

BAKU 10 2006-2016 YEAR REVIEW

SUMMER

ENERGY

SCHOOL



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**WELCOME
TO THE BAKU SUMMER ENERGY SCHOOL**



I am delighted to present the Baku Summer Energy School (BSES) anniversary program brochure. This year holds particular importance for us, because it marks the 10th anniversary of the founding of ADA University. The Baku Summer Energy School was launched at the same time as the University and has been grown in parallel with the University's development.

Over the last decade, more than 500 people have graduated from this program. The program's core aim is to educate international youth about the global position of the Azerbaijani energy industry. Having grown year-on-year, the program is one of the University's success stories.

Steeped in history, the capital city of Baku is one of the birthplaces of the petroleum industry. Since Azerbaijan regained its independence in the early 1990s, Baku has reasserted its place in the world energy arena. Over the past 25 years, Azerbaijan and the Caspian region have become a key focal point for international experts, analysts, and journalists. However, there is a historic – and prevailing - lack of understanding of the region's position in global energy politics.

Therefore, the program aims to develop a cadre of individuals who have a deep understanding of the energy industry, the region, as well as Azerbaijan itself. A physicist myself until my appointment as the first Azerbaijani Ambassador to the United States, I have often been asked to compare life in academia with life in politics and diplomacy. There are many differences between the two, but the greatest distinction I've found is the role of facts and the truth. Objectivity only comes with education. This concept lies at the very heart of ADA University and its programs.

I am very excited for you to see what this year's Summer School has to offer, and we look forward to welcoming all of you. I would like to take this opportunity to thank the program staff, first and foremost Dr. Elnur Soltanov, Chair of the Caspian Center of Energy and Environment, as well as the sponsors of BSES, SOCAR, BP and ExxonMobil.

*Amb. Hafiz Pashayev,
Rector of ADA University*



Ms. Rosaura Eliamar Martinez, Alumni, 2015, US

After attending the Baku Summer Energy School, I left with a better understanding of energy and environment issues within the Caspian Basin region. I was left awestruck at the information that was given to us in two weeks. These are the kind of topics you don't hear in your traditional classroom. It felt like a discussion among colleagues. Except, instead of colleagues it was with policymakers, lawyers, ambassadors, SOCAR representatives, and professors. It was definitely an amazing experience. This program helped me improve my networking skills along with being able to discuss energy and environment issues within the Caspian Basin without having any prior knowledge.



WHY ADA UNIVERSITY?

ADA University's focus on a variety of fields, its innovative model of learning, its unique setting for collaborative research, and high quality English language teaching already make ADA University a unique center of learning in an increasingly strategic region. The University is dedicated to preparing innovative global leaders and to promoting useful collaborative research on diplomacy, public and international affairs, business, humanities and sciences, information technologies and system engineering.

ADA University plays a significant role in developing a productive research climate and in stimulating a forum for innovative ideas in Azerbaijan, and programs like Baku Summer Energy School are a crucial part of this vision.

