



ISSUE BRIEF

# Securing Ukraine's Energy Sector

APRIL 2016 ANDERS ÅSLUND

The energy sector is key to the success of Ukraine's economic reform, battle with corruption, and independence from Russia. Therefore, it was a key section in the Atlantic Council's 2014 *Roadmap for Ukraine: Delivering on the Promise of Maidan*. Fortunately, in 2015 Ukraine carried out far-reaching reforms in the energy sector, and this provides a reason to return to this topic. The current focus is on the completion of the substantial reforms that already have been undertaken.<sup>1</sup>

Energy represents one of Ukraine's greatest vulnerabilities, as well as a source of potential strength; it must be central to a broader, more comprehensive economic reform plan. Energy is the linchpin of Ukraine's dependence on Russia. The Kremlin has used energy as a weapon not only to exert leverage over Ukraine, but also to control its leaders and key power players who have personally enriched themselves through opaque energy deals with Russia.

As such, the energy sector is a critical pillar in building an effective, stable national security and economic strategy for Ukraine. This strategy must be long-term, and yet have an immediate positive impact. Getting the energy sector right—eliminating subsidies, ensuring that public revenues are not diverted to private pockets, enhancing energy efficiency, and reinforcing Ukraine's national security—is essential to transforming the Ukrainian economy.

## The Challenges

Ukraine possesses large energy resources, but this sector has been poorly managed and has been permeated with high-level corruption. Every year, a few gas traders in Russia and Ukraine have shared a few billion dollars in rents made on the trade between the low, regulated state prices and free prices, which were usually several times higher.

As a joint initiative of the Atlantic Council's Global Energy Center and Dinu Patriciu Eurasia Center, the **Eurasian Energy Futures Initiative** covers critical energy issues in the wider Eurasian space. The Initiative analyzes trends and disruptive factors to facilitate the provision of secure, affordable, and sustainable energy for consumers.

<sup>1</sup> Anders Åslund, *Ukraine: What Went Wrong and How to Fix It* (Washington, DC: Peterson Institute for International Economics, 2015). This brief draws on and updates the Chapter 10, "Cleaning up the Energy Sector," pp. 185-206.

The artificial energy pricing and this privileged trade have endured, regardless of who rules Ukraine. It has had many negative consequences. Importantly, Kremlin-connected gas traders have used these funds to exert influence on Ukrainian leaders, thus jeopardizing Ukraine's national security.

These fortunes have been financed by Ukrainian taxpayers, who have paid vast energy subsidies. Ukraine's artificially low energy prices have led to excessive energy consumption and large, unnecessary current account deficits. A side effect has been that these policies kept Ukraine's own production of energy far below potential. The focal concerns today are natural gas and electricity, while oil and coal are predominantly handled by private enterprises on a market. Naturally, this situation in the energy sector has diminished the legitimacy of the Ukrainian state, eroded people's trust in government, and weakened the nation's ability to stand up to Russian pressure and aggression. It is difficult to imagine a more damaging energy policy.

The public cost of Ukraine's energy policy has been considerable. For 2012, the International Monetary Fund (IMF) assessed the state energy subsidies at no less than 7.6 percent of GDP.<sup>2</sup> These subsidies are likely to have peaked at 10 percent of GDP in 2014.<sup>3</sup> In 2014, Ukraine's domestic household prices for natural gas were at only 12 percent of the world market price level or cost recovery prices.<sup>4</sup>

These large state subsidies did not simply undermine Ukraine's public finances, but also its foreign trade balance. In the last pre-crisis year, 2013, Ukraine imported natural gas for \$11.5 billion and oil for \$7.0 billion.<sup>5</sup> Together this amounted to \$18.6 billion or 10

percent of GDP.<sup>6</sup> This figure was larger than Ukraine's 2013 current account deficit, which amounted to \$16.3 billion or 9.2 percent of GDP.<sup>7</sup>

This wasteful importation at public expense is all the more baffling given that Ukraine possesses large energy assets that are only partially—and quite inefficiently—utilized. International observers agree: BP sets its estimate of Ukraine's hydrocarbon reserves at 9 billion tons of oil equivalent. The conventional natural gas reserves that Ukraine holds are extensive, with 1.1 trillion cubic meters of proven reserves and 5.4 trillion cubic meters of potential reserves.<sup>8</sup> The International Energy Agency assesses Ukraine's oil reserves at 850 million tons, and its reserves of gas condensate are estimated to be larger than 40 million tons. Nevertheless, Ukraine's utilization of these resources is less than optimal: from 1990 to 2010, production of primary energy fell by 47 percent, and reliance on energy imports was 39 percent in 2010.<sup>9</sup>

## Ukraine's artificially low energy prices have led to excessive energy consumption and large, unnecessary current account deficits.

