U.S. - Israel Center of Excellence

in

Energy, Engineering and Water Technology

(The U.S. – Israel Energy Center)

Call for Proposals

Submission Procedures Handbook

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The U.S. – Israel Energy Center

Main Milestones and Due Dates

in the Call for Proposals

Events / Milestones	Dates
Submission deadline of Executive Summary	June 30, 2026
Webinar on proposal submission requirements	February 25, 2026
Submission deadline for final Full Proposals	**September 15, 2026**
Expected date for notification of awardees selection	December 2026

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LIST OF ACRONYMS AND ABBREVIATIONS

AI	Artificial Intelligence
BIRD	(US-Israel) Bi-National Research & Development (Foundation)
CM	Consortium Member
CMA	Agreement / Contract between all Consortium Members
DOE	Department of Energy of the U.S.
EBW	Excel Budget Workbook
EC	U.S.-Israel Center of Excellence in Energy, Engineering and Water Technology (the Energy Center)
ECCP	Energy Center's Assigned Contact Person
ECEC	Energy Center Executive Committee
ECFA	Energy Center Funding Agreement
ES	Executive Summary (of the Proposal)
FM	Founding Members of the Consortium
FP	Full Proposal
G	Grant Award Payments
G&A	General and Administrative (Expenses)
IIA	Israel Innovation Authority
IL	Israel
ILB	Total Budget of all Israel Consortium Members
ILCA	Israel Consortium Administrator
IP	Intellectual Property
MOE	Ministry of Energy of the State of Israel
M&D	Milestones and Deliverables
N	Number of (6 months) segments
R&D	Research and Development
TRL	Technology Readiness Level
U.S.	United States of America
USB	Total Budget of all U.S. Consortium Members
USCA	U.S. Consortium Administrator

1 Introduction to the Energy Center and its Goals

1.1 Purpose of the Energy Center

The U.S. and Israel, through the Department of Energy of the United States of America (henceforth: "DOE"), the Israel Ministry of Energy and Infrastructure (henceforth: "MOE"), and the Israel Innovation Authority (henceforth: "IIA") have established the U.S.-Israel Center of Excellence in Energy, Engineering and Water Technology (henceforth: the "Energy Center" or the "EC"). The **purpose** of the Energy Center is to accelerate development and deployment of critical and innovative technologies in areas of energy.

1.2 The Goal of the Energy Center

The **goal** of the Energy Center is to promote energy efficiency, resilience, security and economic development through the research and development (R&D) of innovative energy technologies, while facilitating cooperation between U.S. and Israeli companies, research institutes and universities.

The Energy Center will facilitate joint R&D on energy areas by teams of scientists and engineers from the U.S. and Israel and related joint activities in energy R&D. Priority areas to be addressed are specifically defined in section 2.

2 Topic Areas of Research Priorities

2.1 Introduction

The 3 research topics to be addressed by the proposing consortia are:

1. Energy storage
2. Energy-water nexus
3. Fossil energy

Note: If there is uncertainty whether a proposed R&D project can be defined and included within any of these 3 research topics, please contact and consult the BIRD Foundation.

Related joint efforts shall focus on, but not be limited to:

- Development, validation and optimization of functionality, durability and cost-effectiveness of new methods and technologies.
- Resource, infrastructure and economic analysis to inform investment decisions, operational strategies and action plans.
- Development and implementation of decision support tools for use by government decision-makers, business and technical partners and other stakeholders.
- Sharing best practices by facilitating: (a) access to R&D infrastructure, (b) technology transfer practices from academic institutions and National Laboratories for application by industry in the U.S. and Israel, (c) workforce training and educational programs, and (d) student and postdoctoral exchange.

2.2 Topic Area #1: Energy Storage

Seeking consortia addressing energy storage challenges through metal economy principles - such as reduced reliance on critical materials, circular use of metals, and durable system design - supported by integration, digital, and application-focused innovations.

2.2.1 Alternative Chemistries & Material Efficiency

Develop storage solutions that reduce reliance on scarce, high-cost materials (lithium, cobalt, nickel) by advancing chemistries based on abundant elements (sodium, zinc, aluminum, others), while improving material efficiency.

2.2.2 Recycling & Closed-Loop Systems

Create scalable, cost-effective recycling technologies for key battery components, supporting end-of-life management and minimizing the environmental impact of raw material extraction. The aim is to enable closed-loop systems that reduce dependence on virgin resources and enhance circularity.

2.2.3 Standalone Storage for Remote/Grid-Constrained Areas

Design and deploy modular storage units powered by solar or charged during off-peak hours to provide reliable infrastructure (e.g., for telecom stations, EV charging or other applications) in remote or infrastructure-limited regions.

2.2.4 Thermal Energy Storage

Develop innovative, scalable, low-cost, and sustainable thermal storage technologies.

2.2.5 Integration & AI Applications

Use AI to improve integration and management of storage in the energy system, including failure prediction, grid optimization, demand balancing, smart supply, and data analysis.

2.2.6 Long-Duration Storage

Advance solutions that extend storage duration to support energy systems flexibility.

2.2.7 Safety, Reliability & Cost Reduction

Enhance performance, reliability and safety, while reducing costs of energy storage technologies.

2.3 Topic Area #2: Energy-Water Nexus

Seeking consortia to advance sustainable, energy-efficient solutions at the energy-water interface.

2.3.1 Mineral Recovery from Brines

Develop low-energy technologies to harvest lithium, magnesium, and other critical minerals from desalination, geothermal, and industrial brines, reducing environmental impact and providing local raw material sources.

2.3.2 PFAS Removal

Explore energy-efficient methods to remove PFAS (“forever chemicals”) from treated wastewater, effluents, and sludge, support regulatory readiness and safeguard water reuse and public health.

2.3.3 AI and Digital Twins for Water–Energy Optimization

Develop predictive, data-driven platforms to simulate and optimize water–energy operations across desalination plants, industrial clusters, and irrigation systems, improving efficiency and reliability.

2.3.4 Resilient Water–Energy Systems under Climate Stress

Advance adaptive technologies and strategies to ensure reliable water and energy services under extreme conditions such as droughts, floods, heatwaves, or cyber-physical disruptions.

2.3.5 Coupled Water–Energy Storage and Operations

Create integrated approaches where water infrastructure also functions as an energy-balancing and load-shifting resource, reducing energy costs and enhancing grid resilience.

2.4 Topic Area #3: Fossil Energy

Seeking consortia to advance innovation, efficiency, and sustainability in fossil energy systems:

2.4.1 Ultra-Deep Drilling

Develop technologies for accessing ultra-deep resources, including advanced drilling systems, novel materials for extreme subsurface environments, and real- time data acquisition and analytics to improve precision, efficiency, and cost-effectiveness.

2.4.2 Efficiency in Gas-Based Energy Systems

Improve thermal and operational efficiency through innovations such as advanced turbines, waste heat recovery, and digital tools for optimization, predictive maintenance, and reducing energy losses.

2.4.3 Artificial Intelligence Applications / Digital Transformation

Apply AI to predictive maintenance and equipment monitoring, drilling optimization, reservoir management, industrial energy consumption, safety and compliance automation, enhanced decision-making, and supply chain optimization.

2.4.4 Pipeline Integrity and Infrastructure Resilience

Implement advanced monitoring systems, including embedded sensors and AI-driven analytics, to detect leaks, prevent corrosion, and enable predictive maintenance, ensuring the safety and reliability of aging pipeline infrastructure.

3 Grant Awards Model of the Energy Center

3.1 Overview

Any **two** or more entities from **each** country, registered in Israel or in the U.S., one industry partner and one academic or research institution may jointly apply for financial support from the EC, as long as they have the combined capability and infrastructure to develop an innovative product and / or technology by conducting R&D activities as described in section 2.1, above, referred to as "**the Program**". The partnering entities are collectively referred to as "**the Consortium**". One key criterion is that each Consortium Member (henceforth: "**CM**") has the demonstrated ability to carry out its part of the Technology's joint development program, referred to as "**the Proposal**". The Proposal will present the joint R&D activities of the U.S.-Israel Consortium and their cost, referred to as the Proposal's "**Budget**".

3.2 The Award Applicants – A Consortium

- A proposal should be submitted by a U.S. - Israel Consortium of at least two (2) entities from each country, one industry / commercial company and one academic or research institution.
- Each Consortium defines the **Founding Members** (henceforth: “FM”) to lead planning and submission of the Proposal. At least two FMs must be corporations (one from each country). The FMs are responsible for building the Consortium - they select and approve CMs, and they lead the writing and submission of both the Executive Summary and the Full Proposal. Thus, the FMs will lead the consortium in the initial stages, and they will nominate the **Consortium Administrators** after the consortium is selected and approved.
- The Consortium must have one (1) U.S. Administrator (henceforth: "USCA") and one (1) Israel Administrator (henceforth: "ILCA"). Administrators may be drawn from any CM (a research institution or a commercial company).
- The ILCA / USCA will be responsible to the Consortium and to the EC for the following functions / responsibilities:
    - ✓ Coordinate and supervise cross-Consortium efforts, initiatives, and events.
    - ✓ Fulfil BIRD Foundation reporting requirements: management and reporting of both the technical and fiscal (the Budget) activities of their CMs, accordingly.
    - ✓ Manage allocation of funds to CMs.
    - ✓ Act as the official interface between CMs and the BIRD Foundation
- A given Consortium may submit only one (1) Proposal per the research topic areas stated in sections 2.2 – 2.5. (A given Consortium can submit several proposals, but only one for each of these research topic areas.)
- The Energy Center Executive Committee (henceforth: “ECEC”) will approve **a maximum total of 2 Grant Awards for 2 Approved Proposals** submitted by the various Consortia. The ECEC may select additional alternate awardees in each research topic.
- The CMs all agree to share risk involvement in the Proposal and rewards. The nature of the business relationship between the CMs is that of sharing - both in the technology's development program (the Proposal) and in the revenues derived from its subsequent commercialization.
- If applicable, at least one of the CMs should possess intellectual property rights to the Technologies being developed.

- The ILCA / USCA have responsibility for managing sub-contractual arrangements with CMs from their respective countries.
- Changes in Consortium membership require prior approval by the EC.

3.3 Proposal Characteristics

- The Proposal should be based on **close R&D collaboration** between the U.S. and Israeli entities.
- The Proposal should include **novel** concepts, products and / or technologies.
- The Proposal should show how the proposed activities provide potential for **accelerating development, technology transfer** and **deployment** of advanced technologies in the areas of interest. Preferably, the Proposal should lead to **demonstration or implementation of the technologies / activities** in relevant industry environments.
- **Industry involvement** should be embedded from the outset in the work plan.
- Each Consortium's objectives **should be defined with a focus on practical industrial application and commercialization** potential.
- Work plans must reflect **meaningful engagement** of all CMs.
- Each CM's work plan must clearly outline an R&D program that demonstrates future **contribution to the industry.**
- The Proposal's **effective date** (start date) may be as early as the 1st day of the month following the signing of the Energy Center Funding Agreements (ECFA) (see section 3.6, below). Proposal duration may be as long as **3 years**, if deemed necessary for reaching significant technological advancement / achievements.
- The Proposal should include **detailed provisions for conducting and managing** the cooperation, and shall cover such matters as technical scope, work plan, staffing requirements, funding sources and budget, protection and allocation of intellectual property, exchange of proprietary information, and any undertakings, obligations or conditions necessary to the proposed activity.