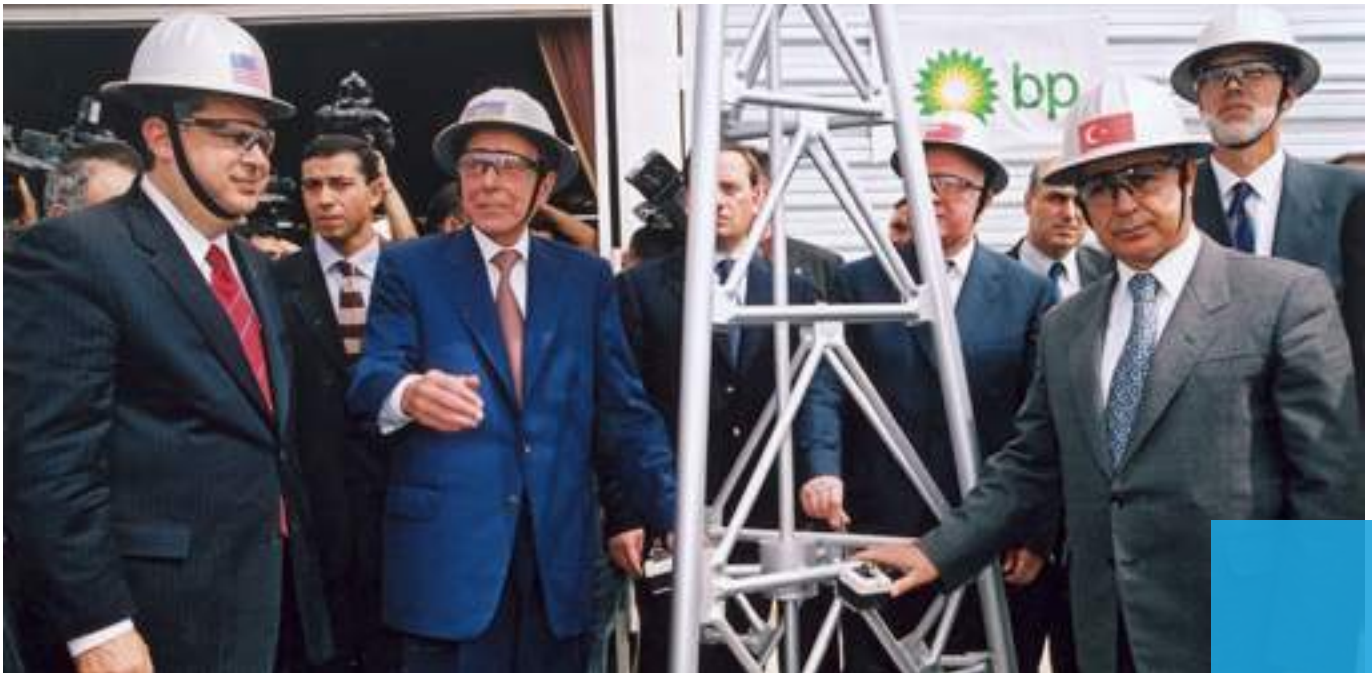
WHY BAKU?

A UNIQUE PERSPECTIVE ON THE GLOBAL OIL INDUSTRY

Baku's unique role in the world's oil industry dates back to the late 19th century. This historic city is home to the museum of the Nobel Brothers, the former residences of the first Azerbaijani oil barons, and of course several important industry locations, making it the ideal place for this annual program. Each year, participants leave with a deeper understanding of the energy developments in the Caspian Basin and beyond.

It might come as a surprise to visitors that at the turn of the 20th century, the world's number one oil-producing field was in the prosperous port city of Baku, in Azerbaijan. The Nobel brothers launched the Baku oil boom in 1873, and soon after, huge oil tankers from the region were traversing the globe. Then in 1883, oil companies owned by the Rothschild family arrived on the scene in Baku, followed by Rockefeller's gigantic Standard Oil Company.

The route of the current pipeline, running from Baku to Ceyhan via Georgia, is in fact more than a century old. However, for outsiders, Baku's "black gold" first became famous for its contribution during the Second World War. Azerbaijan was the cradle of the Soviet oil industry, and as such, the major supplier of oil and oil products.





It was after the break up the Soviet Union that Baku's importance in the regional as well as the global oil market came to the fore. More precisely, it is Baku's energy wealth that has, essentially, defined the modern geopolitical and geo-economic map of the South Caucasus region. The irony of history is that back in October 1876, European and American companies helped to engineer the transportation of three hundred barrels of oil from Baku to St. Petersburg. This was a historic event in the Russian oil industry: the beginning of the end of the hegemony of American oil.¹ But then more than a century later, it was the involvement of American and European companies in the 1994 "Contract of the Century" that marked the end of Russia's hegemony in pipeline politics, and more broadly its political dominance in the South Caucasus.

In light of this remarkable history, anyone interested in the development of the oil industry will benefit greatly from the Baku Summer Energy School, which includes visits to key locations such as Bibi-Heybat, the world's first oil well, and Sangachal Terminal, the modern oil and gas industrial complex. The program is organized around lively, engaging courses delivered by world renowned academics as well as public officials.

