

ANNUAL REPORT 2023

Binational Industrial Research and Development Foundation

# MISSION STATEMENT

To stimulate, promote and support industrial R&D of mutual benefit to Israel and the U.S.

# **BRIDGING INNOVATION:** A Reflection on 2023 through the Lens of the BIRD Foundation



The BIRD Foundation is an established binational program that supports R&D collaborations between U.S. and Israeli companies and, in sector-specific programs, universities and research institutes, leading to the joint development and commercialization of innovative technologies that are of mutual benefit to both countries.

In 2023, the BIRD Foundation achieved significant milestones that have continued to contribute to its mission of strengthening ties between the two countries. In February 2023, the third Executive Committee of the Energy Center commenced, which

included the participation of leaders from both U.S. and Israeli consortia and showcased their achievements. In March 2023, the Foundation completed its first cycle of BIRD Cyber, a new program funded by the U.S. Department of Homeland Security and the Israel National Cybersecurity Directorate. BIRD Cyber promotes collaborations that focus on cybersecurity and emerging technologies and are aimed at enhancing the cyber resilience of critical infrastructure and the economies of both countries.

In September 2023, the Foundation completed its eighth cycle of BIRD HLS, a program that demonstrates the ongoing commitment to the development of homeland security technologies. In November 2023, the Executive Committee of BIRD Energy convened in a virtual meeting to approve a record number of nine projects, underscoring the Foundation's ongoing commitment to collaborations in the clean energy sector. The BIRD Board of Governors met in Washington DC in June and December of 2023, approving a record number of projects during both general cycles.

As we reflect on the events of the past year, particularly amidst the socio-economic challenges brought about by October 7th and the subsequent war between Israel and Hamas, the BIRD Foundation has remained dedicated to fostering innovation and collaboration between U.S. and Israeli partners. Our team and stakeholders have demonstrated unwavering support and perseverance throughout these trying times. While events in Israel have presented formidable obstacles, they have also underscored the importance of our work in fostering innovation and collaboration between U.S. and Israeli entities.

As I complete my first year as Executive Director, I wish to extend my gratitude to the exceptional BIRD team and the Board of Governors for their staunch support and patience. My experience in the last year has made me even more enthusiastic and optimistic about the prospects for BIRD and its distinctive role in fostering U.S.-Israel technology cooperation.

This year and moving forward our priorities include:

- 1. Streamlining and simplifying processes for grantees and stakeholders.
- 2. Increasing our support for impactful innovation and the promotion of diversity.
- 3. Seeking additional resources to leverage the BIRD-proven platform allowing us to expand our reach and maximize our impact.

Thanks again to our team, partners, supporters, and stakeholders for their dedication and resilience during the challenges of the past year. Together, let us continue in our efforts towards a future where innovation knows no bounds and collaboration no horders

# **BOARD OF GOVERNORS AND ADVISORS**

### **U.S. GOVERNORS**



MS. MOJDEH BAHAR | CO-CHAIR
Associate Director for Innovation and
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Department of Commerce



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Middle East and North Africa,
Representing the Assistant
Secretary for International Affairs
Department of Treasury



DR. SARAH STATON
Deputy Director
Office of Science and Technology Cooperation
Representing the Assistant Secretary for Oceans and
International Environmental and Scientific Affairs
Department of State

### **ISRAEL GOVERNORS**



DR. AMIRAM APPELBAUM | CO-CHAIR
Chief Scientist
Ministry of Innovation, Science and Technology
Chairman, Israel Innovation Authority



DR. EINAT MAGAL | ACTING CO-CHAIR
Deputy Chief Scientist
Ministry of Innovation, Science and
Technology



MR. SHLOMI HEIZLER
Director General
Ministry of Finance



MR. AMNON MERHAV
Director General
Ministry of Economy and Industry

# **BOARD OF GOVERNORS AND ADVISORS**

### DESIGNEES WHO HAVE REPRESENTED THE GOVERNORS AT THE BOARD MEETINGS - 2023

Dr. Shmuel Abramzon Israel Ministry of Finance

Mr. Inon Elroy Israel Ministry of Economy and Industry

Mr. Noach Hacker Israel Embassy, Washington, D.C.