3.4 Funding Sources and Scope of Awards

The EC is funded by the **DOE** and the **MOE**, jointly with the Israel Innovation Authority (**IIA**) and managed by the U.S. - Israel Binational Research and Development Foundation (**BIRD), acting** as the EC **Secretariat**.

The EC will participate in the Program's development cost (the Proposal Budget, described in section 3.5, below) with the Consortium, by funding **up to 50%** of the **consolidated** (total) **Budgets** of all U.S. CMs (henceforth: "**USB**") and the consolidated (total) **Budgets** of all Israel CMs (henceforth: "**ILB**"), referred to as the "**Award**".

Dependent on satisfactory performance and progress of the proposal's execution, the Award will be extended separately to the ILCA and USCA on a **semi-annual basis,** who will distribute them among the CMs under their management, based on the **Consortium Agreement / Contract** between all CMs (henceforth: "**CMA**").

Funding to each Consortium will be approved for three (3) years, totalling **$6M** (subject to funding allocation, and performance). The grant will be divided between the USCA and the ILCA according to their respective workshares (see section 3.5, ahead), to be **further distributed** between their respective CMs.

After review of the Consortium objectives and achievements in the first three years, which will be reported and reviewed semi-annually, the Consortium will be able to apply for an extension of up to two (2) additional years (years 4 and 5) and an additional grant of **$3.2M.** The application for an extension will be considered on its merits, based on the performance of the first three years, on the content of the suggested proposal extension, on availability of funds, and on the prevalent priorities of the EC stakeholders.

3.5 The Proposal's Budget

The Proposal **Budget** is estimated by the Consortium and is submitted as part of the Proposal in the application process. It should include all development expenses to be incurred during the course of the 3 years Program that the Consortium wants to be included in the Proposal, including direct labor and its associated overhead, materials, subcontractors, consultants, travel and depreciation on new or used equipment employed.

The **USB** and **ILB** (see section 3.4. above) will be presented in the Full Proposal, covering the **entire 3 years duration** of the Proposal. In addition, each CM will include its Proposal Budget in the Full Proposal. The USB and ILB will be managed throughout the Proposal execution by the USCA and the ILCA, respectively, including the reporting to the EC of the budgets' status vs. actual expenditures.

To receive the **maximum award**, the minimum approved Proposal Budget of the Consortium (USB+ILB) for a period of 3 years will be **$12M** (an average of ~$4M per year). This budget will include the **maximum $2M annual award** to the Consortium plus the minimum 50% cost share.

Cost share: The USB should include the minimum 50% cost share from the U.S. CMs, **in aggregate.** The ILB should include the minimum 50% cost share of the Israel CMs, **in aggregate.**

All CMs should contribute and share their technological expertise and intellectual property in execution of the joint Proposal. The **task assignments** should be divided in such a way that the relative workshare is expected to be approximately 50% / 50% between all the U.S. and all the Israel awardees, accordingly. Justified exceptions will be considered, but no deviations more than 60% / 40%. Thus, neither the U.S. nor Israel CMs portion in the total Consortium Proposal Budget (USB +ILB) should be less than **40%**.

Tasks that are not on track will not receive the funding specifically allotted to them. Moreover, reassigning budgeted expenses from task to task will require prior approval from the EC.

3.6 Funding Contracts and Consortium Agreement

The BIRD Foundation, as the EC Secretariat, will **negotiate and sign** separate **funding contracts / agreements** (henceforth: "ECFA") with the Founding Members (FMs).

The approved USB and ILB will include an **Overhead Allowance** of 2.5% of the Budgets, to reflect the cost of the management role of the USCA / ILCA. This Overhead Allowance is on top of the 25% Labor Overhead Allowance and the 5% General & Administrative (G&A) Expenses Allowance that is included in the Budget of each CM.

The ECFA will include substantive milestones, budget, reporting and other requirements, as well as payments due to the Consortium by the EC.

The EC will **monitor the progress** of the Consortium awardees, consistent with the contracts.

A **Consortium Agreement / Contract** between all CMs (henceforth: "**CMA**") needs to be defined, signed and submitted to the EC for review prior to signing of the ECFA. This agreement is not an EC document, and the BIRD Foundation is not a party to this agreement. However, the CMA will have to be approved by the EC prior to the signing of the ECFA. The CMA should address issues relating to the development Proposal Tasks and responsibilities of each CM, to the Tasks execution timetable, to

the periodic technical and fiscal (expenses) reporting to the EC, to the intellectual property ownership of the developed Program, etc.

4 Program Progress and Review

4.1 Semi-Annual (Periodic) Review

- The Consortium will submit to the EC one **semi-annual** technical report, covering the R&D progress made since the last report, relative to the most updated approved Program plan.
- The USCA and the ILCA will each submit to the EC a separate **semi-annual** fiscal report (one for the IL and one for the US side), covering the cumulative actual Program expenditures compared to the updated approved USCA / ILCA Budgets.
- The formats of the technical and fiscal reports are described in a separate document.
- The amount of the next periodic **grant payment** extended by the EC to the USCA / ILCA will be based on the semi-annual technical and fiscal reports.

4.2 Annual Review

In addition to the reports mentioned in section 4.1, each Consortium will submit to the EC an **Annual** Technical and Fiscal Summary Report / Presentation. This report / presentation will be due within 2 months from the end of the reporting year.

With the Summary Report / Presentation, the Consortium will submit an updated ILCA / USCA Budget Proposal for the following year. This update will include requested changes to the budget which were forwarded by the Consortium to and approved by the EC throughout the past year.

The ILCA/USCA will attend and deliver a presentation at the annual EC Executive Committee meeting on the status, achievements and next-year plans of the Consortium.

The EC Executive Committee (**ECEC**) will review the Annual Summary Report during its annual meeting and will decide whether to accept the Report and the updated ILCA / USCA Budgets.

The ECEC may discontinue or reduce the Award at any time if it will be dissatisfied with the performance of the Consortium.

Changes in Consortium membership (either an exiting of an existing CM or the addition of a new CM) require prior approval of the ECEC. A request for Consortium membership change should be submitted as soon as possible.

5 Proposal Selection Criteria

Proposals are evaluated based on consideration of the following factors. All sub-criteria are of varying weights.

5.1 General

The selection criteria are comprised of the following general components:

- ✓ Technological innovation
- ✓ The value and level of synergy of industry–academy collaboration
- ✓ Tangible benefits to the participating companies and industry

- ✓ Focus on developing solutions to broadly recognized challenges (by both academia and the private sector) in a given industry/sector
- ✓ The value created by the researchers for the Israeli and the US companies that are partners in the consortium or to the sector overall
- ✓ Level of commercial potential of a project's outputs
- ✓ Level of participation and engagement of industrial partners
- ✓ Level and impact of usage of AI in research and solutions

5.2 Criterion #1: Scientific and Technological Merit, Innovation, and Impact

5.2.1 Technological Merit and Innovation

- Extent to which the proposed Program is innovative and has the potential to advance the state of the art. Awareness of commercial and emerging technologies and processes, in case relevant.
- Soundness of the concept.
- Clarity and persuasiveness of the presentation and ideas including prior art, data, and analysis.

5.2.2 Impact of Technology Advancement

- How the projects support the topic area objectives, and their impact on the relevant market within the area objectives.
- Extent to which the plan can contribute to bridging knowledge gaps in both countries.
- Extent to which the plan contributes to the establishment of strong knowledge centers.

5.3 Criterion #2: Work Packages and Team

5.3.1 Research Approach and Work Plan

- Degree to which the problem statement, the approach and the critical path have been clearly described and thoughtfully considered.
- Degree to which the tasks are coherent, effective, timely, appropriately allocated and well balanced between the parties, resulting in a high likelihood that the proposed work plan will succeed in meeting the project goals; Degree to which the tasks descriptions are clear and detailed.
- Potential of the knowhow transfer from academy to industry.
- Degree to which the proposed activities lead to demonstration of the technologies in relevant environments, and can be later scaled and implemented, when relevant.
- Appropriateness of the management structure and procedures (e.g., for monitoring and controlling project scope, cost and schedule).
- Reasonableness of budgets and spending plan for proposed project and objectives.

5.3.2 Identification of Technical Risks

Discussion and demonstrated understanding of the key technical, process and commercialization risk areas involved in the proposed work and the quality of the mitigation strategies to address them, in case relevant.

5.3.3 Baseline, Metrics, and Deliverables

- The level of clarity in the definition of the baseline, metrics and milestones and their relevance.
- Relative to a clearly defined baseline, the strength of the quantifiable metrics, milestones and mid-point deliverables defined in the application, such that meaningful interim progress can be demonstrated.

5.3.4 Team

- The capability of the Consortium and the proposed team to address all aspects of the proposed work with a good chance of success. Qualifications, relevant expertise and time commitment of the individuals on the team.
- Plan for the management team to technically integrate the various components of the work and adapt in response to successes and setbacks.
- The sufficiency of the facilities to support the work.
- Degree to which the proposed Consortium demonstrates the ability to facilitate and expedite further development and commercial deployment of the proposed technologies.
- Degree to which the proposed consortium management demonstrates effective coordination and communication between the project team members and other project participants, including technical, business, financial, and other parties, and including prior experience in managing projects of similar type, size, and complexity.

5.4 Criterion #3: Industry Focus and Commercialization

- Identification and quantification of target markets, competitors and distribution channels for the proposed Program, along with known or perceived barriers to market penetration.
- Initial commercialization plan, including identification of potential paths and timetable towards commercial deployment.
- Estimated sales revenue expected during the first 3-5 years of commercialization.

5.5 Criterion #4: Collaboration

- Extent to which the plan encourages collaboration and demonstrates synergies between the U.S. and Israel CMs.
- Extent to which the plan encourages collaboration in mutual access to R&D infrastructure, including for the industrial development of technology, knowledge as well as student and post-doctoral exchange.
- How the plan supports cooperation in the development of human resources with expertise in applications of innovative technologies and their industrial applications.

- Added value of the Consortium compared with independent research of the parties (complementarity of the participants within the Consortium). Researchers' plans to leverage the experience and expertise of other organizations in the consortium.

6 The EC Proposal Application Process and Timetable

Following is a description of the EC Proposal application process and timetable. This **10-step process** begins with the initial introduction of the potential Proposal to the BIRD staff (acting on behalf of the EC) by (informal) representatives of the planned Consortium and is completed when the EC transfers the first award payment to the Consortium.

6.1 Step 1: Introduction of Potential Project to the EC

BIRD strongly recommends to Israeli and U.S. companies that are considering applying for funding from the EC with respective U.S. and / or Israeli partners, to **meet with a BIRD representative** as soon as possible, to introduce their company or organization, their innovative technology, and their intention to submit a Proposal to the EC as part of a Consortium. This **introductory meeting**, which can be held even before all the Consortium participants have been identified or recruited, can assist the companies / organizations to better understand the EC's criteria for Consortium qualification, innovative Technologies considered for development, suitable partnering relationships, and characteristics of the planned Proposal considered for submittal.