1 . *Kenne Fant and Marianne Ruuth, Alfred Nobel: A Biography, New York: Skyhorse Publishing, Inc., 2012, p.192.*



BAKU SUMMER ENERGY SCHOOL'S OBJECTIVES AND ADVANTAGES

The two-week program, conducted in English, provides a stimulating mix of lectures and group activities. Participants will work together with educators and industry stakeholders to explore energy and environmental issues with a special focus on the Caspian Basin. In addition to regional pipeline and energy security developments, participants will become acquainted with a wide range of issues, including: the fundamentals of energy; energy law and economics; environmental impact of the petroleum industry, management in oil and gas industry; and the strategic outlook of national and international oil companies.



Dr. Asterios Bouzias, Alumni 2014, Greece

I am career diplomat at the Ministry of Foreign Affairs of Greece, and for the last five years, I have been working on the dossier of Euro-Mediterranean relations. I attended the Baku Summer Energy School in 2014. It was an excellent opportunity for me to obtain a comprehensive overview of energy affairs. Energy constitutes a substantial part of my work. Furthermore, the legal aspects of energy are of particular interest to me, since I have studied Law, with emphasis on Public Law. The Baku Summer Energy School has also provided an important framework for horizontal exchange of experience and networking.

The participants will have the chance to discuss challenging issues with the Minister of Foreign Affairs, Minister of Energy, Minister of Ecology and Natural Resources of Azerbaijan, who feature as key speakers, along with executives of oil companies such as SOCAR, ExxonMobil, Petronas, and BP and leading international academics.

The program also offers social activities and field trips; this structure combines theoretical learning in the classroom with practical dimensions. One of the advantage of the program, is that graduates receive a certificate worth the equivalent of 3 ECTS, as well as gaining a strong understanding of the politics and economics of the Caspian-Black Sea region.

COURSE DESCRIPTION

During the two-week intensive teaching period, we offer a range of topics related to energy and the environment to the participants. Each year we have added new course subjects in order to strengthen the learning objectives.

FUNDAMENTALS OF ENERGY

This course focuses on the geological aspects of oil and natural gas production, discussing conventional methods and supply trends, as well as the expanding production of unconventional oil and gas. Given the environmental burden this entails, the course will also cover related technological innovations in the field. The course also provides a detailed introduction to the scientific aspects of energy production, comparing the various forms of energy and the extent to which they are unique, interchangeable, and transformable.

HYDROCARBON CYCLE: FORMATION, EXPLORATION, TRANSPORTATION AND CONSUMPTION

This course centers on the methods of petroleum exploration and production, which involve expensive and technology-driven approaches. In this session, the participants will learn in detail how investment decisions are made in regard to exploratory drilling, development, and production, and how these can be weighed against the potential economic returns. The course also deals with different forms of energy storage and transmission, as well as optimal source utilization and fuel-life cycle analysis.

ENERGY ECONOMICS

The course covers theoretical and practical issues related to the economics of energy, such as energy prices and public policies affecting energy demand, supply, prices, and environmental effects. The syllabus contains an up-to-date assessment of upstream petroleum economics including the world petroleum market, an introductory economic analysis of global warming, and potential roles of government and the implications for energy markets. The course will also explore oil and gas price forecasting, different types of the agreements in the petroleum industry, and management and economics of financing.

ENERGY LAW

Legal frameworks play a major role in energy exploration and production, and there are a number of different instruments available to producing states and investing companies, each with different economic and political impli-

cations. The course introduces participants to the statutes, regulations, and common law principles that apply to all aspects of the energy system, including extracting and transporting fuels by pipeline and rail and generating, transmitting, and distributing electricity. Participants will explore the types of the agreements that energy companies sign with governments, using Azerbaijan as a case study to illustrate how this works in practice.