### **JOINING THE BOARD MEETINGS - 2023**

Mr. Andrew Conn U.S. Department of Commerce

Mr. Adam Friend U.S. Department of State

Dr. Hae-Jeong Lee U.S. Department of Commerce

Mr. Dante Mazzarri U.S. Department of Treasury

Mr. Eitan Glazer PwC Israel

Ms. Yifat Hadaya Israel Innovation Authority

Mr. David Osborne Arnon, Tadmor-Levy

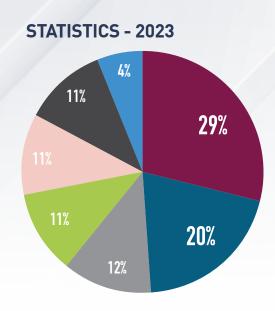
### **ADVISORS**

**Dr. Harry Hertz** 

Dr. Phillip Singerman



# **ACTIVITY SUMMARY – BIRD GENERAL PROGRAM**



### **APPROVED PROJECTS**

Sector	Total
Energy, Water, Environment *	<b>1</b> 0
HLS & Cyber Security **	7
Agrotechnology	4
Electronics	4
Life Sciences/Medical Devices	4
Other	4
Healthcare IT	2
Total	35

<sup>\*</sup> includes 9 BIRD Energy projects

### **FINANCIAL SUMMARY - 2023**

		Inco	Gr	ant		
	Endov	wment	Repay	ments	Payn	nents
	Year (\$M)	Cum. (\$M)	Year (\$M)	Cum. (\$M)	Year (\$M)	Cum. (\$M)
2013	8	251	3	99	8	309
2014	8	259	3	102	10	319
2015	7	266	2	104	10	329
2016	7	273	1.5	105	10	339
2017	8	281	0.9	106	7.4	346
2018	8	289	2.4	109	8.7	355
2019	8	297	1.9	111	7.8	363
2020	8	305	2.2	113	8.8	372
2021	8	313	2.3	115	9.0	381
2022	9	322	0.6	116	9.0	390
2023	9	331	1.0	117	7.6	396

### Income

BIRD's annual income is comprised of interest earnd on the Endowment Fund and Repayments from companies whose projects generated sales. That annual income enables BIRD to meet all its financial obligations.

Since its inception, BIRD has received interest income of approximately \$331 million on the Endowment Fund and Repayments of approximately \$117 million from successful projects. Over that period, Grant Payments to companies have reached approximately \$396 million (all amounts are nominal, not adjusted to inflation).

### **ACTIVITY SUMMARY - 2023**

Direct Sales	Repayments	Grant Payments		Approved Projects	
\$19 million	\$1.0 million	\$7.6 million	Full-scale projects 19 projects*	Mini projects O projects	Total projects 19 projects
Cumulative \$5.32 billion	Cumulative (from 477 companies) \$117 million	Cumulative \$396 million	Cumulative 891 projects	Cumulative 179 projects	Cumulative <b>1,070</b> projects

<sup>\*\*</sup> includes 3 BIRD HLS projects, 4 BIRD Cyber projects

# **ABOUT BIRD**

The U.S.- Israel Binational Industrial Research and Development (BIRD) Foundation works to encourage cooperation between U.S. and Israeli companies in a wide range of technology sectors by providing funding and assistance in facilitating strategic partnerships for the development of joint products or technologies.

BIRD provides support of up to 50% of a project's budget, beginning with R&D and ending with the initial stages of sales and marketing. BIRD shares the risk and requires repayment only if the project achieves revenue. BIRD supports projects without receiving any equity or IP rights in the participating companies or technologies.

BIRD's scope extends to Advanced Manufacturing, Agrotechnology, Cleantech, Energy and Environment, Communications, Construction Tech, Cyber Security, Electronics, FinTech, FoodTech, Healthcare IT, Homeland Security, Life Sciences, Nanotechnology, Semiconductors, Software, Water and other areas of innovative technology with commercial potential.

Since 1977, the Foundation has approved investments in close to 1200 projects, which have yielded direct and indirect revenues of more than \$10 billion. BIRD approves projects twice a year. Projects are evaluated by expert reviewers appointed by the Israel Innovation Authority (IIA) and the National Institute of Standards and Technology (NIST), U.S. Department of Commerce.

The Foundation also manages BIRD Energy, a program which promotes and supports U.S.-Israel joint development projects relating to clean energy technologies. This program is the implementation of a cooperation agreement between the U.S. Department of Energy and the Israel Ministry of Energy, along with the Israel Innovation Authority. BIRD Energy adheres to the same rules and procedures as BIRD.