Having failed to accomplish energy reform on its own, Ukraine has requested assistance from the European Union. In February 2011, Ukraine joined the European Energy Community, thereby committing itself to the EU's "third energy package" reforms, which should guide Ukraine's energy transformation. Thus, Ukraine has

obligated itself to establish real markets for electricity and gas transactions and to integrate these markets with the European Union. It also has promised to unbundle transportation of natural gas and electricity

<sup>6</sup> Calculated from nominal GDP of \$183 billion in 2013, "Assessing Progress in Structural Reforms," Dragon Capital, March 9, 2016, p. 9.

<sup>7</sup> IMF, "Ukraine: Ex Post Evaluation of Exceptional Access under the 2010 Stand-By Arrangement," IMF Country Report No. 14/146, May 2014.

<sup>8</sup> BP, "BP Statistical Review for Energy," June 2014, <http://www.bp.com/content/dam/bp/pdf/Energy-economics/statistical-review-2014/BP-statistical-review-of-world-energy-2014-full-report.pdf>, sets Ukraine's reserves at only 0.6 tcm, 0.3 percent of the global total. BP is more cautious than the International Energy Agency (IEA) and tends to use official figures. Since exploration has been neglected for long in Ukraine, I put more trust in the higher figure.

<sup>9</sup> IEA, "Ukraine 2012: Energy Policies beyond IEA Countries," 2012, Paris, pp. 21, 82.



The Urengoy-Pomary-Uzhgorod pipeline, connecting Russia and the European Union via Ukraine, was modernized starting 2011. Photo credit: Dmytro Glazkov/World Bank.

from production and distribution to open up pipelines and grid to third parties.

### Great Reform Achievements in 2015

Never before has a Ukrainian government carried out so many sensible energy reforms, and in no other area has the Ukrainian government achieved reforms as radical as in the energy sector in 2015. This is an indisputable fact, but it has not been much noted. Attracting attention to this success benefits neither the government, which doesn't want to antagonize the population by emphasizing how substantial the price changes have been, nor the populist opponents, who would prefer not to reveal how large the rents to the gas traders were.

The most important change of the reform process stipulated that from April 1, 2015, all energy prices for households were increased by up to four times for natural gas. The intention was to raise all subsidized energy prices to half the cost recovery, in order to reduce the

fiscal cost of subsidizing the energy sector and to avoid further privileged arbitrage for certain insiders.

The Ukrainian government extended conditional cash transfers to no fewer than 4.5 million households—one third of all households in Ukraine—in order to make the increases in energy prices politically and socially feasible. This process was made possible because Ukraine has a well-developed system of 745 local social welfare offices.

Ukraine's gas consumption was excessive, but now it has declined extraordinarily. As late as 2011, consumption amounted to 59.3 billion cubic meters. In 2015, it had fallen to merely 36 billion cubic meters, of which Ukraine itself produced 20 billion cubic meters.<sup>10</sup> The causes are multiple: the war with Russia; the sharp fall in production from heavy industry; but also the sharp

<sup>10</sup> Wojciech Kononczuk, "Reform #1. Why Ukraine Has to Reform Its Gas Sector," OSW, Centre for Eastern Studies, *Commentary*, September 1, 2015.

price increases. Price hikes have led to greater savings than expected. In 2015, Ukraine cut its consumption of natural gas by 20 percent. Naftogaz statistics show that from 2013-15 industrial consumption fell by 38 percent; household consumption by 33 percent; and heating and utilities by 29 percent.<sup>11</sup> These adjustments are both massive and highly desirable. The numbers also suggest that large subsidies, which previously went into the foreign bank accounts of a few gas traders, have now dwindled to insignificance.

Naftogaz is expecting that Ukraine's consumption of natural gas will fall by another 20 percent in 2016 to a mere 29 billion cubic meters, of which Ukraine itself will produce 20 billion cubic meters. Thus, Ukraine would only need to import 9 billion cubic meters, all of which could be imported from Europe.

While Ukrainian energy prices for households rose to the level of half the world market price, international energy prices also fell by roughly half in 2015. As a consequence, Ukraine's energy prices now are at nearly the world market level, but they do need to be adjusted to that level. In 2015, Ukraine's vast energy subsidies shrunk to probably just 1 percent of GDP, and those subsidies should be eliminated in 2016.

