

# Electricity Supply

*What it Means for Security, Development  
and Geopolitics*

ASP

American Security Project

Perspective Paper

December 2014



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Stuart Piltch is the Co-Founder and Managing Director of Cambridge Advisory Group, an actuarial and benefits consulting firm based in Philadelphia.



### **Ed Reilly**

Edward Reilly is CEO of Americas of FD International Limited, a leading global communications consultancy that is part of FTI Consulting, Inc.



### **Governor Christine Todd Whitman**

Christine Todd Whitman is the President of the Whitman Strategy Group, a consulting firm that specializes in energy and environmental issues.

## In this Report:

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## IN BRIEF

- Energy, development, and security are inextricably linked to one another- especially in rural and other communities without access to a traditional power grid system.
- While existing security concerns, governance challenges and general instability present real barriers to the generation and distribution of power, the absence of reliable energy creates greater risks.
- “Fast-track” models and similar micro-grid systems are viable solutions for communities passed over by traditional grids and must be part of the solution for previously electrified areas.
- Going forward, policy makers will need to consider new and diverse technologies to generate and distribute power.

# Electricity Supply: What it Means for Security, Development & Geopolitics

## Introduction

The nexus of electricity, development and security is significant, yet its nuances are too often overlooked. American Security Project's half-day conference, "Electricity Supply: What it Means for Security, Development and Geopolitics," brought together development and energy experts, government officials, business leaders, and policy makers to better establish these important linkages, share successful implementation strategies and consider how these successes can be replicated in diverse contexts.



A reliable energy supply enables more effective food cultivation and storage, illuminates spaces for educational and commercial activity, and supports the deliverance of other essential services. When these capabilities are consistent, economies and the communities they support have the opportunity to flourish. Consistent power generation and distribution also bolsters security efforts simply by being dependable, whereas rolling blackouts contribute to turmoil and general instability. Rural and other communities that are outside the scope of traditional grid systems are particularly vulnerable and in need of solutions better suited to their needs.

The Conference examined these relationships in greater detail, focusing particularly on the impacts of accessible power in diverse contexts, the risks to generating and distributing that energy and models that successfully mitigate those concerns.

Panel one, "Electricity: The Catalyst for Change," examined the foundational role of electricity for sustainable development and security. The second panel, "The Challenges of Generating and Delivering Electricity" assessed the barriers to electricity posed by poor governance and instability and the work being done to mitigate these risks. The concluding panel discussed strategies successfully for delivering electricity across diverse environments.

## Electricity: The Catalyst for Change

The afternoon's first panel, "Electricity: The Catalyst for Change," brought together an array of development and security experts to highlight the importance of energy and electricity generation around the globe. Each panelist stressed the importance of reliable, sustainable electricity as means to bring about peace, security, and stability.

Moderator [Joanne Trotter](#), a Senior Adjunct Fellow at ASP, began by noting that without access to electricity, developing countries will be unable to support flourishing communities and successful economies, a sentiment that was continuously supported by all panelists.



Dr. Ryan Shelby

Dr. Ryan Shelby, an Energy Engineering Advisor in USAID's Bureau for Economic Growth, Education and Energy, continued by saying, "Within USAID one of our key focus areas is being able to help our host country partners really advance and make this transition to an advanced economy. And our view is that access to reliable and affordable energy particularly in the form of electricity is one of the key barriers that needs to be overcome to make [economic development] happen."

"Electricity, both large and small-scale projects, is helping to build peace even across still very contentious borders," explained [Holly Dranginis](#), a policy analyst for the Enough Project. Dranginis illustrated the potential role of electricity in the Democratic Republic of the Congo and the Great Lakes Peace Process.

"Electricity and economic development at large has become core to the peace building agenda...by first and foremost bring[ing] otherwise adversarial actors and parties to the table...development and profit is motivating in a way that brokering a cease-fire or negotiating with rebels can not," she said.



Holly Dranginis

Using hydropower projects in Central Africa, as an example, Dranginis noted, "The difference between cooperation and destabilization is whether the projects actually benefit the local populations...If [electricity] projects are not touching the rights of youth and women," they will not facilitate peace-building efforts.