Another binational program managed by the BIRD Foundation is "BIRD Homeland Security (HLS)." BIRD HLS is a joint U.S.-Israel program that aims to foster and support

the development of advanced technologies for the homeland security mission. This program was established by the U.S. Department of Homeland Security (DHS) and the Israel Ministry of National Security (IMNS) as part of the agreement between the Government of the United States of America and the Government of the State of Israel on Cooperation in Science and Technology for Homeland Security Matters.

In 2018, the BIRD Foundation was selected to manage the U.S.-Israel Energy Center, fully named: The U.S.-Israel Center of Excellence for Energy, Engineering and Water Technology.

The goal of the Energy Center, established by the U.S. Department of Energy, Israel Ministry of Energy and the Israel Innovation Authority, is to promote energy security and economic development through the research and development of innovative energy technologies.

The Energy Center is a 5-year program, covering four topics: Energy Storage, Energy Cyber, Energy-Water Nexus and Fossil Energy. For each topic, a consortium of U.S. and Israeli companies and/or universities and/or research institutions will jointly perform research and development, leading to know-how/technology transfer from academia to industry and significantly accelerating deployment of technologies.

BIRD Cyber is the most recent program to be added to those managed by BIRD. The program was announced in July 2022 and the first projects to be funded were selected in March 2023. This program was established by the U.S. Department of Homeland Security (DHS) and the Israel National Cyber Directorate (INCD) to promote collaboration on cybersecurity and emerging technologies aimed at enhancing the cyber resilience of critical infrastructure and economies of both countries by harnessing the innovation and ingenuity of the Israeli and the American technology sectors. The maximum conditional grant is \$1.5 M per project.

# **APPROVED PROJECTS - BIRD GENERAL PROGRAM**

### **AGROTECHNOLOGY**

Israeli Co.	U.S. Co.	Title of Project	Additional Sector Info.
Agromentum Ltd. (Fieldin) Yokneam Illit	Manulife Investment Management Agriculture Services Inc. Turlock, CA	A hardware and software platform that turns every tractor into an autonomous tractor for operating in orchards.	Smart Farming
Diptera.ai Ltd. Jerusalem	Vectech, Inc. Baltimore, MD	A process and system to monitor and control the Anopheles Stephensi mosquito, a highly competent malaria vector	Biotechnology/ Al
LahakX Ltd. Ramat Hasharon	Aero Systems West, Inc. San Martin, CA	Heavy payload spraying drone swarm for agriculture and fire prevention	UAS/ Automation & Robotics
Treetoscope Ltd. Mikve Israel	The Toro Company Minneapolis, MN	Next-generation cost effective and scalable precision irrigation management based on direct plant sensing technology	Irrigation

### **ELECTRONICS**

Israeli Co.	U.S. Co.	Title of Project	Additional Sector Info.
Alvalinks Ltd. Tel Aviv	Cobalt Digital Inc. Champaign, IL	A video network intelligence and observability platform for broadcasting and media companies	Video
ContainerEyes Ltd. Tel Aviv	NTELX Inc. Tysons, VA	A real-time tracking and risk analysis service to increase food safety and reduce food loss when it is being shipped	Logistics
Hypervision Ltd. Yokneam Illit	Light Polymers, Inc. Santa Clara, CA	A liquid crystal-based polarized coating technology, methods & systems tailored for Virtual Reality and Mixed Reality optics	Electro-optics / Materials
Quantum Machines Ltd. Tel Aviv	QuEra Computing Inc. Boston, MA	Incorporating a photonic control unit and photonic integrated circuit into quantum computing devices	Hardware / Photonics

### **ENERGY, WATER, ENVIRONMENT**

Israeli Co.	U.S. Co.	Title of Project	Additional Sector Info.
CENS Materials Ltd. Beer Sheva	LiCAP Technologies, Inc. Sacramento, CA	A dry electrode process with carbon nanotube technology dispersion to advance EV battery capacity and performance while lowering production costs	Batteries

### **HEALTHCARE IT**

Israeli Co.	U.S. Co.	Title of Project	Additional Sector Info.
Agado Live Ltd. Tel Aviv	Adventist HealthCare Rehabilitation Rockville, MD	End-to-End remote rehabilitation platform for neurologic	Rehabilitation
Greatnix Ltd. (Opmed.AI) Herzliya	Mayo Clinic Rochester, MN	An Al-driven planner that optimizes procedure scheduling, enhances operating room efficiency and maximizes resource utilization	Digital Health