Typically, either the U.S. Founding Members (FMs) or the Israel FMs will initially approach BIRD for the Proposal's funding support. Ideally, the Israel FMs should contact a staff member at BIRD's Israel headquarters, and the U.S. FMs should approach its regional U.S. BIRD representative. It is recommended that the FMs be represented by at least one Executive who is familiar with both the technical and business (commercial) aspects of the proposed Proposal.

When all the FMs of the planned Consortium have been identified and the general scope of their joint Proposal has been defined, the issues and topics that are typically discussed at the introductory meeting are:

- **Company / Organization Background**: Technical, commercial and financial assets, as well as the relevant strengths of each company / organization included in the Consortium for the successful completion and commercialization of the proposed development Proposal. These include the characteristics and qualities possessed by each CM that would make it a good development partner to the Consortium.
- **The Innovation**: Description of the Program to be developed, including its uniqueness, innovation and the solution it provides for current, unmet market and social needs.
- **Proposed Plan:** Description of the proposed activities to achieve the objectives of the program, including potential transfer of technology from academia to industry, demonstration of technologies in relevant environments and other activities.
- **The Proposal Scope**: An estimate of the approximate total development Budget for both the Israel and the U.S. portion of the Proposal tasks throughout the 3 years duration of the Proposal.
- **Collaborative Relationship**: Description of the anticipated role of each participant in the Consortium during project development and commercialization. This should include division of the development Budget between the Consortium participants, non-EC financing sources for project expenses and the arrangement between the participants regarding any revenue / profit sharing and other benefits expected to be derived from subsequent commercialization.

- **Commercial Potential:** Description of the estimated market size and growth rate for the products / processes to be derived from the developed Program, by main applications, of the current and expected future competitive technologies, and of the potential routes to market entry.

It is recommended, though it is not a formal requirement, that prior to the introductory meeting, the representative participants submit to the EC a draft of the **Executive Summary** (henceforth: "ES") of the Proposal (see sections 6.2 and 7.5, ahead), which, in essence, relates to the same 6 issues listed above.

At the introductory meeting, the BIRD representative will acquaint or update the Consortium representatives with the EC application procedures and timetable, as well as with the grant payment procedures, as requested.

6.2 Step 2: Preparation and Submittal of the Program's Executive Summary

The Program's ES is a formal document which **must be submitted** to the EC (using the EC's File Upload System) by the **specified due date.** The content of the ES follows the topics described in section 6.1, above and the format is described in detail in section 7.5, below.

The ES is an important document to prepare because it forms the basis upon which the GO/NOGO decision by the EC staff will be made (see section 6.3, below).

Note: The ES template can be downloaded from the EC website (File #1 in https://us-isr-energycenter.org/guidelines-forms/

6.3 Step 3: GO/NOGO Decision by the EC Staff

Based on the Introductory Meeting (see section 6.1, above) and the formal submittal of the ES (see section 6.2, above), the EC staff will decide to recommend the FMs whether or not the Consortium should proceed with the preparation of the Full Proposal (henceforth: "**FP**") of the Proposed Program (the GO-NOGO decision).

The GO/NOGO decision by the EC staff will be made and shared with the FMs in writing within 4 weeks from the ES submission deadline.

6.4 Step 4: Preparation and Submittal of the Full Proposal

*Note: Based on the accumulated experience by the BIRD staff, it is estimated that at least **8 weeks** are required to prepare a comprehensive Full Proposal (henceforth "FP"). Thus, the date of the above-mentioned GO/NOGO announcement, referred to as the "**kick-off** " or "**process start**" date is targeted for at least 8 weeks from the EC's announced and published **Deadline for FP Submittal**.*

The Consortium participants will jointly prepare an **FP** document, following the detailed instructions given in section 7, below.

There is a **formal deadline** in the Proposal application process. The upload system will close on the deadline date specified on EC/BIRD's website. In order to ensure that a Proposal be approved at the scheduled meeting of the EC's Executive Committee (ECEC) (see Step 7, below), the FP needs to be submitted prior to the specified deadline. Furthermore, failing to comply with all the instructions and requirements set forth for the preparation of the Proposal will cause the **rejection of the Proposal** and it will not be considered a candidate for the support by the EC.

Optional but **strongly recommended**, a draft of the proposal may be pre-reviewed by the EC's assigned **Contact Person** (henceforth: "**ECCP**"), to ensure adherence to the EC's Proposal Preparation

Guidelines, including completeness, clarity and consistency of its contents. The draft Proposal must be submitted using The EC's Upload System. After incorporating all changes and enhancements recommended by the ECCP, the Consortium must upload the final proposal to the EC's Upload System.

Note: The Full Proposal template can be downloaded from the EC website (File #2 in https://us-isr-energycenter.org/guidelines-forms/)

6.5 Step 5: BIRD's Site Visit to the U.S. and IL Founding Members

It is intended that, as a step in the application process, a BIRD representative, acting on behalf of the EC, will meet (separately) with the FMs and with **key technical and business executives** from both the U.S. and Israel participating in the Consortium who are familiar with the submitted Proposal. This will be done during a scheduled visit to one of the **development or operating sites** of the U.S. and Israel FMs. The site visit will usually take place between the date of submittal of the Full Proposal (FP) (see Step 4, above) and the week preceding the Executive / Selection Committee meeting (see Step 7, below).

Usually, the purpose of a company / organization site visit is to introduce the EC (1) to the Proposal's details, (2) to the other IL or U.S. CMs and their role in the Proposal, (3) to the FMs and USCA/ILCA relevant personnel, and (3) to answer questions the FMs and the USCA/ILCA might have regarding the EC's assistance model, procedures and timetable. It also provides BIRD the opportunity to better understand the FMs and USCA/ILCA capabilities and commitment to the Proposal, as well as its role in the development and commercialization of the Proposal.

6.6 Step 6: Proposal Review and Evaluation by the DOE and MOE / IIA Reviewers

Both the assigned **Professional / Technical Reviewers** from the Israel Ministry of Energy (MOE) and the Israel Innovation Authority (IIA), who may be two different reviewers, and the Reviewers from the U.S. (may be multiple merit reviewers from various U.S. agencies) will receive a copy of the Full Proposal (FP) for review and evaluation.

The review process includes review of proposals by subject matter experts in both the U.S. and in Israel and could include also meetings (typically virtual) with FMs and CMs, in which applicants are expected to cooperate.

Both the DOE and the MOE / IIA will submit to the EC Executive (Selection) Committee (henceforth: "**ECEC"**) the review summary and their recommended evaluation of the proposal. The Consortium participants will not receive the review summary and the evaluation of the Proposal by neither reviewers nor from the EC.

6.7 Step 7: Decision on the Proposal by the EC's Executive / Selection Committee

The EC's Executive / Selection Committee (ECEC) will convene for a meeting (or several meeting sessions), at specified dates, to act upon all award applications that have successfully completed steps 1-6, above.

The ECEC is comprised of members from the DOE and from the MOE / IIA. The members of the ECEC or their acting designees are listed in the EC/BIRD website. The ECEC includes one voting member representing BIRD's Board of Governors.

The ECEC will act on the Proposals submitted by the various applying Consortia by making one of the following decisions for each Consortium:

1. **Approve** a Grant Award for **a specified sum** to the IL CMs and another Grant Award for a specified sum to the U.S. CMs (both totaling at most 50% of the respective Proposal's Budget).
2. **Not approve** a Grant Award to the applying Consortium.

The ECEC's decision will be conveyed in writing to the FMs of each applying Consortium **within eight (8) weeks** after the FP submittal deadline.

If a Grant Award has been approved, the Consortium applicants, represented by the FMs, will have up to **four (4) months** to materialize this approval by signing with the EC the **Energy Center Funding Agreement** (**ECFA)**, as described in Step 10, below.

If they haven't done so yet, the FMs should nominate their respective USCA and ILCA at this stage.

6.8 Step 8: Financial Status and Funding Resources Clearances

If **any** of the CMs of the Consortium is a relatively **young and small private company**, the EC will usually conduct a **short financial analysis** of the company, to determine the following:

1. Current (2026) tangible financial resources available to the company.

2. Financial ability of the company to cover the expenses associated with its overall operation (and not only the expenses stemming from the EC-supported program) for a future period.

The financial analysis is based on a **short questionnaire** completed by the company.

Should the company **not** be able to substantiate item (2), above from the availability of current tangible financial resources (described in (1), above) within 3 months from the Grant Award announcement, the company's owners will be asked to provide the EC with **financial assurances**. Failure to provide satisfactory assurance for item (2), above, may prevent the signing of the ECFA and payment of the EC grant award.

6.9 Step 9: Consortium Members Agreement (CMA)

The EC requires that, prior to the signing of the ECFA's (see Step 10, below), an agreement be in place between **all** the Israel and U.S. companies / organizations participating in the Consortium. A copy of this "**Consortium Members Agreement** (henceforth: "**CMA**") should be submitted to the EC **for approval** prior to signing.

Note: As stated contractually in the ECFA, in any instance in which a provision of the CMA contradicts a provision of any of the ECFA's, the provision in the ECFA shall prevail.

While the EC is not part of the CMA, nor is the EC involved in formulating and negotiating this agreement, at least the following topics should be addressed and covered in it. Agreement on these issues prior to initiation of the joint development **is critical** to maintaining the **cohesiveness of the affiliation** between the CMs throughout all phases of cooperation:

- The assignment of the USCA and ILCA of the Consortium, and the **authorization** given to them to by the FMs to manage the Consortium's program and budget.
- The **ownership arrangement** between the CMs of any of the **Intellectual Property (IP)** evolving from the jointly developed Program throughout the duration of the Proposal execution period.
- The **revenues and profit-sharing arrangement** between the CMs for the jointly developed Program.
- The arrangement between the CMs regarding preparation and timely submission of the **periodic fiscal and technical reports** to the EC throughout the development period of the Proposal.

- The arrangement between the CMs regarding the distribution and forwarding of the **Grant Award payments** extended periodically by the EC to the ILCA and to the USCA.

Failure of the CMs to agree on and to submit to the EC a CMA within 3 months from the Grant Award announcement will prevent the signing of the ECFA and payment of the EC grant award.

6.10 Step 10: Preparation / Signing of the ECFA's; Extension of First Grant Award Payment

6.10.1 Preparation of the ECFA's by the EC

BIRD, representing the EC, is responsible for the preparation of the **two (2) ECFA's** for each approved Consortium Proposal, which are signed by the FMs as one side (referred to in the ECFA's as "**the Proposer**") and BIRD on the other side.

Note: The standard Energy Center Funding Agreement (ECFA) is posted on the EC website and can be downloaded (File #3 in https://us-isr-energycenter.org/guidelines-forms/).

The preparation of the ECFA's commence after the Proposal is approved by the ECEC (see Step 7, above). Although it is a **standard form agreement,** it is customized to any specific Consortium based on information found in the FP (Step 4, above), including:

- ✓ The Effective Date (**Proposal start date**) of the agreement, taken from the Proposal cover page.
- ✓ The project **duration** (taken from the Proposal cover page).
- ✓ The project **title** (taken from the Proposal cover page).
- ✓ The Proposal **managers** from both the U.S. FM and the Israel FM (taken from Section N of the FP).
- ✓ **Mailing and office addresses** of both companies (taken from the Proposal cover page).
- ✓ The **Program plan** (GANTT chart), which constitutes Annex D of the ECFA (taken from Section D of the FP).
- ✓ The **Budgets** of the IL and the U.S. CMs, which constitutes Annex A of the ECFA (taken from Section L of the FP).