Emphasizing the importance of electricity in the advent of climate change and to spur economic development, [Sasanka Thilakasiri](#) of Oxfam stated, "If we don't address climate change, we don't address poverty. 1.2 billion people don't have electricity. There is no chance that we can fight poverty or hunger without access to electricity."

"Electricity and economic development at large has become core to the peace building agenda... by first and foremost bring[ing] otherwise adversarial actors and parties to the table... development and profit is motivating in a way that brokering a ceasefire or negotiating with rebels." Holly Dranginis, Enough Project

“If we don’t address climate change, we don’t address poverty.”  
 Sasanka Thilakasiri,  
 Oxfam International

The majority of electricity-deficient people are the rural poor. Due to deficiencies in grids, it is hard to expand energy access to rural areas. Thilakasiri noted, “Large-scale energy won’t reach out to the rural population. You need more micro to affect more people...65% of the energy needs to come from the off-grid and micro-grid sources. So it makes sense to look at the more decentralized projects.”



Sasanka Thilakasiri

Electricity bolsters security and stability efforts.

Stability Operations specialist [Mark Kustra](#) USMC (Ret.) discussed the role of electricity in Iraq and Afghanistan: “If you don’t have security, you don’t have electricity. If you don’t have electricity, you don’t have security.” Iraq, Kustra said, had a developed, centralized electricity system. In the wake of Saddam Hussein’s fall in 2003, the Iraqi people expected power when mass looting and violence resulted in intermittent power at best, increasing tensions in an already conflict laden environment.

However, maintaining electricity infrastructure and ensuring a sustainable supply of electricity in unstable regions is difficult. Unlike Iraq, Kustra noted, Afghanistan did not already possess a developed electricity grid, and lack of power was common. Therefore, in these hostile environments “energy infrastructure becomes a bane” to operate and requires “neutrality and [partnership] with NGOs to provide and distribute” a constant, reliable flow of electricity.

Large and small-scale electrification projects spur economic growth and development. Reliable access to power supports stability and facilitates peace-building efforts in conflict-ridden regions such as the DRC, Iraq, and Afghanistan. Lastly, providing sustainable electricity supply to the rural poor, youth, and women is of paramount importance for it will foster greater societal resilience, enabling these populations to grow in the wake of the increasingly extreme impacts of climate change.



Mark Kustra



## The Challenges in Generating and Delivering Electricity

Brian Rich, COO of APR Energy, moderated the afternoon's second panel, "The Challenges of Generating and Delivering Electricity." Panelists [Dante Disparte](#), CEO and Founder of The Risk Cooperative, [John Morton](#), Chief of Staff to the President of OPIC, and Faith Corneille, Acting Director of the Office of Electricity and Energy Efficiency at US State Department, discussed the risks posed by supplying power to communities surrounded by instability, and how to mitigate these concerns successfully.

Poor governance structures and political and social instability certainly represent major barriers to generating and supplying electricity. While these factors do discourage some firms from entering into the market, the panelists focused instead on the risks a lack of access to power generates.

"Bad things happen in the dark."

Dante Disparte, The Risk Cooperative



John Morton

"Bad things happen in the dark," Disparte stated in his opening remarks, summarizing not only the opening panels' directive of establishing the linkage between power supply and security but also the vacuum created by the absence of power.

Morton went further on the link between poverty, risk, and power tying US national interests into this nexus. "Poor countries have a regime changes on average every 7 years. Many of those regime changes are not very kind to us, our interests, and much less to the people in the countries with the regime change. We have interests to support more stable democracies... which means we need to decrease poverty and power is a key aspect."

The Energy Resources (EnR) Bureau looks to use energy as means to protect those interests. Corneille offered insight into the office's role touching on two important barriers to a stable power supply. "The EnR Bureau came to fruition in terms of the recognition of the links between energy and national security, geopolitical influence in conflict that emerges from energy. We can only look at Russia and Ukraine as one example, to the affordability and import dependency issues associated with the Caribbean as another example."



Faith Corneille

As panel one discussed, the importance of micro-grid systems to distribute power to rural communities cannot be overemphasized. Before turning it over to the audience for questions, APR Energy’s Brian Rich asked the panelists to speak to some of the work being done to address the challenges companies looking to participate in this space face.