### LIFE SCIENCES

Israeli Co.	U.S. Co.	Title of Project	Additional Sector Info.
Geneyx Genomex Ltd. Herzliya	Ocean Genomics, Inc. Pittsburgh, PA	A multi-omic software method, combining DNA and RNA, that improves the detection of genomic variants to improve the diagnosis of diseases and the identification of drug targets	Biotech/ Genetic Analysis
NeuroTrigger Ltd. Tel Aviv	Rand Eye Institute Deerfield Beach, FL	A clinically validated eyelid pacemaker that restores blinking to individuals with facial paralysis	Medical Devices
The Sheba Fund for Health Services and Research Ramat Gan	Serpin Pharma Inc. Manassas, VA	Phase II clinical trial to provide a targeted therapeutic to restore immune balance for patients with acute myocardial infarction	Pharma
Tissue Dynamics Ltd. Rehovot	ATCC - American Type Culture Collection Manassas, VA	Advanced organoid kit for cardiac toxicity assessment	Synthetic Biology

### **OTHER**

Israeli Co.	U.S. Co.	Title of Project	Additional Sector Info.
Celleste Bio Ltd. Misgav Business Park	Mondelez International – Mondelez Global LLC Chicago, IL	On-demand non-fat cocoa solids and cocoa-based powder using cell-based technology	Foodtech
lmagindairy Ltd. Haifa	Ginkgo Bioworks Inc. Boston, MA	Non-whey dairy proteins at scale and cost parity for novel food products	Foodtech
Israel Aerospace Industries (IAI) Lod	MELD Printworks Corp. Christiansburg, VA	LEAF - Large Metal Parts Enabled by Additive Friction utilizing additive friction stir deposition technology to develop and approve large civil aviation components	Additive Materials
Plantish (Oshi) Ltd. Rehovot	The Better Meat Co. West Sacramento, CA	Allergen-free mycelium- based whole-cut salmon analogs	Foodtech/Meat Substitutes

# **BIRD ENERGY**

BIRD Energy develops innovation through U.S.-Israel cooperation in a range of clean energy technologies including renewable energy, energy efficiency, natural gas and energy-water technologies.

The program is the implementation of a cooperation agreement between the U.S. Department of Energy, the Israel Ministry of Energy and Infrastructure jointly with the Israel Innovation Authority and the BIRD Foundation.

BIRD Energy projects address energy challenges and opportunities of interest to both countries while focusing on commercializing clean energy technologies that improve economic competitiveness, create jobs and support innovative companies.

Projects must include one U.S. and one Israeli company, or a company paired with a research institution. The partners need to present a project that involves innovation and demonstrates significant commercial potential. Awarded projects receive conditional grants of up to \$1.5M per project.

BIRD Energy was launched in 2009 and follows the BIRD Foundation's rules and procedures.

### **BIRD ENERGY STATISTICS 2009-2023**

Approved	Signed	Funding from	Grant	Repayments (3)
Projects	Projects <sup>(1)</sup>	Governments	Payments <sup>(2)</sup>	
85	61	\$53.70M	\$33.56M	\$1.41M

- 1. Signed projects until December 31, 2023
- 2. Payments to projects in development phase
- 3. Repayments from 9 projects

### **BIRD ENERGY EXECUTIVE COMMITTEE**

### Members of the BIRD Energy Executive Committee Meeting during 2023

**Mr. Josh Volz** | Deputy Assistant Secretary for Europe, Eurasia, Africa and the Middle East, Office of International Affairs, U.S. Department of Energy

Dr. Gideon Friedmann | Chief Scientist, Israel Ministry of Energy and Infrastructure

Mr. Dror Bin | CEO, Israel Innovation Authority

**Mr. Jared T. Bierbach** | Senior International Officer, Office of African and Middle Eastern Affairs Office of International Affairs, U.S. Department of Energy

**Dr. Einat Magal** | Acting Chief Scientist of Innovation, Israel Ministry of Innovation, Science and Technology (Representing BIRD's Board of Governors)