Serious efforts have been undertaken to reassert state control over state-owned enterprises, which have been captured by oligarchic interests, notably the oil producer Ukrnafta and the oil pipeline company Ukrtransnafta. For the sake of transparency, an international audit of Naftogaz has finally been implemented.

While detailed foreign trade statistics are not available yet, presumably Ukraine's total energy bill has declined by nearly three-quarters to some \$5 billion. This is a key reason why Ukraine has been able to achieve a balanced current account.

Ukraine has successfully diversified its imports of natural gas, so that it reduced its dependence on Gazprom by importing only 6.1 billion cubic meters of

natural gas from the Russian company in 2015; the rest was imported from Europe, mainly from Norwegian Statoil and Engie (previously GDF Suez).

Domestic energy production is one area, in which Ukraine has made no progress. In fact, Ukraine's production of natural gas even fell by 3 percent because of too high taxes and a nearly prohibitive regulatory environment.

## Recommendations for the Ukrainian Government in 2016

Regardless of how impressive Ukraine's achievements were in the sphere of energy in 2015, the country's situation remains critical. Rather than rest on its laurels, Ukraine's government needs to proceed and complete its energy reforms in 2016. The aims are to enhance Ukraine's energy security, increase energy efficiency and national welfare, reduce corruption, strengthen public finances, and improve Ukraine's balance of payments. As a matter of urgency, the Ukrainian leadership should therefore undertake the following ten steps:<sup>12</sup>

**Regardless of how impressive Ukraine's achievements were in the sphere of energy in 2015, the country's situation remains critical.**

**Priority 1: Unification of energy prices.** At present, gas and electricity prices are close to international market prices, but they should be unified at a market level and placed under the control of an independent regulator. Ukrainian gas and electricity prices for households are at approximately the correct market level now, but they need to be unified to hinder corrupt arbitrage between differently regulated prices and to favor economic efficiency. The current policy of cash transfers to the one-third poorest households should be maintained.

**Priority 2: A real market for gas and electricity should finally be allowed to develop.** Ukraine already has adopted a law on the gas market, but it has yet to come into force, because the many supplementary rules have not been adopted. A similar law on an

<sup>11</sup> "Naftogaz' pokazal dinamiky ispolzovaniya gaza za 10 let, (Naftogaz showed the dynamics of the utilization of gas during 10 years)," *Ekonomiczna Pravda*, February 23, 2016.

<sup>12</sup> Olga Bielkova, a parliamentarian from the Poroshenko Bloc, has published a similar proposal: Olga Bielkova, "A Road Map for energy Reforms in 2016," *Kyiv Post*, February 2, 2016; Another similar reform proposal can be found in Wojciech Kononczuk, "Reform #1. Why Ukraine Has to Reform Its Gas Sector," op. cit.

electricity market has been introduced, but so far it has not been adopted. The IMF sees the creation of these two markets as essential for the success of its program in Ukraine.

### **Priority 3: Establish an independent energy regulator.**

In August 2014, President Poroshenko merged the prior regulators into a new commission, which was tasked with regulation of both energy and utilities (communal) services. The President's proclaimed aim was to increase the strength and authority of the unified regulator, but in practice this commission is dependent on presidential approval. The regulator also needs to be independent of the President to be truly autonomous and strong. Ideally, the energy regulator should have sufficient independence to oversee all of the energy-related natural monopolies, namely, natural gas, electricity, pipeline companies, the electrical grid, communal heating, and the railways in order to serve as an honest broker in weighing the interests among producers, consumers, and the state.<sup>13</sup>

**Priority 4: Ensure full transparency.** In many cases, flows and consumption of gas are not being measured, which hinders any attempt at economization. It is much easier to achieve proper measurement when prices are higher, because then at least one party, the purchaser or the seller, or both, will be interested in accurate measurement, which will stimulate energy savings and thus contribute to greater efficiency.

### **Priority 5: Reasonable and stable taxation, as well as regulation of independent oil and gas producers.**

In 2016, the Ukrainian government needs to focus on creating viable and stable conditions for independent producers of oil and natural gas. Taxation has been reduced to a sensible level; however, wellhead prices, access to pipelines, and the market need to be liberalized. The licensing procedures should be simplified, unified, and synchronized involving fewer state authorities. Legislation on land access needs to be reformed, so that oil and gas companies can purchase or rent agricultural land. In addition, domestic and foreign producers should be treated equally.