Morton responded, “[The] first point about ‘empty middle’ I totally agree – with a couple of exceptions there have been a handful of companies looking to service that space [where micro-grid systems are necessary]... There is a movement afoot for more companies that are looking at that space. They realize it is the sweet spot in many emerging markets. The successes that [APR] and OPIC clients have had show that you can operate in that niche.”

Morton went on to discuss how OPIC supports clients looking to bundle micro-grid projects across rural areas through risk insurance and financing options.

Disparte, a SME risk expert, also spoke to the opportunities micro-grid systems and equally non-traditional models present for organizations like APR Energy and others. “I think the risk proposition for...antiquated approaches is starting to shift in favor of alternatives...where in some cases they carry a much smaller footprint, not unlike APR’s approach, and they have the opportunity to connected distributed economies. Rural electrification is an attractive proposition. I think in some cases the risk in those approaches is lower than the traditional model. The traditional model is being upended.”



Dante Disparte

Several audience questions touched on the role of renewable energy sources going forward. Looking specifically at EnR’s aim to support energy generation and distribution while furthering US interests, Corneille discussed the critical need for market interventions to support the continued growth of renewable energy in addressing climate change:

“From a foreign policy perspective, we can give advice. We can try to steer investments towards clean energy infrastructure. At the end of the day the policy makers in the foreign government



Brian Rich

“Poor countries have a regime changes on average every 7 years. Many of those regime changes are not very kind to us, our interests, and much less to the people in the countries with the regime change. We have interests to support more stable democracies... which means we need to decrease poverty and power is a key aspect.”

John Morton, OPIC

have to also have the political will to make those decisions... when they set their own renewable energy or clean energy targets, that's a much more helpful starting point because we are coming in to help them achieve their own goals.”

While there are real risks to generating and supplying power, especially in politically or socially unstable environment, the true risk lies in failing to ensure reliable energy sources and distribution systems. Bad things really do happen in the dark.



## Innovative Solutions to Providing Reliable Power

BGen Stephen A. Cheney, CEO of the [American Security Project](#) moderated a panel discussion on Innovative Solutions to Providing Reliable Power. The panelists were [Eric Toumayan](#), Managing Director of Government Relations at [APR Energy](#), and [Ken Ditzel](#), Managing Director at [FTI Consulting](#).

Building on the theme of the interrelatedness of electricity and national security, Toumayan described how APR employs new ways of thinking to satisfy underserved electricity markets. In 2001, APR opened a 20 MW plant in 60 days, and he described the changes in a town in Sri Lanka over those two months:

“With the mobile turbine technology, power can be delivered quickly, and it can be delivered in very large increments.”

Eric Toumayan,  
APR Energy

“The fishermen were selling fish on the beach, a few fish at a time, no way to keep them fresh. A few months after we turned the power plant on, the fisherman were selling a day’s catch at a time on a bed of ice. They’d plugged in an ice machine. And yet later on in the process when the plant was running a restaurant had opened on the beach. So these are the kinds of transformative events that happen on a day-to-day basis once you can provide power to the underserved markets.”

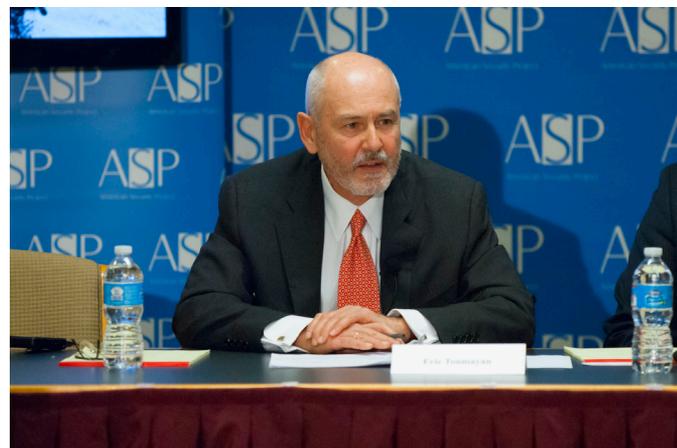
Citing power delivered to Senegal in 2011, he described how APR implements fast-track solutions. In Senegal 2011, power outages lowered GDP growth by more than 1% each year. The situation could have triggered violence and rioting. 50 MW of electricity were delivered in 60 days.