*Notes: (1) If the approved Grant Award is less than 50% of the total Budget in the Proposal, the USCA and ILCA are asked to submit to the EC (in softcopy, as an Excel workbook) revised Budgets for the Israel and U.S. CMs, totaling **exactly twice** the amount of the approved Grant Award. The CMs are **free to select** which expense items in the Budgets are to be partially included or excluded completely in the revised Budgets, provided that the revised budget of the US side or the Israeli side is **not less than 40%** of the combined revised Budgets.*

(2) The revisions of the Budgets do not, in any way, change the obligation of the CMs to carry out all the work as described in the FP.

6.10.2 Signing the ECFA's by the Founding Members

Upon completion of the two ECFA's preparation by the EC / BIRD and execution of Steps 8 and 9 of the application process (see above), the EC will send 2 copies of each ECFA's to the FMs for an authorized signature, respectively. Once signed, the FMs will each return the two copies to the EC / BIRD. After it is signed by **BIRD's Executive Director** (representing the EC), a fully signed copy will be returned to the FMs.

6.10.3 First Payment to the ILCA and USCA of the Consortium

The signing of the two ECFA's by the 2 parties to each agreement (the IL FM and BIRD and the U.S. FM and BIRD, respectively) is a **pre-requisite** for transferring of the **first grant award payment** by the EC to both USCA / ILCA, which is **an advance** (down-payment).

Grant Award Payments (G) are made after receipt and approval of a joint technical report and a separate fiscal report, submitted by both the ILCA and USCA at the end of each one of (N=6) segments (every **6 months**). These reports cover the development progress and the actual expenses incurred during the segment.

All grant payments are an advance (downpayment) to cover expected expenses during the upcoming segment. It should be emphasized that the payments are subject to periodic audits, and the Consortium may have to refund overpayments to the EC.

7 Proposal Preparation Guidelines

7.1 Introduction

Discussions in meetings by the Consortium representatives with the BIRD staff (acting on behalf of the EC) about the participants, objectives, challenges, characteristics, expected duration and costs of the Proposal usually precede submission of a formal Proposal. The EC encourages and recommends that at least one such meeting be held prior to the engagement in the preparation of the Proposal. However, while impressions gained from these contacts are important, in the final analysis, the formal evaluations and decisions are based on the formal Proposal submitted by the Consortium. The following Proposal preparation guidelines are to be followed and adhered to.

*Note: The EC / BIRD's dealings with the Consortium are **treated confidentially**, both by the EC / BIRD staff and by the Professional Reviewers appointed by the DOE, the MOE and the IIA, the three organizations responsible for conducting such reviews (see the EC website for a typical Confidential Disclosure Agreement).*

The Consortium may submit to the EC (through the EC's on-line upload system) a **draft Proposal** prior to the submission of the final Proposal, to be reviewed by an EC Contact Person (ECCP). The purpose of the ECCP's review is to ensure that the proposal is sufficiently detailed to enable the outside reviewers to perform a meaningful and critical evaluation of the proposed program. This "internal" review process, strongly encouraged and recommended by the EC, will be carried out promptly only if the Consortium submits the draft Proposal by a specified deadline, which is typically about 2 weeks prior to the **Proposal submission deadline**.

Note: The Full Proposal (FP) template, containing some MS-WORD and Excel files required in the specific FP sections, can be downloaded from the EC website (File #2 in https://us-isr-energycenter.org/guidelines-forms/)

The proposal should be coherent, comprehensive, and detailed, with a **maximum length of 90 pages.** (Feel free to remove the instructions from the proposal template to gain more space).

Please make sure to use either **Arial or Calibri font** with a **font size of 11**. Additionally, ensure that the uploaded document does not exceed **10 MB in size**.

BIRD expects applicants to adhere strictly to the instructions, ensuring that all requested information is provided. Full compliance with the template and format is required, including section numbering / designation and section captions / titles.

Note: Proposals that do not conform to this content, format or size requirements will be automatically disqualified.

7.2 The Proposal Structure and Contents

There are four parts to the Proposal, the contents of which are included in **15 sections** (A-O):

1. **Research / Program description** and the innovation in the Program / concepts (Section D).
2. Description of Proposal **program execution** and the **cooperation** between the Consortium Members (CMs) – proposed approach, tasks, milestones and deliverables, and analysis of the Project's Technology Readiness Level (TRL) based on the TRL definitions in Section O (Section E); program plan in GANTT chart format (Section F); cooperation between the CMs (Section I); project organization and management (Section J); the CMs and their resources (Section K); the program's budget (Section L) and the Proposal's risk analysis (Section M).
3. The **marketing and commercialization plan** and prospects (Sections G and H).
4. **Registration / contact** information – cover page (Section A), table of contents (Section B) and sundry information (Section N).

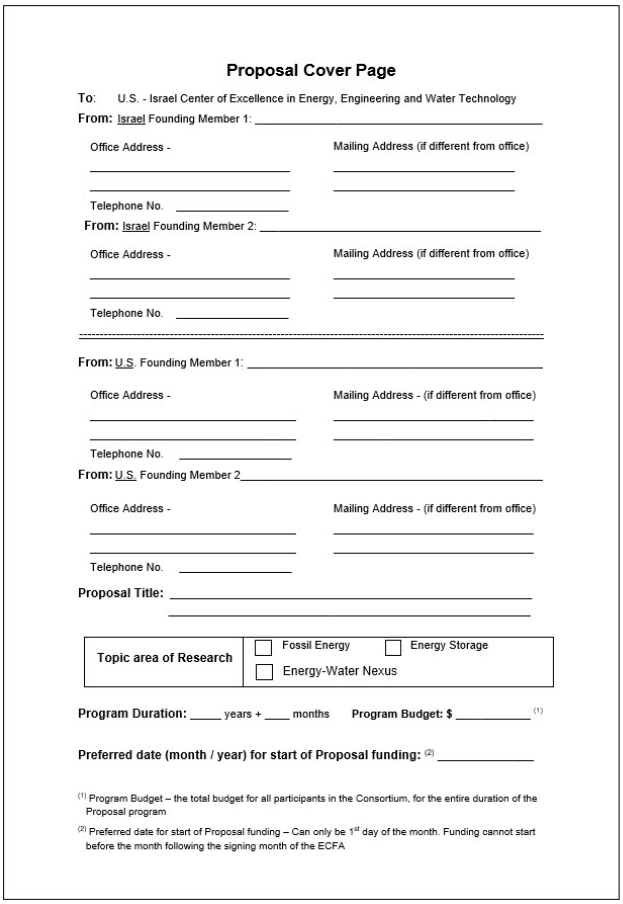
The following is a detailed description of the required contents of each Proposal section:

7.3 Section A: Proposal Cover Page

The format and content of the Proposal cover page is given in Table 1, below. It should be the **1st page** in the Proposal and must be **signed** by **authorized officials** from both the IL FMs and the U.S. FMs.

Notes:

1. *All the requested information is mandatory.*
2. *Pease do not make any changes to the table's format.*
3. *The **Proposal Cover Page Form** is included in the downloadable FP template (File #2).*



Proposal Cover Page

To: U.S. - Israel Center of Excellence in Energy, Engineering and Water Technology

From: Israel Founding Member 1: _____

Office Address - _____ Mailing Address (if different from office) _____

Telephone No. _____

From: Israel Founding Member 2: _____

Office Address - _____ Mailing Address (if different from office) _____

Telephone No. _____

From: U.S. Founding Member 1: _____

Office Address - _____ Mailing Address - (if different from office) _____

Telephone No. _____

From: U.S. Founding Member 2 _____

Office Address - _____ Mailing Address - (if different from office) _____

Telephone No. _____

Proposal Title: _____

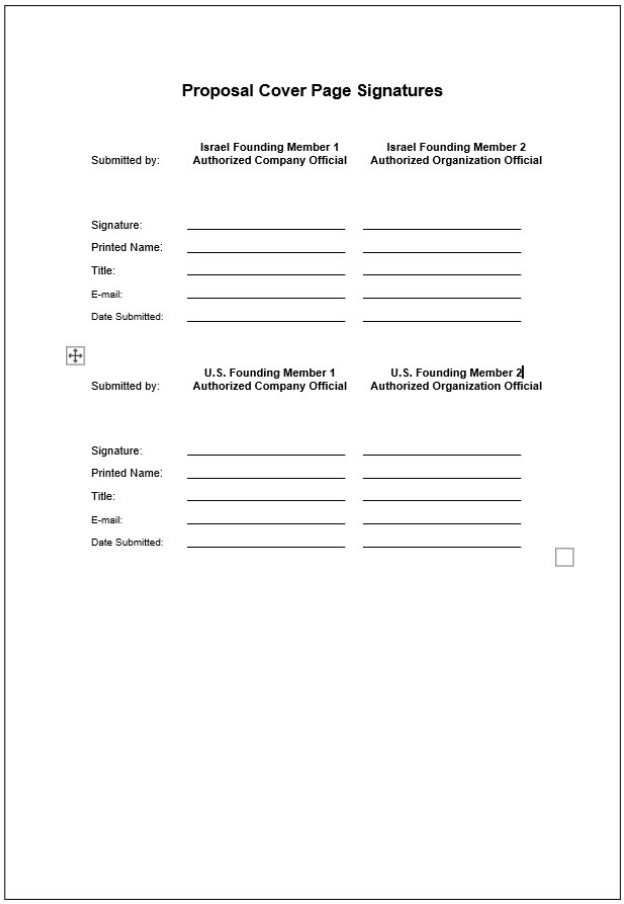
Topic area of Research	☐ Fossil Energy ☐ Energy Storage ☐ Energy-Water Nexus

Program Duration: ____ years + ____ months **Program Budget: $** _____ (1)

Preferred date (month / year) for start of Proposal funding: (2) _____

(1) Program Budget – the total budget for all participants in the Consortium, for the entire duration of the Proposal program

(2) Preferred date for start of Proposal funding – Can only be 1st day of the month. Funding cannot start before the month following the signing month of the ECFA



Proposal Cover Page Signatures

Submitted by:	Israel Founding Member 1 Authorized Company Official	Israel Founding Member 2 Authorized Organization Official
Signature:		
Printed Name:		
Title:		
E-mail:		
Date Submitted:		

Submitted by:	U.S. Founding Member 1 Authorized Company Official	U.S. Founding Member 2 Authorized Organization Official
Signature:		
Printed Name:		
Title:		
E-mail:		
Date Submitted:		

Table 1: Structure and Contents of the Proposal Cover Page

7.4 Section B: Table of Contents

The table of contents should include reference only to the main Proposal sections (A-O). The section numbering must be adhered to and the page number of each section specified**.**

7.5 Section C: Executive Summary

As in any detailed technical document, the Executive Summary (henceforth: "**ES**") should address all the major topics of the Proposal, as specified below. Since the length of sections 1-6 of the ES is **limited to a maximum of 5 pages**, special attention should be given to its concise and clear wording.