**Priority 6: Breakup of Naftogaz.** Naftogaz should be unbundled and broken up into independent subsidiaries for production and transportation.

Naftogaz and Energorynok should be deprived of their trade monopolies, and state trading in any form of energy should cease, as a competitive market for private traders should be established. Eventually, the producing enterprises within Naftogaz should be fully privatized, but, given current circumstances, that can hardly be done in a satisfactorily transparent and competitive fashion in 2016 as the current asset prices are too low. For reasons of national security, the trunk transportation systems will have to remain state-owned for the foreseeable future, although private international management could be considered.

### **Priority 7: Continue improving corporate governance.**

The Ukrainian government and Naftogaz need to continue to improve the corporate governance of state energy companies, so that all state energy companies can benefit from new, competent, and honest management that is subject to control from qualified supervisory boards.

**Priority 8: Stop buying gas from Russia.** Thanks to Naftogaz's successful opening to Europe for gas supplies, Ukraine could slash its purchases of gas from Russia in 2015 to just 6.1 billion cubic meters, while the EU supplied 10.3 billion cubic meters.<sup>14</sup> In 2016, Ukraine should aim at eliminating all purchases from Russia, where Gazprom has the monopoly on exports through pipes. At present, Russia is switching back and forth between offering very cheap gas and gas above market prices. Ukraine should not fall for the temptations of temporarily lower prices, as the Russian government insists on its privilege to abolish "discounts" offered at any time. Moreover, Gazprom's corrupt and geopolitical designs persist. For Ukraine, it is a matter of national security to stop buying gas from Russia, and Russian gas prices are, in any case, dictated by international LNG prices, currently around \$225 per 1000 cubic meters.

### **Priority 9: Make gas transit from Russia orderly.**

Russia's expressed aim is to transport all of its oil and gas to Europe through pipelines owned by the Russian state. Therefore, Russia has cut its gas transit to Ukraine by half and has expressed its ambition to eliminate this gas transit by 2018, by building a new pipeline, Nord Stream 2, which would run through the Baltic Sea, from Russia to Germany. This transition may take time, but the Ukrainian government needs to

<sup>13</sup> Anders Åslund, *Ukraine: What Went Wrong and How to Fix It* (Washington, DC: Peterson Institute for International Economics, 2015), p. 195.

<sup>14</sup> Tadeusz Iwanski, "Ukraine: Successful Diversification of Gas Supply," OSW, Centre for Eastern Studies, Warsaw, February 3, 2016.



US Secretary of State John Kerry meets with Ukrainian President Poroshenko on the sidelines of the Munich Security Conference ahead of a bilateral meeting on February 13, 2016. *Photo credit: US Department of State/Flickr.*

create an orderly process for gas transit from Russia to Europe, to eliminate corruption associated with it, and to secure gas supplies for European gas importers. Gas transit needs to become completely transparent and clearly separate from the Ukrainian gas trade. To this end, Naftogaz has increased the transit tariffs to a normal market level, and Ukraine's Anti-Monopoly Committee has fined Gazprom for violations of Ukraine's competition rules.<sup>15</sup>

**Priority 10: End the gas contract with Russia of January 2009.** In order to render its gas trade and transit transparent, Ukraine needs to officially end the unfavorable gas contract with Russia of January 2009. This is one of many legal issues that Ukraine needs to resolve with Russia, which require the best legal expertise that can be offered.

### Recommendations for the Transatlantic Community

The Transatlantic community, that is, the European Union, including the European Energy Community, the United States, but also the IMF and the World Bank need to weigh in and help Ukraine stand up against the unfair business practices of the Russian Federation and Gazprom. At the same time, the Transatlantic community needs to assist the Ukrainian government with its domestic reforms of the energy sector.

**Priority 1: Help free Ukraine from Gazprom's monopolistic and corrupt practices.** The case against Gazprom is evident. This state corporation is routinely accused of trying to bribe or otherwise sway politicians throughout its area of operation for the sake of geopolitical influence or corrupt interests.<sup>16</sup> This

<sup>15</sup> "Stoimost' tranzita dlya Gazproma mozhet vyrasti vtroe – Naftogaz (The Cost of Transit for Gazprom Can Increase Three Times – Naftogaz)," *Ekonomichna Pravda*, February 17, 2016.