The consumer provides a location, typically near a power plant, fuel, and connection to the grid. APR provides everything else, and the consumer pays for kilowatt hours.

“The fast track solutions... are based on the use of power modules,” Toumayan said. The modules used to generate electricity are jet engines in a truck. They are in shipping containers and can go wherever a truck can go. The jet engines can use both liquid and gas fuels; they are reliable, and are 20 times more powerful than a diesel generator of the same size. The turbines are sustainable, quiet, and clean. “With the mobile turbine technology, power can be delivered quickly, and it can be delivered in very large increments.”

Ditzel spoke about natural gas price considerations. “Gas is going to be important for what technology you choose going forward.”

He highlighted three interconnected objectives for delivering electricity: reliability, low cost, and sustainability: “Reliability is always number one. Historically, cost



Eric Toumayan



Ken Ditzel

has been number two. It's becoming more and more fact that sustainability and low cost are becoming equivalent in terms of second place, given EPA's regulations."

"No matter which way you look at it, predicting gas prices has been challenging," Ditzel said. He showed several graphs of the AEO gas price range vs. the historical cost of gas, and showed how predictive models fluctuated. He said that international drivers, like flat global GDP growth, global shale gas boom, or the restart of nuclear reactors by Japan or Germany could lower international LNG prices.

To mitigate forecasting bias and price uncertainty, infrastructure to deliver gas should be built. This would help remedy bottlenecks such as those seen during the polar vortex. Also, gas purchasers could mitigate risk by creating medium to long-term purchasing contracts with producers. Other ways to mitigate risk include investing in energy efficiency and renewable energy sources.

"Reliability is always number one. Historically, cost has been number two.

It's becoming more and more fact that sustainability and low cost are becoming equivalent in terms of second place, given EPA's regulations."

Ken Ditzel, FTI Consulting



## Conclusion

The role of a reliable energy supply in fostering stability, peace, and economic growth is irrefutable. Economies, and the communities they support, cannot flourish without a stable energy source. “Electricity Supply: What it Means for Security, Development, and Geopolitics” brought together development and security experts, policy makers, and business leaders to reaffirm the interdependent relationship between power, security, and development, examine the challenges of generating and supplying energy and discuss strategies that have successfully mitigated those concerns in diverse contexts.

While issues of security, governance, and general stability do present real concerns to generating and distributing electricity, the risks created by an absence of reliable power are much greater.

Rural and other communities outside the scope of traditional grids are often those most at risk and in need of security assistance and economic development. Their acute needs make micro-grid systems increasingly vital to their sustainable economic and security development.

Going forward, policy makers will need to consider new and diverse technologies to generate and distribute power. Doing so will enable comprehensive economic development and is a vital component in addressing security challenges.



## Further Reading

[Electricity: The Catalyst](#)

[The Green Side of Energy Security](#)

[Telling the Story of \(US\)Aid](#)

[What the Fight for Foreign Aid Funding is Really About](#)

## About the Sponsor

APR Energy is a global leader in rapidly delivered large-scale power solutions and, following its purchase of GE's power rental business, is the world's leading provider of fast-track mobile turbine power. APR Energy sells electricity and generation capacity to utility and industrial customers that have critical power deficits or that require dedicated, distributed, or seasonal generation solutions. Through its use of highly mobile, turnkey power plants, APR Energy delivers, within weeks, large blocks of power that can run entire cities. APR Energy has installed over 2.5GW of generation capacity across more than 25 countries, providing reliable power that helps promote economic growth, socio-political stability, and an overall improved quality of life. For more information, visit APR Energy's website [www.aprenergy.com](http://www.aprenergy.com).