# Others who have participated in the Executive Committee Meeting during 2023

**Ms. Maegon Barlow** | Deputy Director of the Office of African and Middle Eastern Affairs, U.S. Department of Energy

**Ms. Yifat Hadaya** | North America Desk, International Collaboration Division, Israel Innovation Authority

Mr. Shlomi Kofman | Vice President, International Division, Israel Innovation Authority

Mr. John Michele | Department of Energy Attaché, U.S. Embassy, Jerusalem

# **BIRD ENERGY APPROVED PROJECTS AND SECTORS**

Israeli Co.	U.S. Co.	Title of Project	Sector Info.	
Air Vev Ltd. Pardes Hana	Nidec Motor Corporation St. Louis, MO	Electric Motor Tailored for Mid-size eVTOL Aircraft	Electric Aviation	
Bar Ilan R&D Company (BIRAD) Ltd. Ramat Gan	Forge Nano, Inc. Thornton, CO	Advanced Flexible Thin Films Coating by Molecular Layer Deposition for Improved High- Capacity Anodes	Batteries	
Boson Energy Ltd. Modi'in	Drexel University Drexel University's C. & J. Nyheim Plasma Institute Camden, NJ	Development of a Next Generation Tar Cracking Systems for Gasification Projects	Waste to Energy	ZIIIII)
Carbon Blue Ltd. Haifa	Energy and Environmental Research Center Foundation (EERC) Grand Forks, ND	Ocean-based Carbon Dioxide Removal Technology for the Desalination Industry	Desalination / CO2 Reduction	
Groundwork BioAG Ltd. Mazor	Verdesian Life Sciences U.S., LLC Cary, NC	Integrated Biological Decarbonization Solution	Carbon Sequestration	GCO <sub>2</sub>
PowerPlug Ltd. Tel Aviv	Cirrus Nexus Corp. Wilmington, DE	AI-driven Saas-based platform for monitoring, analyzing, and reducing IT carbon footprint	Energy Efficiency	002
Solarpaint Ltd. Yokneam-Illit	Lippert Components, Inc. Elkhart, IN	Solar Awning- a Fully Flexible and Rollable Solar Panel	Solar Energy	
Trigo Solar Ltd. Sde Hemed	Texas A&M AgriLife Research College Station, TX	A Water-Energy Agri-voltaic Mounting System	Agrivoltaics	(00)
WindStore Ltd. Tel Mond	NPS Solutions LLC Darien, CT	A Compressed Air Energy Storage Solution Incorporating Wind Turbine Towers	Storage	

# **BIRD HLS - HOMELAND SECURITY TECHNOLOGIES**

BIRD HLS promotes innovation in Homeland Security technologies through U.S.-Israel cooperation between the U.S. Department of Homeland Security/Science & Technology (DHS S&T) and the Israel Ministry of National Security (IMNS). Both DHS S&T and IMNS wish to foster and support development of advanced technologies for the benefit of first responders and focus on challenges of interest to both countries while expecting a commercialization of the supported technologies.

Projects must include one U.S. and one Israeli company, or a company and a research institution. Awarded projects receive conditional grants of up to \$1M per project.

In recent years, the main program's topics included technologies and methods to secure critical infrastructure and public facilities, to enable safe and secure cities, border protection (including maritime security), unmanned aerial systems technologies, and any other advanced technologies that can help first responders in best fulfilling their duties.

This program is managed by the BIRD Foundation and follows the BIRD Foundation's rules and procedures.

### **BIRD HLS 2023 APPROVED PROJECTS**

Israeli Co.	U.S. Co.	Title of Project
NextVision Stabilized Systems Ra'anana	Data Blanket Bellevue, WA	Airborne Sensors & Computer Vision Systems for Wildfire Suppression and Real Time Awareness in HLS and Disaster Response Applications
Validit Evaluation Solutions Haifa	Inspire Labs New York, NY	Development of a Real-Time Biofeedback- Based Fraud Detection Platform for HLS- wide Field Deployment
NeuralGuard Netanya	Point Security Lexington, NC	Al Auto Detection System of Improvised Explosive Devices for Xray

### **BIRD HLS STATISTICS 2016-2023**

Approved Projects	Signed Projects [1]	Funding from Governments	Grant Payments <sup>(2)</sup>
18	14	\$11.91M	\$7.34 M

<sup>1.</sup> Signed projects until December 31, 2023

### Members of the BIRD HLS Executive Committee Meeting during 2023

**Ms. Megan Mahle** | Director, Industry Partnerships, Office of Innovation and Collaboration, Science & Technology Directorate, U.S. Department of Homeland Security