Please start with the updated ES of the Proposal that you submitted to the EC earlier. You can revise the ES with any new details, insights, or updates gathered during the proposal preparation period. (**No need to include the signatures of authorized company officials again**).

The ES should start with Table 2, below, defining the topic area of research (only one area can be chosen), the Proposal title (name), the total Proposal budget, and the total Proposal duration.

Note: The info in Table 2 should be exactly the same as in the Cover Page in Section A, above.

Topic area of research	☐ Fossil Energy ☐ Energy Storage ☐ Energy-Water Nexus
Proposal title	
Proposal total budget	$ _____
Proposal duration	_ years and __ months

Table 2: Proposal Summary Table at the Top of the ES

Description	Israel Founding Organization 1	Israel Founding Organization 2
Full company / organization name (as appears on the Certificate of Incorporation)		
Registration #		
Co. / org. location (state, country)		
Company / organization website		
Year established		
Revenues in 2025 fiscal / calendar year (as applicable)	$ _____ million	$ _____ million
Total number of employees		
Ownership (Public / Private)		

Description	U.S. Founding Organization 1	U.S. Founding Organization 2
Full company / organization name (as appears on the Certificate of Incorporation)		
Duns #		
Co. / org. location (state, country)		
Company / organization website		
Year established		
Revenues in 2025 fiscal / calendar year (as applicable)	$ _____ million	$ _____ million
Total number of employees		
Ownership (Public / Private)		

Table 3: Summary info of the Administering Co. / Org. of the Consortium at the Top of the ES

The ES should continue with *Table* 3, above, to be completely filled out by the Israel Founding Members and the U.S. Founding Members of the Consortium.

Directly below Table 3, the ES should continue with *Table 4*, below, summarizing the **relationship between the Founding Members** ([1] no common relationship, [2] parent / subsidiary, [3] common ownership, or [4] other):

	IL FM 1	IL FM 2	U.S. FM 1	U.S. FM 2
IL FM 1		1	1	1
IL FM 2	1		1	1
U.S. FM 1	1	1		1
U.S. FM 2	1	1	1	

Table 4: The relationship between the Founding Members

Next, the ES should continue with *Table 5*, to be filled out **consecutively by each** one of the remaining CMs.

Description	Value
Reporting to / supervised by Admin. Co/Org in:	☐ Israel ☐ U.S.
Full company / organization name (as appears on the Certificate of Incorporation)	
Registration # (IL); Duns # (US)	
Co. / org. location (state, country)	
Company / organization website	
Year established	
Total number of employees	
Ownership (Public / Private)	

Table 5: Summary Info in the ES of Each CM other than the FMs

Following the 4 Tables above, the ES should continue with a concise description of the following 6 main topics, following the guidelines below:

Note: The length of sections 1-6 below **should not exceed 5 pages in length**. You can delete the explanations in each section.

1. **Abstract:** A summary (**no more than 20 lines)** describing the Technological essence of the Proposal, the problem it is challenged to solve and its expected outcome, the CMs and their contribution and the eventual commercial potential. The abstract should be self-explanatory to someone who has no previous knowledge in the field.
2. **Lead Company / Organization Background:** Describe the major technical, marketing and financial assets and strong points of each one of the **Founding Members** that are relevant to the successful completion of the proposed Program. Describe the characteristics and qualities possessed by each company / organization that would make it a good development partner to the other companies / organizations. In addition, the FMs should identify and describe the characteristics, resources and other added values and responsibilities of all other CMs under their management in the Consortium during the Program.
3. **The Innovation:** Provide a concise description of the technology/(ies) / product(s) to be developed within the Proposal Program, including its uniqueness, its innovation, and their potential impact in the relevant markets.
4. **Proposed Plan:** Provide a concise description of the proposed activities to achieve the objectives of the program, including potential transfer of technology(ies) from academia to industry, demonstration of technologies in relevant environments and other activities.

5. **Collaborative Relationship:** Describe the anticipated role of each CM during the **development and commercialization** (when relevant) **phases** of the Proposal Program. Indicate how the development **Budget will be split** between the CMs by including and referring to *Table 6,* (below), and from where the non-EC portion of the Program's expenses will be obtained. Describe the expected general basis and arrangement between the CMs regarding sharing of profits and other benefits during commercialization.

#	Name of Consortium Member	Israel Consortium Members		U.S. Consortium Members	
		Total Program Budget (K$)	% of total Program Budget	Total Program Budget (K$)	% of total Program Budget
1	Company A	3,500	29.2%		0.0%
2	Company B		0.0%	2,500	20.8%
3	Company C	1,000	8.3%		0.0%
4	Organization A		0.0%	2,200	18.3%
5	Organization B	2,507	20.9%		0.0%
6			0.0%		0.0%
7			0.0%		0.0%
8			0.0%		0.0%
		=======	=======	=======	=======
		7,007	58.4%	**4,700**	39.2%
	ILCM / USCM overhead	175	**2.5%**	118	**2.5%**
	Total Program Budget (K$)	7,183	**59.9%**	4,818	**40.1%**
	Total Program Budget (K$)	**12,000**			

Table 6: Total Program Budget Split between CMs (example)

6. **Commercial Potential:** Describe the major commercial applications (when relevant) expected to be derived from the Program development, and the expected **year** in which commercial sales can be expected (the "time to market"). State the estimated relevant **market size** (in volume and value) at the year of first commercialization for the developed Program for 2-3 major and representative applications (products), and the expected market share after 3-5 years of commercialization. (Please indicate the sources employed in deriving this forecast). Use *Table 7* (or similar), below, to estimate the **total volume and the total $** value of **direct sales revenue** expected to result by beneficiaries from the developed Program over the **first 5 years** of commercialization.

Description	Calendar Year				
First calendar year of commercial sales	**2025**	**2026**	**2027**	**2028**	**2029**
Year of commercialization	**1**	**2**	**3**	**4**	**5**
Definition of units:	MWH				
Annual units sold (Units)	50,000	60,000	70,000	80,000	100,000
Cumulative units sold (Units)	50,000	110,000	180,000	260,000	360,000
Product price ($/unit)	500.00	500.00	500.00	500.00	500.00
	======	======	======	======	======
Annual product sales revenue (M$)	**25**	**30**	**35**	**40**	**50**
Cumulative product sales revenue (M$)	25	55	90	130	**180**

Table 7: Sales Revenue Estimate for first 5 Years of Commercialization (example)

Note: The Executive Summary template can be downloaded from the EC website (File #1 in https://us-isr-energycenter.org/guidelines-forms/). It includes the forms of all 6 tables above (Table 2 to Table 7). This ES template is also included in the FP Template (File #2).

7.6 Section D: The Innovation (Up to 7 pages)

This section should address the following two main issues: How are things done in this area today? What is the current state-of-the-art for the target markets?

- What is the state-of-the-art? Is this a unique technology? Why do you believe it will be successful? How will the technology differ from those in the market today?
- What are the limitations of the current technologies in the market? This is your opportunity to elaborate on the shortcomings that exist in the proposed Program and product area as a prelude to the description of the innovation and how it overcomes these shortcomings. Current limitations could include: high cost, non-optimal performance, lack of attention to specific market segments, i.e., poor suitability to high- or low-end markets, size, compatibility, nonconformance to standards, etc.
- What is the technology / product concept? Sketches, diagrams and tables should be included to help describe the innovation. This description should clearly identify in which way the innovation overcomes current limitations.
- What is the patent situation, including background patents and the potential for new patents?
- Which regulatory and technical standards are relevant to the developed technology? Will the proposed Program meet current and / or emerging standards?
- Were any of the companies funded by other Israeli and/or U.S. government agencies (such as the Israel Innovation Authority, the NIH, DHS, SBIR etc.), which have supported any part of the innovation development thus far?
- Are there any obligations to other government agencies?

7.7 Section E: Proposed Program Execution

This section of the Proposal is to be organized in three parts: (1) Analysis of the Problem, (2) Proposed Approach, and (3) Analysis of the Project's TRL:

7.7.1 E.1 R&D Program

The purpose of this section is to provide a credible foundation for the proposed Program by identifying areas that require attention and emphasizing challenges that must be resolved to achieve the Program objectives. Here are the key points to be addressed:

- **Required Properties and Functions:** Define the desired properties and functions of the end-products to be used in the market environment. Explain how market input has played a vital role in formulating these specific characteristics.
- **Challenges and Technological Issues:** Identify and describe the challenges associated with realizing the required properties and functions. Discuss the technological issues and economic constrains that need to be addressed to achieve the Program's objectives. Additionally, mention the technological resources available to the companies to address these challenges.

In summary, this section focuses on defining the desired properties and functions of the end-products, as well as identifying and addressing the challenges and technological issues that need to be overcome to reach the desired outcome.

7.7.2 E.2 Project Execution Strategy

This section outlines the **general plan**, highlights the **techniques and methods** for product development along with relevant experience, addresses how you plan to mitigate the **technical or economic constraints**, and provides a comprehensive breakdown of tasks with their objectives, contents, resource requirements, and responsible parties.

1. **General Plan:** Present an overall plan of the proposed effort, including milestones and deliverables necessary to achieve the Program's objectives. Focus on straightforward descriptions of "what has to be done" without delving into discussions on problem-solving approaches.
2. **Techniques and Methods:** Describe the techniques and methods that will be used for developing the products. Provide evidence of relevant experience in developing similar products to demonstrate a valid experience base.
3. **Technical or Economic Constraints:** Discuss any technical or economic constraints that need to be considered during the development process.
4. **Task Identification and Description:** This section constitutes the core technical aspect of the proposal. Each task will be carefully identified and thoroughly described, including its objective, contents, required resources, and the responsible organizations. Any potential challenges will be acknowledged, along with the proposed approach to mitigate these constraints effectively. Additionally, if the involvement of other consultants or subcontractors is anticipated for completing the task, it will be stated here.

7.7.3 E.3 Definition and Detailed Description of Program Tasks

This sub-section is the heart of the technical part of the proposal, in which **specific and measurable Tasks** are defined, stating the objective and contents for each Task, the resources required and the CMs with primary responsibility for carrying out the Task.

The Tasks should include **Annual Reviews** in which, once a year, the status of the program is presented to the EC with the participation of all CMs.

Following are the guidelines for the detailed description of the Tasks:

1. Define up to 25 tasks to be carried out throughout the (maximum of) 3 years comprising the development period of the Program. Number and name each one of the Tasks.
2. Any specific task can be carried out by **one or more CMs**, whether from IL or from the U.S., which have to be identified.
3. Each Task must have a specific starting and ending date, specified by **calendar month / year**. Thus, Tasks start at the beginning of the month and end at the end of the month. The duration of each Task **is not limited in time**.

The following information is to be supplied for each Task, using the form given in Table 8, below:

1. Task # and name. Task # and name should be the same as in the Excel Budgets (Section L) of all organizations and as in the Program Plan (GANTT) (Section F).
2. Task starting and ending dates (in MM/YYYY format) and Task Duration. They should be the same as in the Excel Budgets (Section L) of all organizations and as in the Program Plan (GANTT) (Section F).
3. Consortium members participating in each Task, their responsibilities (roles) within the Task and their total Task Budget. The task budgets for each organization should be extracted directly from the “Tasks Report” tab in the Excel Budget of each organization and should be given in units of K$. Insert the % of the total task budget attributed to each CM.