PETROLEUM RESOURCE MANAGEMENT AND GOOD GOVERNANCE

The course has multiple objectives. It will first of all explore the fundamental positions of key participants in the petroleum sector, and the essential requirements of state management of resources. This will be helpful in understanding the essential functions of public institutions in relation to the petroleum sector, and the requirements for building capacity to enable effective national engagement in the sector. In addition, the Azerbaijani experience of resource management will be presented by practitioners, including the Executive Director of the State Oil Fund of Azerbaijan Republic (SOFAZ). Each year the course will bring world-renowned scholars and practitioners dealing with this issue in, for instance, Central Asia or Norway.

GEOPOLITICS OF ENERGY

The course will discuss this topic from the perspective of energy producing, consuming and transit states. The session will also analyze the foreign policy patterns of oil and gas exporters and the role of energy in the policies of a number global and regional powers.

ENERGY AND FOREIGN POLICY

The course will examine the use of energy resources as a means to promote political and security goals and peace. In particular, it will discuss whether there is an “oil weapon” and/or a “natural gas weapon”. The sessions will look at the conditions under which supply relationships are vulnerable to political use. It will also study the attempts to use energy infrastructures as tools for conflict resolution, including the so-called “peace pipelines”.



Mr. Atanas Georgiev, Alumni 2014, Bulgaria

I applied for the program because I wanted to learn in detail about the oil and gas industry as well as to experience first-hand the impact of the oil industry on the country's economy, and to get to know Azerbaijani culture. The program offered exactly these opportunities and allowed me to be part of a very interesting and diverse group of other young professionals, providing an excellent chance for both formal and informal networking. I was impressed by the quality of the lectures and the knowledge of the speakers and by the hospitality and the culture of the Azerbaijani people. I also had the opportunity to develop my knowledge about the oil and gas sectors. I have always been interested in energy markets (electricity and gas), but did not have the chance to learn more about specific issues.

ENERGY AND ENVIRONMENT

Energy production and consumption causes significant damage to the environment. This course reviews the emerging regimes and agreements to address climate change and the technological innovations in the field. The course is designed provide participants with a framework for thinking about the future of energy use, and by extension, societal and environmental well-being. This will include a discussion of how the current energy system could be improved.

STRATEGIC MANAGEMENT IN THE ENERGY INDUSTRY: INTERNATIONAL AND NATIONAL OIL COMPANIES

The course will focus on how national and international oil companies influence industry structure and the pace of resource development. The ways in which national oil companies are re-evaluating processes and changing business strategies, with substantial consequences for international oil and gas markets will be explored in detail. The learning objective of the course will include exploration of the goals and priorities of national oil companies, and why they are different to those of Western international majors - with potentially serious consequences for market stability and oil geopolitics. The practical side of course looks at how The State Oil Fund of Azerbaijan (SOFAZ) should divide its resources between domestic and international investments, and across different economic sectors. The course will also consider the role of SOCAR in shaping Azerbaijan's energy polices.

THE REGIONAL PERSPECTIVE: THE CASPIAN-BLACK SEA AREA

With its vast gas and oil resources and strategic location, the Caspian Basin-Black Sea region is central to global energy security discourse, especially across Europe, the US and China. The course will look at the energy policies of regional countries, Turkey, Russia, Iran, Georgia as well as the South Eastern European countries, and assess their effects on the region's energy development trajectory, including forecasting developments.

PRACTICAL COURSES AND SIMULATION GAMES

This aspect of program offers practical sessions including "Historical Milestones in the Development of the Caspian Hydrocarbon Resources" and "The Effect of the Global Climate Change on the Caspian Basin". In addition, different types of simulations are offered each year, such as "Long-Term Oil and Gas Scenarios" and "The Southern Gas Corridor and Future of the Natural Gas Policies in Europe".



Ms. Natasha Hroneska, Alumni 2009, Macedonia

The summer school was very well organized and indeed enjoyable. The opportunity to interact with academics, businessmen and politicians from the Caspian region and around the world, and to learn about the future of the energy supply in Azerbaijan from the people that actually craft energy politics on a global level was a unique experience.