Dr. Gad Frishman | Chief Scientist, Israel Ministry of National Security (via Teams)

### Others who have participated in the BIRD HLS Meeting during 2023

**Mr. Dror Arda** | Representative of the Police, Washington D.C., invitee of Department of Homeland Security

**Mr. Andrew Conn** | International Program Manager, International and Academic Affairs Office, NIST

**Ms. Allison Garland** | Support Contractor, Industry Partnerships, Science & Technology Directorate, U.S. Department of Homeland Security

**Ms. Kesia Hamilton** | International Cooperative Programs, International Cooperative Programs Office, Science & Technology Directorate, U.S. Department of Homeland Security

Mr. Yaron Kron | Head Technology Section, Israel Ministry of National Security

**Mr. Yaron Schone** | Director of Technology Development, Israel Ministry of National Security

<sup>2.</sup> Payments to projects in development phase

# **BIRD CYBER**

In March 2022, the U.S. Department of Homeland Security (DHS) and the Israel National Cyber Directorate (INCD) issued a Joint Statement of Intent to "expand cooperative research and development, both bilaterally and by building on the framework of the Israel-U.S. Binational Industrial Research and Development (BIRD)" and to focus "on cybersecurity and emerging technologies".

The BIRD Cyber program is the implementation of this statement and the result of agreements between BIRD and the U.S. Department of Homeland Security (DHS), and between BIRD and the Israel National Cyber Directorate (INCD).

Projects that are submitted to BIRD Cyber must include one U.S. and one Israeli company, or a company and a research institution.

Awarded projects receive conditional grants of up to \$1.5M per project.

The main program's topics in its first-year included four cyber technology challenges as defined by DHS S&T and INCD:

- 1. Secured Architecture for Protecting Core Operational Processes.
- 2. Small to Medium Airports or Seaports Real-Time Risk Assessment Solution Pilot.
- **3.** Piloting Resilience Centers for SMBs and Enterprises.
- 4. Advanced Data Fusion and Analytics.

BIRD Cyber is managed by the BIRD Foundation and follows the BIRD Foundation's rules and procedures.

### **APPROVED PROJECTS - 2023**

- Rescana (Tel Aviv) and Trend Micro (Irving, TX)
   An operational cyber threat intelligence capability to inform cyber risk maritime decision-making.
- Salvador Technologies (Rehovot) and Bastazo (Fayetteville, AZ)
   A solution for Industrial Control Systems (ICS) vulnerability management, monitoring, and rapid recovery from cyber-attacks.
- Cyber 2.0 (Rishon LeZion) and Cincinnati/Northern Kentucky International Airport (Hebron, KY) A platform for Airports and Air Traffic that will provide continuous cyber visibility, real-time monitoring, and data traffic detection to minimize risks and boost compliance with regulations.
- A project to develop an airport cyber protection solution across the entire attack surface.

### LEAD PROGRAM REPRESENTATIVES

**Ms. Megan Mahle** | Director, Industry Partnerships, Office of Innovation and Collaboration, Science & Technology Directorate, U.S. Department of Homeland Security

**Mr. Aviram Atzaba** | Executive Director, Strategy & International Cooperation, Israel National Cyber Directorate

### ADDITIONAL COMMITTEE MEMBERS AND OBSERVERS

**Mr. Yosi Aviram** | Director, Cyber Cooperation Strategy and Partnerships, Israel National Cyber Directorate

Mr. Andrew Conn | International Program Manager, International and Academic Affairs Office, NIST (representing Ms. Mojdeh Bahar, Co-Chair, BIRD, Associate Director for Innovation and Industry Services, NIST)

**Mr. Adam Friend** | Covering Science and Technology Cooperation with Israel (representing Dr. Sarah Staton, Deputy Director, Office of Science and Technology Cooperation, U.S. Department of State)

**Ms. Allison Garland** | Support Contractor, Science and Technology Directorate, U.S. Department of Homeland Security

**Mr. Dadi Gertler** | Executive Director of Innovation and Technology Partnerships, Technology Division, Israel National Cyber Directorate