4. Major Task objectives - Describe the overall objective / goal of the task, in 1-3 sentences.
5. Task description, approach to task execution and potential difficulties in reaching the task objectives:
   - ✓ Describe, for each task, the specific approach that will be employed. Detail the specific techniques to be used to solve the previously identified problems. Thus, in this section, the CMs demonstrate that not only are they aware of the state-of-the-art in their industry and the limitations of current practices, but they also have an innovative idea, understand the challenges associated with developing the idea to commercial readiness, and know how to deal with constraints and challenges. For each task, provide supporting information that justifies the selected approach, where appropriate.
   - ✓ Describe for each task how the task is implemented (technologically). Describe the ACTUAL R&D to be done: what tools/algorithms/methods will be used and implemented. If data is needed, where will it come from and how it is tagged, etc.
   - ✓ What is the technological innovation? provide supporting information (preliminary testing/validation/POC/publications) which justifies the specific approach, where appropriate.
   - ✓ Describe for each task - What is a measurable outcome (KPI) of the task - how does the Consortium evaluate that the task is complete.
   - ✓ Since the final objective is a product or process, tasks addressed should include compliance to standards (or why the product will not comply with relevant standards), prototyping, regulatory approvals, beta testing, exhibitions, marketing activities, documentation, etc. For those tasks relating to "testing", for example, details should be given as to what is to be tested, how many tests are needed, test objectives, test methodology, expected results, etc., rather than writing "tests will be performed".
   - ✓ Discuss alternate approaches to resolving problems and the basis for selecting the preferred solution. Even if a preferred solution has not yet been identified, the various alternatives should be reviewed, along with their pros and cons.
   - ✓ The numbers of the measurable milestones to be achieved in the Task (see below).

Task #			
Task name			
Task duration (months)			
Start date (month/year)		End date (month/year)	

#	Consortium Member Name	Budget (K$)	% of Task Budget
		==========	========
	Total for Task:		100%

Objective of Task	

Task Description
(This field can be expanded or contracted, as needed)

Approach to Task Execution and Potential Difficulties
(This field can be expanded or contracted, as needed)

#	Description of Responsibilities within Task Among Consortium Members

# of the milestone(s) to be achieved:	

Table 8: Detailed Task Description Form

Note: The Detailed Task Description Form in Table 8, above is included in the downloadable FP template (File #2).

7.7.4 E.4 Schedule of Program Milestones and Deliverables

1. General guidelines:
   - Please use the table below to fill-out the schedule of Milestones and Deliverables (henceforth: "M&Ds") in your EC Consortium Program. The table will be copied to Annex E of the ECFA (Energy Center Funding Agreement). The M&Ds will be monitored / reviewed and updated throughout the (maximum) 3 years duration of the EC Program.

- M&Ds are to be defined and presented separately in 2 categories / classes:

  (a) Major M&Ds in Overall (maximum) 3 Program Years

  (b) Specific M&Ds in First Program Year

- A separate schedule of M&Ds should be defined for the US and for the IL CMs of the EC Program.

2. Regarding Milestones:

   - Each milestone must have a specific target date by which it is expected to be reached, preferably (but not compulsory) at the end of a specific task.
   - The milestone description must relate to how it is going to be measured, so that both the Consortium Administrators and the EC staff can verify if it has been reached.
   - At least 1 milestone should be defined to be reached within each Project segment.

3. Regarding Deliverables:

   Some of the milestones defined above should have tangible deliverables to provide, as an indication of task, milestone or Program completion. The following guidelines apply in specifying the deliverables:

   - Each deliverable must have a specific target date by which it is expected to be completed, preferably (but not compulsory) at the end of a specific task or milestone.
   - Each deliverable must include a physical hardware or software object / component / product with defined characteristics / specifications / features that can be measured and compared to a given planned target.
   - There must be at least one tangible deliverable at the completion of the Program.

4. Major M&Ds in Overall (maximum) 3 Program Years:

   In the table below, please define and describe in **1-2 sentences** the major / tangible M&Ds targeted for the entire (maximum) 3 years program. (The total number of M&Ds in the table can be changed, as planned.)

   Note: The "Major Milestones and Deliverables" tables ahead are included as WORD tables in the downloadable FP template (File #2).

Major Milestones and Deliverables in Overall program (fill-out only the white cells)					
Consortium Name:					
Country: (mark with "X")		**IL**		**U.S.**	

Milestone #	**Major Milestone Definition / Description and How Will It be Measured**	**Milestone Date (Program Year – YYYY)**
1		
2		

Deliverable #	**Major Deliverable** Definition & Description	Deliverable Date (Program Year – YYYY)
1		
2		[end of program]

5. Specific M&Ds in First Program Year:

- In the table below, please define and describe in 1-2 sentences the specific M&Ds targeted for **the first program year** (The total number of milestones can be changed, as planned.)
- The M&D # should coincide with the # of the Major M&D # defined in the table above.
- For each M&D, please indicate the **Semi-Annual Segment** in which the M&D will be accomplished / realized (segments 1-2).
- For each M&D, please indicate the **Program Task #** to which the M&D will be associated. This should coincide with the Milestones defined in the "Detailed Description of Program Tasks" in Section E of your Program Proposal.

Note: The "Specific Milestones and Deliverables in the First Program Year" tables ahead are included as WORD tables in the downloadable FP template (File #2).

Specific Milestones and Deliverables in First Program Year (fill-out only the white cells)					
Consortium Name:					
Country: (mark with "X")		**IL**		**U.S.**	

Milestone #	**Specific Milestone** Definition / Description and How Will It be Measured	Semi-Annual Segment # (1-2)	Associated Program Task #
1a			
1b			
1c			
2a			
2b			
2c			

Deliverable #	Specific Deliverable Definition & Description	Semi-Annual Segment # (1-2)	Associated Program Task #
1a			
1b			
2a			
2b			

7.7.5 E.3 - Analysis of the Project's TRL (Up to 3 pages)

This section aims to establish the Program's Technology Readiness Level (TRL) **before** the Program's inception and **following** the Program's completion. It is essential to explain the gap between the current product TRL (before the Program initiation) and its TRL by the end of the Program and explain in short how the Program activities will fill this gap.

You are asked to review the **TRL DEFINITIONS** (See **APPENDIX in Section O, below**) and identify the program's current TRL based on the definitions provided in this table and your acquaintance with the current status of the Program. You are asked to substantiate this assertion with examples. You are also asked to predict the Program's TRL following its completion and to justify this prediction based on the Program's goals and deliverables (as provided in section E.2), and the Program's plan (as provided in section F).

Use the following two templates to provide your analysis. Please provide the most relevant examples.

Identify Program's TRL prior to the Program Inception	Examples substantiating the Program's TRL prior to Program Inception
(Provide the current TRL here)	(Free text explaining your choice)
	(Examples of achievements that were accomplished prior to the Program's inception that will support your choice) – Example 1
	(Examples of achievements that were accomplished prior to the Program's inception that will support your choice) – Example 2

Expected Program's TRL by the Program Completion	Examples substantiating the Program's expected TRL by the Program's Completion (based on the Goals and Deliverables provided in section E.2)
(Provide the expected TRL here)	(Free text explaining your prediction)
	(Example of Goals and Deliverables from Section E.2 that will support your prediction) – Example 1
	(Example of Goals and Deliverables from Section E.2 that will support your prediction) – Example 2

Note: The TRL Analysis tables above are included as WORD tables in the downloadable FP template (File #2).

7.8 Section F: Program Plan (GANTT) in Graphical Form (Up to 2 pages)

The Program Plan should consist of a chronological schedule of program activities, defined as **Tasks** and presented in graphical form (**GANTT chart)**. The chart should indicate clearly only the following information:

- ✓ The Task # and name
- ✓ The start and finish dates of each task (in MM/YYYY format)
- ✓ The duration of each task (in months)
- ✓ The time axis should have **a resolution of quarters** (not more detailed) and should extend over a (maximum) **3 years period**
- ✓ Each Task is to be classified according to 1 of the following 3 classifications, and the GANTT chart should distinguish visually (graphically) between the 3 classifications:
  - Task assigned to U.S. Consortium members (CMs) only
  - Task assigned to Israel CMs only
  - Task assigned to both U.S. and Israel CMs

If the Program Plan Chart comprises several pages, only a one-page summary GANTT chart should be included here. An example of a GANTT chart with the required details is illustrated in Fig. 1, below:

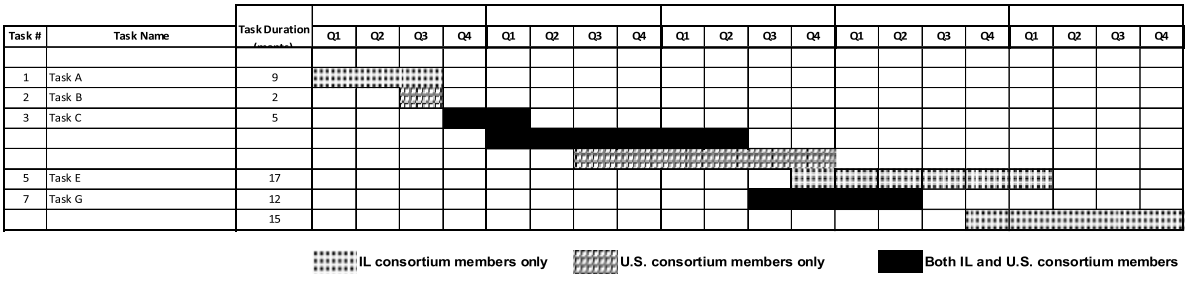


Fig. 1: Details Required in Program Plan GANTT Chart (example)

Notes: (1) The Tasks listed in the Program Plan GANTT Chart should coincide with those described in Section E, above, both in assigned number, name, start and finish dates and duration.

*(2) It is strongly recommended to generate the GANTT chart using **Microsoft Project®**. The GANTT Chart file generated by this software should be included in the Uploads to the EC /*

BIRD website (see Section 8, ahead).

Should the Proposal be approved, an updated summary GANTT representing the Program Plan will be incorporated into the **Energy Center Funding Agreement** (ECFA) and will be used by the EC in monitoring project progress.

Note: The Program Plan (GANTT) should be one of the files to be uploaded separately to the BIRD Upload System site as a component of the Proposal.