Introductory Video Credit: "The Square," produced by Noujaim Films



## Speaker Biographies

**Joanne Trotter** is an Adjunct Senior Fellow of ASP and is an independent consultant and advisor. She supports the design, implementation and assessment of innovative programs and partnerships that promote inclusive and sustainable development. Joanne is particularly focused on fragile and conflict-affected settings, and on a range of issues including sub-national and participatory governance, youth, education, and agricultural livelihoods. Between 2004 and 2013, Joanne worked with the Aga Khan Foundation (AKF), as the Director of Programs in the US office and prior to that, as the Head of External Relations and Grant Management in the Afghanistan office. She led the Foundation's engagement with donors including European and US Governments, private, philanthropic and multi-lateral agencies. She was responsible for securing resources to support program implementation, coordinating sector interventions in the rural livelihoods program, and developing organizational strategies for learning, communications, and policy engagement.

Prior to joining AKF, Joanne worked extensively in Latin America, focused on education and capacity building, particularly for marginalized youth and educational institutions. She obtained her Master's of Science in International Development from the University of Bath, UK, with a special focus on citizenship, civic education and governance.

**Faith Corneille** joined the U.S. Department of State's Bureau of Energy Resources (ENR) as Deputy Director for the Office of Electricity and Energy Efficiency (EEE), where she has served as Acting Director for more than two years. She is responsible for coordinating ENR's analysis of global power sector issues and involvement in issues related to electricity markets, power sector reform, energy finance, and the advancement of lower carbon power technologies and energy efficiency. She manages implementation of the Presidential initiative Connecting the Americas 2022, and the EEE office supports Power Africa, the U.S.-Asia Comprehensive Energy Partnership, and other bilateral and multilateral energy policy dialogues.

From 2005-2011, Mrs. Corneille served as the Energy Officer for the Bureau of Western Hemisphere Affairs (WHA) Bureau where she managed WHA's involvement in Presidential initiatives including the Energy and Climate Partnership of the Americas and U.S.-Brazil Biofuels Cooperation. Mrs. Corneille also served as Executive Assistant to Assistant Secretary Roberta Jacobson from July-November 2011. She entered federal government as a Presidential Management Fellow and held assignments in development finance for Latin America and the Caribbean; U.S. Embassy New Delhi's Economic Section; and the Bureau of International Narcotics and Law Enforcement Affairs Colombia program. Prior, she worked for the Carter Cen-



ter's Latin American and Caribbean program in Atlanta, Georgia. Mrs. Corneille earned master's degrees in Public Administration and International Relations from The Maxwell School of Syracuse University. Her undergraduate degrees are in International Relations and Spanish with a minor in Environmental Conservation from the University of New Hampshire.

**Dr. Ryan Shelby** is an Energy Engineer for the Bureau of Economic Growth, Education, and Environment. He works on energy access, power sector reforms, technical designs, due diligence, & business models for micro-grids, mini-grids and small scale grids in Sub Saharan Africa and other emerging regions to support USAID Missions, the Powering Agriculture Energy Grand Challenge for Development and the Power Africa initiatives being undertaken by USAID. Prior to his current position at USAID, Dr. Shelby was a Millennium Challenge Corporation Science, Technology, & Innovation Fellow focused on the design and implementation of mini- and micro-grids to aid the expansion of modern electricity services in six Sub Saharan African countries: Sierra Leone, Liberia, Ghana, Benin, Tanzania, and Malawi. Prior to his position at MCC, Dr. Shelby was a dual J. Herbert Hollomon and Christine Mirzayan Science & Technology Policy Fellow within the National Academies that focused on engineering education in the US and the application of system engineering to peace building initiatives in Haiti, Kenya, and Libya as a fellow in the Program Office of the National Academy of Engineering supporting the NAE & U.S. Institute of Peace Roundtable on Technology, Science & Peacebuilding.



**Holly Dranginis** is a Policy Analyst for the Enough Project, focused on the Democratic Republic of Congo and the Lord's Resistance Army. Prior to joining the Enough Project, she interned for the United States Mission to the United Nations and the prosecution team on the Charles Taylor case in The Hague. She helped defend two death row inmates, conducting extensive mitigation investigations in Texas and successfully litigate a case against the government of Guatemala before the Inter-American Court of Human Rights involving forced disappearances and torture.

Before law school, Holly was a Program Director at Insight Collaborative and spent a year in Northern Uganda where she facilitated the work of International Criminal Court intermediaries and piloted a violence prevention program in war-affected primary schools in the North. She also worked as a consultant to former-ICC Chief Prosecutor Luis Moreno-Ocampo, and interned at the International Criminal Tribunal for the Former Yugoslavia.