**Mr. Tamir Goren** | Director, Strategic Programs, Technology Division, Israel National Cyber Directorate

**Dr. Einat Magal** | Deputy Chief Scientist, Israel Ministry of Innovation, Science and Technology

### **BIRD CYBER STATISTICS 2022-2023**

Approved	Signed	Funding from	Grant
Projects	Projects <sup>(1)</sup>	Governments	Payments <sup>(2)</sup>
4	2	\$2.71M	\$0.54M

1. Signed projects until December 31, 2023 | 2. Payments to projects in development phase

# **U.S.- ISRAEL ENERGY CENTER**

The U.S.-Israel Energy Center (full name: The U.S.-Israel Center of Excellence in Energy, Engineering and Water Technology) was authorized by the U.S. Congress in the U.S.-Israel Strategic Partnership Act of 2014 and funded in the amount of \$4 M per year. In 2016, the Israeli Government approved equivalent funding to expand the U.S.-Israel Cooperation.

The Israel Ministry of Energy (MOE), the Israel Innovation Authority (IIA) and the DOE approached the BIRD Foundation to manage and operate the program. BIRD's Board of Governors approved BIRD's role in September 2018.

In June 2018, the DOE and the MOE signed an Implementation Agreement of the U.S.-Israel Energy Center. The goal of the Energy Center is to promote energy security and economic development through the research and development of innovative energy technologies by facilitating cooperation between consortia comprised of U.S. and Israeli companies, universities, and research institutions in four Topic Areas: (1) Energy Storage; (2) Cyber Security for Energy Infrastructure; (3) Energy-Water Nexus; (4) Fossil Energy. At the Energy Center Executive Committee Meeting, which was held in Washington D.C., on March 4, 2020, three consortia were selected for Topics (1), (3) and (4) and were awarded \$27.6 M in grants (\$55.2 M total value, including cost-sharing). These three consortia started their activities in August and September of 2020.

A second Call for Proposals was issued for Topic (2) Cyber Security for Energy Infrastructure, on July 2020 as a three-year program, with a budget of \$12 M. On March 16, 2021, the Energy Center Executive Committee chose the Cyber consortium. The consortium started its activity in November 2021. The 2020-awarded consortia has completed three years of activity, and the 2021-awarded consortium has completed two years of activity.

You can find more details about the ongoing consortia activities at: https://us-isr-energycenter.org/.

### **ENERGY CENTER STATISTICS 2018-2023**

Approved	Funding from	Total Grants	Grant
Consortia	Governments <sup>(1)</sup>	Approved <sup>[2]</sup>	Payments <sup>(3)</sup>
4	\$43.9M	\$31.6M	\$15.8M

- (1) Total received from both governments in the years 2018-2023
- (2) Net of conditional amounts and EC management costs
- (3) Until December 31, 2023

### **Energy Center Executive Committee**

### U.S. Members

### Mr. Nicholas Sherman

Israel Desk Officer in charge of the Cooperation Bilaterally with Israel, U.S. Department of Energy

### Mr. James Jewel

Deputy Director of Middle East and Africa, U.S. Department of Energy

### Israeli Members Dr. Gideon Friedmann

Chief Scientist Israel Ministry of Energy and Infrastructure

### Mr. Shlomi Kofman

VP International Division, Israel Innovation Authority

### **BIRD Board of Governors (in advisory role)**

**Mr. Andrew Conn** | International Program Manager, International and Academic Affairs Office, NIST, U.S. Department of Commerce

**Mr. Adam Friend** | Covering Science and Technology Cooperation with Israel, U.S. Department of State

**Dr. Einat Magal** | Deputy Chief Scientist of Innovation, Israel Ministry of Innovation, Science and Technology

### **Joining the Executive Committee Meeting**

**Mr. John Michele** | U.S. Department of Energy Attaché, U.S. Embassy, Jerusalem

**Ms. Emily Sands** | Office of Middle Eastern and African Affairs, U.S. Embassy, Jerusalem

Mr. Edward Rios | Office of Technology Transition, Commercialization Executive for the Office of Carbon Management, U.S. Department of Energy Ms. Natenna Dobson | Office

of Fossil Energy and Carbon Management, U.S. Department of Energy

**Ms. Yifat Hadaya** | North America Desk, Israel Innovation Authority

### **Energy Center Management and Operations**

The Energy Center is managed and operated by the BIRD Foundation and its staff, with the support of the following:

Ms. Tal Fischelovitch | Director of Partnerships

**Mr. Uri Attir** | Coordinator Energy-Water Nexus

Dr. Ory Dor | Coordinator Fossil Energy

Mr. Eynan Lichterman | Coordinator Energy Cyber

Dr. Zvi Tamari | Coordinator Energy Storage

Ms. Shiri Freund Koren | U.S. Coordinator

# **SUCCESS STORIES**





# Novel Solution to Optimize Compressed Air Energy Efficiency and Quality

In a collaborative effort, **EcoPlant Technological Innovation** of Israel and Kentucky-based **Atlas Machine and Supply** were awarded a BIRD Energy grant for their project aimed at optimizing compressed air energy efficiency and quality in the food and beverages industry.