FIELD TRIPS AND SOCIAL PART OF THE PROGRAM

The program offers a mixture of interesting field trips and social activities to enhance the learning process, including visits to historical places, museums, and visits to the regions outside of Baku. The field trip locations include the Bibi-Heybat oil fields, Sangachal Oil Terminal, and the Tamiz Shahar waste management plant.



The Bibi-Heybat oil fields

The 21-meter deep oil fountain in the Bibi-Heybat field of Baku in 1848 laid the foundations for the first industrial production of oil in Azerbaijan. This event marked the first time in world history that an oil well was successfully drilled. More than a decade later, on August 27, 1859, "Colonel" Edwin L. Drake (1819-1880) struck oil on American soil for the first time, in Titusville, Pennsylvania.

Sangachal Terminal

Located to the south of Baku, the Sangachal terminal is an oil and gas terminal that receives, processes, stores and exports crude oil and gas produced from the British Petroleum-operated assets in the Caspian. The terminal includes oil and gas processing facilities, the first pump station for the Baku-Tbilisi-Ceyhan oil pipeline and the South Caucasus Gas Pipeline compressor.

Tamiz Shahar Waste Management Plant

In terms of production capacity, the Tamiz Shahar waste-to-energy plant is the largest in Eastern Europe and the former Soviet countries. It is equipped with fourth generation technologies and has processes 500,000 tons of solid waste and up to 10,000 tons of medical waste annually. The waste product is inert clinker, which can be used as a construction material. After the visit to the plant, participants will attend lectures, as part of the program's focus on environmental issues.



The social part of the Summer School includes visits to several “must-see” locations, including Baku’s museums and theaters, and a trip to the Caucasus Mountains via the city of Quba. There will also be opportunities to participate in a range of other activities, including:

“In the Footsteps of Oil Barons” - a walking tour

The walking tour through the old part of Baku will be led by Fuad Akhundov, one of the city’s best-known tour guides, and who has written a series of articles about the history of Baku. The old part of Baku consists of historical buildings, including hundreds of beautiful mansions that were built in Baku during the Oil Boom (1885-1915). At that time, Baku was producing more than 50 percent of the world’s supply of oil, and which enabled wealthy Azerbaijanis to build these beautiful private mansions.²

2 . Anne Kresler, *The ABC’s of Baku: Monograms on the Oil Baron Buildings*, *Azerbaijan International*, Winter 1998 (6.4), pp. 66-68



Mr. Renato Oliveira, Alumni 2014, Brazil/US

The Baku Summer Energy School (BSES) is a great opportunity to learn from leading academics and industry specialists on important issues on energy development, particularly oil. In addition to that, I benefited from the networking opportunities with the other participants that the course offered. All this, plus the very professional and kind staff from ADA, made the program a priceless experience that I would recommend. The knowledge that I obtained helped me a lot in developing my research skills as a Ph.D. candidate at the Massachusetts Institute of Technology in the US.

Museum of Nobel Brothers

The Museum of Nobel brothers was opened in 2008 after the restoration of this complex, built in 1882 by Nobel brothers and called Villa Petrolia. The opening marked an important step by the Baku Foundation of Nobel Heritage in terms of establishing the first museum of the family outside Sweden. The museum houses some of the family's original possessions.

Mud Volcanoes

Mud volcanoes are associated with oil and gas prospects, often within hydrocarbon source rocks. These can be found near Gobustan (Qobustan), a settlement 64km southwest of Baku. Nearly half of the world's mud volcanoes are located in Gobustan, in the middle of an oily desert. This trip will enhance what the participants will learn in the course on fundamentals of energy.

Gobustan Rock Art Cultural Landscape

Gobustan has outstanding universal value for the quality and density of its rock art engravings, for the substantial evidence the collection of rock art images presents for hunting, fauna, flora and lifestyles in pre-historic times and for the cultural continuity between prehistoric and mediaeval times that the site reflects. In 2007, UNESCO awarded Gobustan a World Heritage Site designation for its rock art engravings, as well as for its prehistoric and Bronze Age sites.