From 2006-2007, Holly was a Fulbright Scholar in Guatemala where she investigated criminal trials, reparations, and truth-telling mechanisms related to Guatemala's genocide. Holly holds a J.D. from the University of California, Berkeley, School of Law, and a B.A. in International Relations and History from Connecticut College. She speaks Spanish.



**Sasanka Thilakasiri**, is Oxfam International's economic justice policy lead for international financial institutions, leading the Confederation's advocacy efforts toward the World Bank Group and IMF on the issues of climate, energy, land and agriculture policy. He also co-led the development of Oxfam's energy policy. He received a Master of Natural Systems Engineering from the University of Western Australia in 2008 and a Bachelor of Chemical Engineering from Curtin University of Technology in 2002, and has worked in environmental, climate and energy policy and projects in the Australian mining sector. Prior to joining Oxfam he worked at The Energy and Resources Institute (TERI) in New Delhi, working on domestic climate policy and distributed rural off-grid renewable energy projects, as well as the international UNFCCC negotiations.

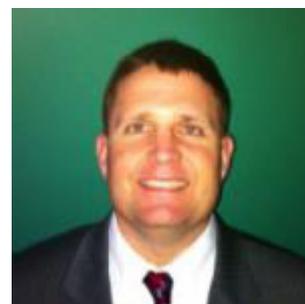


**Mark Kustra** is a former United States Marine Officer with over 23 years of operational experience serving in positions from the tactical to the strategic levels of Defense. Throughout his life, to include his childhood and career, he has lived and worked in Asia for over 17 years.

Most recently he worked as a Strategic Analyst in the Marine Corps' Strategic Initiatives Group where he looked at a range of issues related to future trends and threats to global stability and requirements to meet them. As a member of the Afghanistan Pakistan Hands Program he served as a governance and development advisor in Marjah District, Helmand Province, Afghanistan.

Prior to this, Mark served as the Director of Joint Operations, Joint US Military Advisor Group-Thailand where he served on the Country Team and successfully provided training initiatives with Thai security forces focused on peacekeeping, counter narcotics, counter terror, counterinsurgency operations, and disaster relief. In addition to working in Thailand and Afghanistan, Mark has served in numerous other assignments in Asia (Republic of Korea and Japan) and the Middle East as well as Africa. He has worked in command and staff assignments from the platoon to the Division level as an Infantry and Reconnaissance Officer and has deployed in support of operations in Kuwait, Somalia, Iraq, and Afghanistan as well as numerous other contingencies throughout the Indo-Pacific region.

He also worked within the US Marine Corps' Program and Resource Department as a Program Coordinator in which his focus was to analyze the Program of Record and ensure that it was aligned with existing strategic guidance as well as forecasting the potential impacts of new strategic guidance like the Quadrennial Defense Review.



**Brian Rich** brings over 20 years of international energy and utility infrastructure experience to his role as COO at APR Energy. Prior to joining APR Energy, Mr. Rich was Chief Financial Officer of Lebara Ltd, a \$1 billion telecommunications company based in London and earlier served as Chief Executive Officer, AES Africa Power Corporation, where he managed AES Corporation's fully integrated utility in Cameroon, generation assets in



Nigeria, and business development throughout the region. Mr. Rich also held senior management positions in Moscow, Russia, as Senior Vice-President, Chief Financial Officer and Treasurer of NASDAQ-listed Golden Telecom, Inc., and in Hong Kong as Chief Financial Officer of Mirant Corporation's International power businesses. Mr. Rich holds his Bachelor and Juris Doctor degrees from Tulane University in New Orleans, Louisiana. Mr. Rich has served APR Energy as Senior Vice President of Business Development since 2012.

**Dante Disparte** is the founder and CEO of The Risk Cooperative, a strategy, risk and investment advisory firm focusing on mid-market opportunities and equity investments on a global scale.