<sup>16</sup> Margarita Mercedes Balmadeca, "Gas, Oil and the Linkages between Domestic and Foreign Policies: The Case of Ukraine," *Europe-Asia Studies* 50, no. 2, 1998, pp. 257–286; Margarita Mercedes Balmadeca, *The Politics of Energy Dependency: Ukraine*,

must not be accepted by the international community. Ukraine has made a clear choice to stop buying gas from Russia, because the state is too weak to stand up to Gazprom's corrupting influence. The European Union and the United States need to support Ukraine in this sensible decision and facilitate its purchases of gas from other sources, primarily Europe.

**Priority 2: Facilitate orderly gas transit through Ukraine.** The Russian government has developed the habit of cutting off its gas supply through Ukraine for political reasons. As long as EU countries purchase gas from Russia, this must not be allowed. The European Union must ensure that gas transit through Ukraine is transparent and secure, and the United States should offer support.

#### **Priority 3: Pursue EU competition policy against Gazprom.**

No company has violated EU competition policy more blatantly than Gazprom, with its prohibition against re-exports, its pay-or-take policies, and its extraordinary price discrimination on political grounds. The evidence is available and persuasive, but the European Commission, which has all the relevant powers, is late to act. It is difficult to perceive this lack of action as anything but subservience to Russian political pressure. The United States needs to use its influence to keep the EU true to its legal principles. The same is even more true of Nord Stream 2, a gas pipeline project instigated by Gazprom and certain German interests, to weaken the EU and its energy policy to the disadvantage of Ukraine.

**Priority 4: Investigate Gazprom as a criminal organization.** Anecdotal reports abound about senior Russian officials bribing European politicians, and Russian officials extracting billions of dollars of corrupt revenues from Gazprom.<sup>17</sup> This must not be accepted in a society based on the rule of law, such as the European

Union. The most plausible of the many corruption accusations need to be properly investigated by law enforcement in the respective countries. According to the ordinary banking standard, "know your customer," banks are not supposed to allow an account to be opened by a customer, who is suspected of criminal activity. By this standard, Gazprom and its many subsidiaries should not be permitted to open a bank account in any EU country, and there is no reason to make an exception to the rule for Gazprom.

**Priority 5: Implement the EU Third Energy Package in Ukraine.** Ukraine is a member of the European Energy Community, which is the appropriate agent to assist Ukraine in implementing energy reforms. The Energy Community has an excellent secretariat that is well-placed to be a lead advisor to the Ukrainian government in its energy reforms.

The World Bank and the European Bank for Reconstruction and Development can also contribute to Ukraine's domestic energy reforms.

**The European Union must ensure that gas transit through Ukraine is transparent and secure, and the United States should offer support.**

#### **Priority 6: Support Ukraine in international governance institutions.**

Ukraine and Russia have a substantial number of arbitration cases, some related to Russian confiscation of Ukrainian property in Crimea and the occupied Donbas. Many involve gas transactions, involving alleged arrears, contract and price disputes. Most of these seem to be going to the Arbitration Institute at the Chamber of Commerce in Stockholm, but other international institutions should play a more prominent role. In particular, the European Commission should take a firm lead in competition policy. If the principles of the Russian-Ukrainian gas agreement of 2009 are deemed illegal, Gazprom's chances of success in Stockholm arbitration would decrease sharply. Other international institutions that could and should play a role are the World Trade Organization and the Energy Charter. Ukraine needs all the support it can get in these international forums.

**Anders Åslund** is Resident Senior Fellow with the Dinu Patriciu Eurasia Center. He is a leading specialist on the East European economies, especially Russia and Ukraine. He has written two books on Ukraine and co-edited two. Åslund was one of the founders of the Kyiv School of Economics and co-chaired its board of directors 2003-12.

<sup>16</sup> Belarus, and Lithuania between Domestic Oligarchs and Russian Pressure, *Studies in Comparative Political Economy and Public Policy* (Toronto: University of Toronto Press, 2013).

<sup>17</sup> Global Witness, "It's a Gas: Funny Business in the Turkmen-Ukraine Gas Trade," 2006, <https://www.globalwitness.org/en/reports/its-gas/>; Vladimir Milov and Boris Nemtsov, *Putin: What 10 Years of Putin Have Brought*, Novaya Gazeta, 2010.

# Atlantic Council Board of Directors

## CHAIRMAN

\*Jon M. Huntsman, Jr.