SELECTION CRITERIA AND SCHOLARSHIP OPPORTUNITIES

The program is open to academics and professionals in the field of international relations, economics, and journalism, mid to senior level employees in the energy and environment-related sectors, and local and foreign government officials. Fluency in English is a requirement, as is a University degree (BA). The selection process will seek to achieve diversity both in terms of professional background and country of origin.

In evaluating submitted applications, Caspian Center for Energy and Environment (CCEE) shall be guided solely by



Ms. Nigar Goksel, Alumni 2010, Turkey

For a two week program, the Summer School illuminated many more different facets of the world of hydrocarbons than I expected. For me, usually consumed by the daily politics and soft power/IR debates of the region, it also served as a reality check - factoring in the hard sciences, such as the mathematics and physics involved in decision making, as well as the politics. As someone who also has a passion for Azerbaijan, I feel that ADA University and the staff set an example that is very important for the future of the country and the region.

the compatibility between the Applicant's professional/academic profile and interest in the program. Candidates will be selected by the Selection Committee, consisting of CCEE managers and ADA University leadership. The results of the selection process will be announced on 1 May in each year by email. Only successful applicants will be contacted. Updated information will be made available on the CCEE website.

The program fee does not include accommodation or travel, which is the responsibility of the candidate. However, in order to serve the interest of program participants, based on applicants' background and a strong case set out in a letter, we offer partial scholarships, up to 50 percent. In addition, from 2016, British Petroleum in Azerbaijan offers a scholarship to Azerbaijanis, via the Social-Educational support direction of BP Azerbaijan.

FACTS AND FIGURES

The Baku Summer Energy School offers a fascinating educational and social program, bringing together a diverse group of participants from all over the world along with a host of knowledgeable and well-known academics and experts as speakers.

During recent years we have worked hard to develop the diversity of the program, identifying the topics best suited to the wide-ranging program we wanted to deliver. Over the first two years, the range of topics has extended far beyond the energy industry. We would like to describe a few relevant statistics in order to show the path we have taken since the program's inception.

Number of Participants by Country (2006-2016)

Azerbaijan	105	Cyprus	1	Iraq	2	Mozambique	1	Sudan	1
Austria	1	Czech Republic	4	Israel	5	Netherlands	3	Switzerland	1
Bahamas	1	Estonia	2	Italy	14	Norway	5	Qatar	2
Bangladesh	2	France	4	Japan	2	Oman	1	Russia	8
Belarus	1	Georgia	5	Kazakhstan	1	Poland	9	Turkey	21
Belgium	6	Germany	7	Kuwait	2	Romania	6	UAE	2
Bhutan	1	Greece	8	Lithuania	2	Slovakia	3	UK	3
Brazil	1	Guyana	1	Macedonia	1	Slovenia	2	US	64
Bulgaria	3	Hungary	4	Malaysia	1	South Africa	2	Uzbekistan	2
Canada	1	India	8	Mexico	6	South Korea	1	Venezuela	1
Croatia	3	Iran	3	Moldova	1	Spain	2		



Ms. Oana-Maria Rebedea, Alumni 2011, Romania

Baku Summer Energy School is a gathering of brilliant and innovative minds with a keen interest in the global and regional energy agenda, and was a privilege to experience. Broadly, the Summer School generally serves two functions, firstly as a way of learning more about the industry, but secondly as a social and networking opportunity, where you can meet like-minded people and discuss the topics with them. Also, I had the pleasure of meeting high level government officials, distinguished professors and eminent CEOs of the major energy companies, all with varying experience and insightful presentations.



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Caspian Center for Energy and Environment
ADA University

Ahmadbey Aghaoghlu str. 11
Baku, Azerbaijan, AZ1008
Tel.: (+994 12) 437 3235 ext. 307
Fax: (+994 12) 437 3236

E-mail: ccee@ada.edu.az
Web: www.ccee.ada.edu.az