Prior to forming The Risk Cooperative, Mr. Disparte served as the Managing Director of Clements Worldwide, a leading insurance brokerage with customers in more than 170 countries. Mr. Disparte is a specialist in strategy and risk reduction through the design and delivery of comprehensive risk solutions of worldwide scope. He is credited with designing the world's first card-based life insurance program for the United Nations, a plan that has placed more than a half billion USD of risk with the markets in more than 150 countries. This innovation was heralded as one of the top product innovations of 2011 by the MENA Insurance Review. Mr. Disparte serves as the Chairman of the board of the Harvard Business School Club of Washington, D.C., and on the global alumni board. He is a founding member of the Business Council for American Security and an advisory member with the American Security Project.

He was formerly the Managing Director of Land Rover's operations in 32 Sub Saharan African markets and held numerous general management roles in Denmark, where he developed applied skills in social entrepreneurship. Mr. Disparte is credited with developing a humanitarian fleet management solution that is proven to reduce the economic, environmental and social impact of humanitarian operations. This body of work is profiled in a business case published by INSEAD's Social Innovation Centre. He served on the board of directors of Kjaer Group A/S, one of the top 10 workplaces in Europe and the top workplace in Denmark for 4 years and currently serves on the board of Communities in Schools Nation's Capital. He is conversant in 6 languages and has published numerous articles on the subject of risk, strategy and business effectiveness. A graduate of Harvard Business School's Program for Leadership Development, Mr. Disparte holds a degree in International and Intercultural Studies from Goucher College and a MSc. in risk management from NYU's Stern School of Business.

**John E. Morton** brings more than fifteen years of experience in emerging markets, and environmental and economic policy. Prior to joining OPIC, John Morton was Managing Director of the Pew Economic Policy Group at The Pew Charitable Trusts. The Economic Policy Group focused on developing and promoting solutions to issues such as the growing U.S. deficit, the changing regulatory system in financial markets, and trends in economic mobility in the American middle class.

Prior to joining Pew, Mr. Morton served as director of National Security Policy for the John Kerry presidential campaign, where he coordinated the development of policy concerning Afghanistan, Russia and the former Soviet states, Africa, and on issues



relating to democracy, human rights and economic development. Previously, Mr. Morton was an investment officer with Global Environment Fund, where he oversaw global investments in sustainable forestry and the natural gas sector and developed the firm's clean-energy practice. Mr. Morton also worked as a strategy consultant with Mercer Management Consulting. He began his professional career at the World Bank, where he managed investments in the former Soviet Union. Mr. Morton has served on the boards of directors and executive committee of the National Security Network, and the Clean Energy Network. He is a fellow of the Aspen Institute's Catto environmental leaders program and the U.S.–Japan Leadership Program.

**BGen Stephen Cheney, USMC(Ret)** is the Chief Executive Officer of the American Security Project (ASP) and a member of the Department of State's Foreign Affairs Policy Board.

He is a graduate of the U.S. Naval Academy and has over 30 years experience as a Marine. His career included a wide variety of command and staff positions with the operating forces and the supporting establishment. His primary specialty was artillery, but he focused extensively on entry-level training, commanding at every echelon at both Marine Corps Recruit Depots, to include being the Commanding General at Parris Island. He served several years in Japan and has traveled extensively throughout the Middle East and Asia.

Other selected highlights of his military career include tours as Deputy Executive Secretary to Defense Secretaries Cheney and Aspin; ground plans officer for Drug Enforcement Policy in the Pentagon; liaison to the Congressional Commission on Roles and Missions of the Armed Forces; and Inspector General of the Marine Corps. Following retirement from the Marines, he became the Chief Operating Officer for Business Executives for National Security (BENS), in Washington, D.C., and most recently was President/CEO of the Marine Military Academy in Harlingen, Texas. He is a graduate of the Marine Corps Command and Staff College, the National War College, and the University of Southern California. He was a military fellow at the Council on Foreign Relations in New York City, where he is a member. He is also a member of the Secretary of State's International Security Advisory Board.

Since 2004, **Eric Toumayan** has fostered APR Energy's business development and public policy efforts, across U.S. federal and foreign government liaison operations, with a focus on West Africa and multilateral financial institutions. As Managing Director of Government Relations, he is responsible for the external matters of APR Energy: building partnerships and broader business relationships, government outreach and thought leadership, as well as advising the senior leadership on business and policy issues. Prior to joining APR Energy, Mr. Toumayan spent 25 years with World Business Inc., an international business consultancy specializing in global procurement and energy projects financed by international financial institutions. In addition to World Business Inc. his previous employers include Skidmore Owings and Merrill in Chicago and Algeria. Mr. Toumayan holds an undergraduate and graduate degree from the University of Pennsylvania and a Master of International Public Policy from The John Hopkins University.