7.9 Section G: The Market (up to 6 pages)

Although we are aware of the uncertainties implicit in predictions of future markets and possible competition for any new product or process, the Consortium should make an **analysis of the market** and its current trends. Such an analysis will typically include the following considerations, which should be addressed in this section of the Proposal:

- Which market needs are served? Are any CMs currently active in developing, manufacturing and selling products based on the developed technology in this market? What is the basis for those market needs?
- What performance features and **selling price**, and hence manufacturing cost, must be achieved to penetrate this market? Provide the basis for the **manufacturing cost** and enough information to enable the reviewers to determine the likelihood of achieving the target cost. How does this cost compare with those of other, similar products developed and sold by any CM? Identify any key aspects of the technical development which could adversely affect realization of the target manufacturing cost and describe the fallback options. If the technology is part of a system not to be developed within this Proposal's Program, indicate the leverage afforded for sales of the overall system by the proposed Program, and include a comparison of the manufacturing cost of the proposed innovation to that of the entire commercial system.
- What is the total **currently available market** for the 1-2 most likely application products based on the developed technology (in physical units and in US $)? What is the current position (**market share**) of the companies in this market? What is the expected **growth rate** of this market over the effective sales window of the technology being developed and what is the basis for this projection? What events could significantly alter this projection?
- What **market share** is expected to be captured in the first year of market entry (commercialization) and over the product sales lifetime? How many units does this represent in each year of sales? What is the **unit selling price** (to third parties) of the most likely product to be developed based on the Program? How will the unit sales price change from the year of the product launch to subsequent years?
- Additional pertinent market information, such as product brochures, expressions of interest from potential customers in the products or processes to be developed, marketing agreements, etc., should be included.
- What **competition** exists or can be expected? Who are the companies, what are their products, performance and prices? Provide an evaluation of the impact of competition on the commercialization of the proposed Program.

This is not a complete list. The CMs should present whatever additional market information it considers relevant. The quantitative estimate of the annual market size, sales revenue and market share for a representative (typical) product based on the developed technology should be summarized in Table 9, below (should be identical to the estimate presented in the Executive Summary in Section C, above):

Description	Calendar Year				
First calendar year of commercial sales	**2025**	**2026**	**2027**	**2028**	**2029**
Year of commercialization	**1**	**2**	**3**	**4**	**5**
Definition of units:	MWH				
Market annual growth rate (%)	5.0%				
Market size (K Units)	5,000	5,300	5,600	5,900	6,200
Market share (%)	1.0%	1.1%	1.3%	1.4%	1.6%
Annual units sold (Units)	50,000	60,000	70,000	80,000	100,000
Cumulative units sold (Units)	50,000	110,000	180,000	260,000	360,000
Product price ($/unit)	500.00	500.00	500.00	500.00	500.00
	======	======	======	======	======
Annual product sales revenue (M$)	**25**	**30**	**35**	**40**	**50**
Cumulative product sales revenue (M$)	25	55	90	130	**180**

Table 9: Forecast of Annual Market Size and Share and of Sales Revenue for a Representative Product (example)

Note: The "Forecast of Annual Market Size and Share and Sales Revenue" in Table 9 is included as an Excel sheet in the downloadable FP template (File #2).

7.10 Section H: Commercialization – Plans and Prospects (up to 5 pages)

In addition to a promising market potential, a **commercialization program** needs to be planned and implemented, including product manufacturing, marketing, sales activities and required resources. Some of the questions to be discussed are:

- Describe the main challenges and milestones required to reach commercialization.
- Which of the CMs will be engaged in the commercialization efforts?
- Which CMs will be engaged in production? What are the existing manufacturing facilities? How can the proposed products manufacturing be integrated into existing facilities? If outsourcing is planned, which organizations will be primarily responsible, and what potential subcontractors will or could be used?
- Do any of the CMs currently have a suitable **sales and service network**? If there is such a network, it should be described. Alternatively, does such a network need to be created from scratch? If so, describe the process by which the Consortium plans to establish such a network and the resources required.
- To what extent are the necessary resources – financial or otherwise – available within the Consortium? If any additional resources will be required, how will they be mobilized? Describe all relevant potential sources.

7.11 Section I: Economic & Social Impact and Cooperation (Up to 4 pages)

7.11.1 I.1. - Economic Impact

An important factor is the benefit to Israel and the U.S. in the form of new export markets, new employment opportunities, new capital formation, productivity improvements, etc. Please elaborate on issues which are relevant to the Program's economic outcome and impact.

7.11.2 I.2. - Social Impact

The social contributions of the Program are addressed in this section. It emphasizes the social impact of the joint Program throughout its lifetime and beyond. The summary should elaborate on various aspects, including the expected environmental impact (positive or negative), sustainability of product consumption and production, and contributions to fields such as health, education, improved nutrition, sustainable agriculture, energy, industrialization, transportation, urban living.

7.11.3 I.3 - Cooperation between the CM's and Risk/Revenue/Profit Sharing

Previous sections dealt with the proposed division of tasks between the CMs. Please summarize here the projected mode and extent of **cooperative activity in areas of R&D**, including the sharing of R&D infrastructure, the industrial development of technology, etc.

- Describe the **synergies** between the U.S. and Israel CMs, the plans to leverage experience and expertise of other organizations in the Consortium and the added value of the Consortium.
- Describe the **risk-sharing** by CMs during the Program development stage and during the potential commercialization.

7.12 Section J: The Consortium Members and Their Resources (up to 8 pages)

This section addresses financial information, relevant facilities, integration with existing structure, previous BIRD-funded projects, and relationships with other supported projects. Please provide information about **each Consortium Member (CM)**, including the following:

- **Record of performance in similar / related undertakings** - Describe the extent to which Technologies / products similar or related to the proposed innovation have been developed and commercialized by the co. / org. Describe the track record or history of the co. / org. that also substantiates a positive prognosis for this proposed Program's successful commercialization.
- Degree to which the proposed Program can be absorbed into the existing structure of the co.
- / org. To what extent are the staff, equipment, facilities, etc., available for the Program? Identify the need to hire staff, obtain (purchase, lease or rent) capital equipment, or expand manufacturing operations.
- Description of previous projects for which the co. / org. received **BIRD funding**. Indicate the program scope, program duration and outcome in commercial terms, i.e., **revenues from commercialization** of the BIRD product and repayments to BIRD. Also indicate the future commercial potential of products previously developed in BIRD projects.
- Relationship of the proposed Program to other co./ org. projects that receive / have **received financial support** from any outside agency for development of the proposed Program, such as the **IIA, the MOE, the NIH, the NIST, the DOE, DHS, MOPS**, etc.
- **Financial information** validating that the co./org. **has the resources available**, not only for contributing its share of the Program's cost, but also to cover the commercialization phase. Public companies can submit annual and quarterly reports rather than specially prepared information. At a minimum, **annual revenues expected** during the current fiscal year and realized during each of the

last two fiscal years should be given, in addition to an indication of the profitability of the co./org. during this period.

- **Number of employees** at the home country, at field locations and abroad should be given, along with an indication of changes in the employment picture during the past two years.
- Description of relevant **facilities, equipment, infrastructure**, etc., which are expected to be utilized during the development Program and during commercialization.

7.13 Section K: Organizations **(up to 4 pages)**

This section should contain a presentation of the proposed **management procedures** for the Program, including the **internal review procedures** and overall management plan that will ensure, barring unforeseeable circumstances, implementation according to design specifications, on schedule and within Budget.

- Describe the procedures to be implemented to maintain **timely communications** between the Program team of each CM. Indicate the role of review meetings (when, where, or what purpose, with whom) during the Program.
- Provide an **organization chart** for the Program, identifying the Program Manager of each Consortium member, the Israel Administration (ILCA) and the U.S. Administration (USCA) Program Managers and the overall Consortium Program Manager (if such a manager is appointed by the Consortium) and indicate the relationship of this ad hoc organization to the formal hierarchies in the organizations of CMs. For each CM, identify the Program's **key personnel and their responsibilities**.
- Regarding staff – For each CM, indicate **positions to be filled by new employees** and identify the status of these staff.
- Identify the role of **key consultants and subcontractors** on the organization chart of each Consortium member and indicate if a relationship between the consultants / subcontractors and the CMs currently exists. **Resumes of key consultants** should be included.
- For each CM, attach short **resumes** (up to one page each) of **key personnel** who will work on the Program project. The resumes should include each individual's role in the Program (i.e., project manager, senior software engineer, field engineer, etc.). Include the person's current company affiliation, job title, relevant job experience and significant accomplishments, starting from the most current position. Indicate higher education and degrees and list professional affiliations and committee memberships.

  *Note: In the final analysis, the determining factors in the successful commercialization of innovations are **the people and the companies** involved. The reviewers of the proposal need to see that the experience, education and capabilities of the professional staff are commensurate with the R&D tasks to be performed.*

7.14 Section L: The Budget

7.14.1 Introduction and General Guidelines

- All **development expenses** directly associated with the Proposal Program, to be incurred by each Consortium member throughout its entire development phase (maximum 3 years), should be included in the Budget (and not only those expenses falling within the scope of work of the EC-sponsored portion of the development).

- The EC's funding of the Program, if approved, begins at the **Effective Date** of the Proposal Program, which may be as early as **the month following the signing the ECFA**. Expenses incurred by any CM prior to the Effective Date cannot be recognized by the EC.
- A **separate Budget** should be presented for each CM's activities throughout the entire duration of the Program. In addition, the Proposal should also present, in **summary form only** (see below):
  - ✓ the **combined Budget** of the ILCA and all other **Israel** CMs under its responsibility / management (the **ILB**)
  - ✓ the **combined Budget** of the USCA and all other **U.S**. CMs under its responsibility / management (the **USB**)

  Note: To uphold confidentiality, each CM shall be responsible for uploading its respective budget file to BIRD's Upload System.
- Before starting the Budget-building process, the Consortium should **already have available**:
  - ✓ The definition of up to **25 major tasks** (activities), including the **number and name** (short textual description) of each task, which should completely coincide with the tasks defined and described in Section E of the Proposal, above.
  - ✓ The **Effective Date and finish dates** of each task (**in MM/YY format**), or as a default, the **duration (in days) of each task,** which should completely coincide with the assignments in Section E of the Proposal and the GANTT chart presented in the section "Program Plan" (Section F), above.
- The task number, task name, start and finish dates and duration of all (up to 25) tasks **are the same** for all CMs, but the Budgets of each Task are, obviously, **different** for each CM.
- The **Total Budget** of each CM is prepared by estimating the development expenses of the CM for each task, called the **Task Budget,** and summing for all tasks (in a "bottom-up" approach).