The outcome of the project, the SafeAir System, continuously monitors compressed air quality to ensure that manufactured products remain free of harmful contaminants. Additionally, it incorporates a dedicated layer of energy optimization based on compressed air quality. In the event of contaminant detection, the SafeAir system promptly takes corrective action to reduce air pollution and uphold product quality.

Notably, **EcoPlant** was acquired by the American industrial company Ingersoll Rand after the successful completion of the project.

### Approved: BIRD Energy 2019







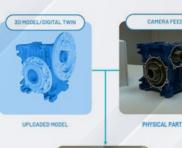
# Augmented reality system for Industry 4.0 applications

In a joint effort, **SkillReal** from Israel and **Siemens Digital Industries Software** based in Texas secured a BIRD grant for their collaborative project. This initiative targets the enhancement of manufacturing quality and throughput on plant assembly lines by leveraging augmented reality technology. Specifically, the project aims to facilitate real-time validation of mechanical parts in the automotive and aerospace sectors, thereby bolstering quality control measures.

The outcome of the project is a cutting-edge platform integrating augmented reality and artificial intelligence. This innovative platform enables rapid quality checks and precise measurements of thousands of production features with sub-millimetre accuracy using standard cameras. Its

primary goal is to identify and prevent defects at various production stages. Notably, this technology has been successfully implemented by major manufacturers worldwide, such as Honda and Volkswagen and Lockheed Martin.

Approved: BIRD June 2021







# **BIRD SELECTION OF EVENTS**



BIRD Webinar: How to Improve your Chances of Winning a BIRD Grant January 31, 2023



IEI - BIRD Webinar: How to Cooperate with a US Company and get Funding from BIRD February 7, 2023



OpenValley- BIRD In-Person Event: Focused on Financing Opportunities for Israeli Companies March 13, 2023



BIRD, Fairfax County & Embassy of Israel: Innovation and Market Opportunities-HLS, ConTech, and Cyber March 16, 2023



Webinar - BIRD HLS Call for Proposals to Secure Non-Dilutive Funding March 22, 2023



HIMSS 2023 in Chicago: BIRD, Israel in Chicago - MATTER: HealthCare IT Conference April 20, 2023



Ignite the Spark: BIRD -EnergyCom.Il Webinar on BIRD Energy Funding April 30, 2023



Department of Homeland Security SVIP Demo Week including a BIRD HLS Panel May 18 - 19, 2023



BIRD -U.S. Chamber of Commerce Webinar: Unleashing the Power of U.S.-Israel Energy Cooperation June 1, 2023



Annual Meeting of the Israel Electrochemical Society. Co-Sponsored by the Energy Center June 7, 2023



IEI -BIRD Webinar: BIRD Model Presented to IS and Foreign Agrotechnology Companies July 25, 2023



HLTH 2023 Vegas - Uniting and Fostering Collaboration within the Health Ecosystem October 8-11, 2023



9th Annual BioHealth Capital Region Forum including Israeli BioHealth Companies September 19-21, 2023



ASU hosts U.S.-Israel Energy Cybersecurity Consortium (ICRDE) October 11, 2023



Drive the AI Future: Chicago & Israel Showcase - Discussing AI Innovation December 7, 2023

# REPRESENTATION IN THE U.S.

# BIRD REPRESENTATIVES IN THE U.S.

### Atlanta, GA

Conexx (FKA America-Israel Chamber of Commerce, S.E. Region)

### **Mr. Barry Swartz**

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### Philadelphia, PA

America-Israel Chamber of Commerce

### Mr. Ravid Butz

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### Baltimore, MD

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### Providence, RI

Rhode Island – Israel Collaborative (RIIC)

### Mr. Avi Nevel

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### Boston, MA

New England Israel Business Council

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### Richmond, VA

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### Cleveland, OH

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