**Ken Ditzel** is a Managing Director at FTI where he has over fifteen years of experience advising clients in the power generation, coal, oil and gas, biofuels, and manufacturing industries. Mr. Ditzel specializes in developing, examining, and planning around future scenarios for natural gas, coal, oil, and electricity markets under a range of technology, policy, and economic environments. He has used scenario analysis in the context of portfolio analysis, asset acquisition / divestment, technology assessments, policy analysis, M&A due diligence, and corporate growth strategies. The implication of global fuel markets on domestic markets has played a major role in Mr. Ditzel's work. In March, he testified before the US House of Representative's Subcommittee on Energy and Power regarding the economic impacts of liquefied natural gas (LNG) exports on natural gas prices and the manufacturing sector. Before FTI, Mr. Ditzel was a Principal at Charles Rivers Associates and an Associate at Booz Allen Hamilton. Prior to consulting, Mr. Ditzel was a power plant engineer for the Dow Chemical Company at two cogeneration plants in Texas. Mr. Ditzel has a B.S. in Mechanical Engineering from the University of Virginia and an MBA from Georgetown University.



## About the Authors

**Maggie Feldman-Piltch** (@MaggieCaroline1) focuses on trade and economic development at American Security Project. She is a recent graduate of Wesleyan University where she completed an independently designed major in Theories of Ethics in Capitalism and earned Honors in General Scholarship for her senior thesis entitled “The Human Rights Obligations of States and Firms: An Economic Analysis of Law.” She is passionate about the role of non-state actors, specifically firms, in driving human development and economic progress. During her undergraduate career, she was the founding captain of the Wesleyan Cheerleading Team, a Jewish Community Programming Fellow, and a founding sister and multi-term board member for Rho Epsilon Pi Sorority. Maggie is also a classically trained coloratura soprano and West Wing aficionado.

**Caroline von Wurden** (@CarolineWurden) is a recent graduate of the University of California, Berkeley, and is originally from Los Alamos, New Mexico. She received a B.A. in physics and has published seven scientific papers on her research at Los Alamos National Laboratory and the ALPHA Antihydrogen Collaboration at UC Berkeley. During her undergraduate career she was a founding captain of the Cal Quidditch team and developed the referee certification process for the International Quidditch Association. She is currently a Fusion Energy Research Intern at ASP.

**Sophia Dahodwala** (@Fjords21) is the Development and National Security research intern at ASP. She is a senior in the Elliott School of International Affairs, pursuing undergraduate degrees in Security Policy and Geography. Sophia's studies have focused on the geopolitics of Iran, Afghanistan and Pakistan, and in fostering security and development through hazard and disaster management.

The American Security Project (ASP) is a nonpartisan organization created to educate the American public and the world about the changing nature of national security in the 21st Century.

Gone are the days when a nation's security could be measured by bombers and battleships. Security in this new era requires harnessing all of America's strengths: the force of our diplomacy; the might of our military; the vigor and competitiveness of our economy; and the power of our ideals.

We believe that America must lead in the pursuit of our common goals and shared security. We must confront international challenges with our partners and with all the tools at our disposal and address emerging problems before they become security crises. And to do this we must forge a bipartisan consensus here at home.

ASP brings together prominent American business leaders, former members of Congress, retired military flag officers, and prominent former government officials. ASP conducts research on a broad range of issues and engages and empowers the American public by taking its findings directly to them via events, traditional & new media, meetings, and publications.

We live in a time when the threats to our security are as complex and diverse as terrorism, nuclear proliferation, climate change, energy challenges, and our economic wellbeing. Partisan bickering and age old solutions simply won't solve our problems. America – and the world - needs an honest dialogue about security that is as robust as it is realistic.

ASP exists to promote that dialogue, to forge that consensus, and to spur constructive action so that America meets the challenges to its security while seizing the opportunities that abound.



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