## CHAIRMAN EMERITUS, INTERNATIONAL ADVISORY BOARD

Brent Scowcroft

## PRESIDENT AND CEO

\*Frederick Kempe

## EXECUTIVE VICE CHAIRS

\*Adrienne Arsht

\*Stephen J. Hadley

## VICE CHAIRS

\*Robert J. Abernethy

\*Richard Edelman

\*C. Boyden Gray

\*George Lund

\*Virginia A. Mulberger

\*W. DeVier Pierson

\*John Studzinski

## TREASURER

\*Brian C. McK. Henderson

## SECRETARY

\*Walter B. Slocombe

## DIRECTORS

Stéphane Abrial

Odeh Aburdene

Peter Ackerman

Timothy D. Adams

John Allen

Michael Andersson

Michael Ansari

Richard L. Armitage

David D. Aufhauser

Elizabeth F. Bagley

Peter Bass

\*Rafic Bizri

Dennis Blair

\*Thomas L. Blair

Myron Brilliant

Esther Brimmer

\*R. Nicholas Burns

William J. Burns

\*Richard R. Burt

Michael Calvey

James E. Cartwright

John E. Chapoton

Ahmed Charai

Sandra Charles

Melanie Chen

George Chopivsky

Wesley K. Clark

David W. Craig

\*Ralph D. Crosby, Jr.

Nelson Cunningham

Ivo H. Daalder

\*Paula J. Dobriansky

Christopher J. Dodd

Conrado Dornier

Thomas J. Egan, Jr.

\*Stuart E. Eizenstat

Thomas R. Eldridge

Julie Finley

Lawrence P. Fisher, II

Alan H. Fleischmann

\*Ronald M. Freeman

Laurie Fulton Courtney

Geduldig

\*Robert S. Gelbard

Thomas Glocer

\*Sherri W. Goodman

Mikael Hagström

Ian Hague

Amir Handjani

John D. Harris, II

Frank Haun

Michael V. Hayden

Annette Heuser

\*Karl Hopkins

Robert Hormats

Miroslav Hornak

\*Mary L. Howell

Wolfgang Ischinger

Reuben Jeffery, III

\*James L. Jones, Jr.

George A. Joulwan

Lawrence S. Kanarek

Stephen R. Kappes

Maria Pica Karp

Sean Kevelighan

Zalmay M. Khalilzad

Robert M. Kimmitt

Henry A. Kissinger

Franklin D. Kramer

Philip Lader

\*Richard L. Lawson

\*Jan M. Lodal

Jane Holl Lute

William J. Lynn

Izzat Majeed

Wendy W. Makins

Mian M. Mansha

Gerardo Mato

William E. Mayer

Allan McArtor

Eric D.K. Melby

Franklin C. Miller

James N. Miller

\*Judith A. Miller

\*Alexander V. Mirtchev

Karl Moor

Michael Morell

Georgette Mosbacher

Steve C. Nicandros

Thomas R. Nides

Franco Nuschese

Joseph S. Nye

Hilda Ochoa-Brillembourg

Sean O'Keefe

Ahmet Oren

\*Ana Palacio

Carlos Pascual

Thomas R. Pickering

Daniel B. Poneman

Daniel M. Price

Arnold L. Punaro

Robert Rangel

Thomas J. Ridge

Charles O. Rossotti

Stanley O. Roth

Robert Rowland

Harry Sachinis

John P. Schmitz

Brent Scowcroft

Rajiv Shah

Alan J. Spence

James Stavridis

Richard J.A. Steele

\*Paula Stern

Robert J. Stevens

John S. Tanner

\*Ellen O. Tauscher

Karen Tramontano

Clyde C. Tuggle

Paul Twomey

Melanee Verveer

Enzo Viscusi

Charles F. Wald

Jay Walker

Michael F. Walsh

Mark R. Warner

Maciej Witucki

Neal S. Wolin

Mary C. Yates

Dov S. Zakheim

## HONORARY DIRECTORS

David C. Acheson

Madeleine K. Albright

James A. Baker, III

Harold Brown

Frank C. Carlucci, III

Robert M. Gates

Michael G. Mullen

Leon E. Panetta

William J. Perry

Colin L. Powell

Condoleezza Rice

Edward L. Rowny

George P. Shultz

John W. Warner

William H. Webster

\*Executive Committee Members

List as of March 28, 2016



The Atlantic Council is a nonpartisan organization that promotes constructive US leadership and engagement in international affairs based on the central role of the Atlantic community in meeting today's global challenges.

© 2016 The Atlantic Council of the United States. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without permission in writing from the Atlantic Council, except in the case of brief quotations in news articles, critical articles, or reviews. Please direct inquiries to:

Atlantic Council

1030 15th Street, NW, 12th Floor,  
Washington, DC 20005

(202) 463-7226, [www.AtlanticCouncil.org](http://www.AtlanticCouncil.org)