between government actions that reduce the availability of energy and economic growth could not have been demonstrated more vividly.

ENERGY: AN ESSENTIAL BUILDING BLOCK FOR AN IMPROVED STANDARD OF LIVING

Energy is a key building block for economic opportunity. Energy policies rooted in the principles of economic freedom lead to increased production, improved access, and greater prosperity, while governments that deviate from those principles are likely to doom their citizens to lives of energy scarcity, thereby curtailing economic growth, environmental progress, health, and longevity.

It is clear from the data that one need not choose between energy availability and cleaner environments. With technological advances and high rates of economic growth, societies can have both. But it is the freer economies—those that encourage competition and private ownership—that do the best job of providing the efficient, reliable, and clean energy that every society needs for a prosperous future.

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