*Note: The detailed Budget components, the calculation of these components and the presentation of the Budget in different formats and detail levels (see Section 7.14.2, below) have been incorporated in an **Excel Budget Workbook** (henceforth: "**EBW**"). This workbook is available to the Consortium and can be downloaded from the EC website (File #4: Proposal Budget Template (25 tasks) (V8).xlsx in https://us-isr-energycenter.org/guidelines-forms/). It is essential that all Budget Tables / Reports required in the Proposal (see Section 7.14.2, below) be prepared in the Proposal and submitted to the EC **using this EBW.***

- The **expense components** of the **Task Budget**, an example of which is given in Table 10, below, as well as of all other Budget Tables / Reports required in the Proposal (see Section 7.14.2, below), are defined by the following **functional categories**:
  i. Labor
  ii. Equipment
  iii. Expendable Materials and Supplies
  iv. Travel
  v. Subcontracts
  vi. Consultants
  vii. Other Expenses
- In the Proposal, each CM should prepare its Budget in detailed form, using, as starting point, the same EBW, in which the following info has been entered (filled-in) for all defined Tasks (each Task is a different worksheet in the EBW, an example of which is given in Table 10, below):
  - ✓ Task number (from 1 to 25)
  - ✓ Task name (up to 35 characters long)
  - ✓ Task start date (in MM/YY format)

- ✓ Task finish date (in MM/YY format)
- ✓ Task duration (in both days and months, which is **calculated automatically** in the EBW but can be inserted manually, as an override)

Org. Name: **Company A**

Task #: 1 Task name: Task 1

TASK BUDGET From date: 01/20 MM/YY To date: 10/20 MM/YY

Task duration: 300 days or: 10 months

	Description	Details					Cost ($)	Total ($)
I. Direct Labor								
	Employee's Name (TBD if yet unknown)	**Employee's Profession**	**Employee Location**	**Gross Annual Salary* ($)**	**% on Task**	**No. of Days in Task**	**Cost to Project ($)**	
Empl. 1:	Employee A	Profession 1	IS	100,000	50%	300	**41,667**	
Empl. 2:	Employee B	Profession 2	US	150,000	95%	300	**118,750**	
Empl. 3:				-		300	**0**	
Empl. 4:				-		300	**0**	
Empl. 5:				-		300	**0**	
Empl. 6:				-		300	**0**	
Empl. 7:				-		300	**0**	
Empl. 8:				-		300	**0**	
Empl. 9:				-		300	**0**	
Empl.10:				-		300	**0**	
Empl. 11:				-		300	**0**	
Empl. 12:				-		300	**0**	
Empl. 13:				-		300	**0**	
Empl. 14:				-		300	**0**	
Empl. 15:				-		300	**0**	
Empl. 16:				-		300	**0**	
Empl. 17:				-		300	**0**	
Empl. 18:				-		300	**0**	
Empl. 19:				-		300	**0**	
Empl. 20:				-		300	**0**	
		Total, Direct Labor		* Including social benefits			**160,417**	
		Overhead @ 25%					**40,104**	
		Subtotal, Direct Labor + Overhead						**200,521**
II. Equipment								
	Purchased Equipment Description		**Purchased Cost ($/unit)**	**No. of Units**	**% On Task**	**% Annual Depreciation**	**Depreciation ($)**	
Item 1	Equipment A		500,000	1	20%	33.3%	**27,397**	
Item 2	Equipment B		200,000	2	40%	33.3%	**43,836**	
Item 3			-	-		33.3%	**0**	
Item 4			-	-		33.3%	**0**	
Item 5			-	-		33.3%	**0**	
Item 6			-	-		33.3%	**0**	
Item 7			-	-		33.3%	**0**	
Item 8			-	-		33.3%	**0**	
Item 9			-	-		33.3%	**0**	
Item 10			-	-		33.3%	**0**	
Item 11			-	-		33.3%	**0**	
Item 12			-	-		33.3%	**0**	
Item 13			-	-		33.3%	**0**	
Item 14			-	-		33.3%	**0**	
Item 15			-	-		33.3%	**0**	
		Subtotal, Purchased Equipment					**71,233**	
	Leased Equipment Description		**Monthly Lease Cost ($/unit)**	**No. of Units**	**% On Task**		**Total Leasing Cost ($)**	
Item 1	Equipment C		10,000	1	50%		**50,000**	
Item 2			-	-			**0**	
Item 3			-	-			**0**	
		Subtotal, Leased Equipment					**50,000**	
		Subtotal, Purchased or Leased Equipment						**121,233**
III. Expendable Materials & Supplies								
	Description						**Cost ($)**	
Item 1	Materials 1						**10,000**	
Item 2	Materials 2							
Item 3								
Item 4								
Item 5								
Item 6								
Item 7								
Item 8								
Item 9								
Item 10								
Item 11								
Item 12								
Item 13								
Item 14								
Item 15								
		Subtotal, Expendable Materials & Supplies						**10,000**

Table 10: Content & Format of the **CM Task Budget** (example)

Co. Name: Company A

PROPOSED TASK BUDGET (cont.)

Task #: 1 Task name: Task 1

Description		Details				Cost ($)	Total ($)
IV. Travel							
Foreign Travel							
Destination	**Purpose**	**Cost Per Person Per Trip ($)**	**No. of Trips**	**No. of People Per Trip**	**Duration Per Trip (days)**	**Cost ($)**	
Dest. 1	Destination A (USA)	Purpose A	4,000	2	1	7	**8,000**
Dest. 2	Destination B (Israel)	Purpose B	6,000	1	2	10	**12,000**
Dest. 3			-		-	-	**0**
Dest. 4			-		-	-	**0**
Dest. 5			-		-	-	**0**
Dest. 6			-		-	-	**0**
		Subtotal, Foreign Travel		**3**			**20,000**
Domestic Travel							
Destination	**Purpose**	**Cost Per Person Per Trip ($)**	**No. of Trips**	**No. of People Per Trip**	**Duration Per Trip (days)**	**Cost ($)**	
Dest. 1	Destination C (USA)	Purpose C	2,000	3	2	3	**12,000**
Dest. 2			-		-	-	**0**
Dest. 3			-		-	-	**0**
		Subtotal, Domestic Travel		**3**			**12,000**
			Subtotal, Travel				**32,000**
V. Subcontracts							
	Service to be Performed		**Name of Subcontractor**			**Cost ($)**	
Subcont. 1	Service 1		Subcontractor A			**35,000**	
Subcont. 2	Service 2		Subcontractor B			**60,000**	
Subcont. 3							
Subcont. 4							
Subcont. 5							
Subcont. 6							
		Subtotal, Subcontracts					**95,000**
VI. Consultants							
	Service to be Performed		**Name of Consultant**	**Hourly Rate ($/Hr.)**	**No. of Hours**	**Cost ($)**	
Consult. 1	Service C		Consultant A (USA)	200	**50**	**10,000**	
Consult. 2	Service D		Consultant B (IL)	150	**100**	**15,000**	
Consult. 3				-		**0**	
Consult. 4				-		**0**	
Consult. 5				-		**0**	
Consult. 6				-		**0**	
		Subtotal, Consultants					**25,000**
VII. Other Expenses							
	Description					**Cost ($)**	
Item 1	Other expense A					**30,000**	
Item 2	Other expense B					**60,000**	
Item 3							
Item 4							
Item 5							
		Subtotal, Other Expenses					**90,000**
		Subtotal task budget, before G&A Expenses					**573,754**
		General & Administrative Expenses (G&A) @ 5%					**28,688**
		Total Task Budget					**602,441**

Table 10: Content & Format of the **CM Task Budget** (example) (continuation)

*Note: In all the EBWs, only the cells highlighted in yellow are the **input cells.***

7.14.2 Budget Reports / Tables Required in the Proposal for each CM

The following budget-related reports / tables, all generated by the Excel Budget Workbook (EBW), must be included in the proposal:

- **Total Budget** Table, required for each CM - Example of the Budget components, the structure and the format of the Total Budget of each CM is given in Table 13. It is the sum total of the Budgets of all the Tasks (up to 25 Tasks) in which the CM has an involvement.
- **Budget Summary** Table, required for each CM – Example of the summary of the CM's Budget, by functional category, for each Task is given in Table 12, below.
- **Budget Summary by Country** (Israel or U.S.) Table – The summary of the Budgets of all CMs belonging to either **Israel** (the **ILB**, under the management of the ILCA) or to the **U.S.** (the **USB**, under the management of the USCA). It is identical in content and in format to the Budget Summary Table, given in Table 6, above.

Organization Name: **Company A**

			Cos Compon ents of Tasks ($)									
Task #	Task Name	Task Duration (days)	Direct Labor	Labor Overhead (25%)	Equipment	Expendable Materials & Supplies	Travel	Sub-contracts	Consultants	Other Expenses	G&A Overhead (5%)	Total Task Cost
1	Task 1	300	160,417	40,104	121,233	10,000	32,000	95,000	25,000	90,000	28,688	602,441
2	Task 2	180	66,000	16,500	117,534	0	32,000	135,000	0	11,593	18,931	397,559
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
	Total for project		**226,417**	**56,604**	**238,767**	**10,000**	**64,000**	**230,000**	**25,000**	**101,593**	**47,619**	**1,000,000**

Table 12: Content & Format of the **Budget Summary** of each CM or of all IL / US Members, Generated by the EBW (example)

Note: In all the EBWs, only the cells highlighted in yellow are the ***input cells.***

TOTAL BUDGET

Consortium Name:	Consortium A
Country:	IS
Organization name:	Company A
Project duration:	**60** months

	Description	Details				Cost ($)	Total ($)
	I. Direct Labor						
	Employee's Name (TBD if yet unknown)	**Employee's Profession**	**Employee location**	**Gross Annual Salary* ($)**	**% on Project**	**Cost to Project ($)**	
Empl. 1:	Employee A	Profession 1	IS	100,000	14%	**71,667**	
Empl. 2:	Employee B	Profession 2	US	150,000	21%	**154,750**	
Empl. 3:					0%	**0**	
Empl. 4:					0%	**0**	
Empl. 5:					0%	**0**	
Empl. 6:					0%	**0**	
Empl. 7:					0%	**0**	
Empl. 8:					0%	**0**	
Empl. 9:					0%	**0**	
Empl.10:					0%	**0**	
Empl. 11:					0%	**0**	
Empl. 12:					0%	**0**	
Empl. 13:					0%	**0**	
Empl. 14:					0%	**0**	
Empl. 15:					0%	**0**	
Empl. 16:					0%	**0**	
Empl. 17:					0%	**0**	
Empl. 18:					0%	**0**	
Empl. 19:					0%	**0**	
Empl. 20:					0%	**0**	
	Total, Direct Labor		* Including social benefits			**226,417**	
	Overhead @ 25%					**56,604**	
	Subtotal, Direct Labor + Overhead						**283,021**
	II. Equipment						
	Purchased Equipment Description	**Purchased Cost ($/unit)**	**No. of Units**	**% On Project**	**% Annual Depreciation**	**Depre-ciation ($)**	
Item 1	Equipment A	500,000	1	8%	33.3%	**68,493**	
Item 2	Equipment B	200,000	2	9%	33.3%	**60,274**	
Item 3				0%	33.3%	**0**	
Item 4				0%	33.3%	**0**	
Item 5				0%	33.3%	**0**	
Item 6				0%	33.3%	**0**	
Item 7				0%	33.3%	**0**	
Item 8				0%	33.3%	**0**	
Item 9				0%	33.3%	**0**	
Item 10				0%	33.3%	**0**	
Item 11				0%	33.3%	**0**	
Item 12				0%	33.3%	**0**	
Item 13				0%	33.3%	**0**	
Item 14				0%	33.3%	**0**	
Item 15				0%	33.3%	**0**	
	Subtotal, Purchased Equipment					**128,767**	
	Leased Equipment Description	**Monthly Lease Cost ($/unit)**	**No. of Units**	**% On Project**		**Total Leasing Cost ($)**	
Item 1	Equipment C	10,000	1	18%		**110,000**	
Item 2				0%		**0**	
Item 3				0%		**0**	
	Subtotal, Leased Equipment					**110,000**	
	Subtotal, Purchased or Leased Equipment						**238,767**

Table 13: Content, Structure and Format of the Total Budget of each CM, Generated by the EBW (example)

TOTAL BUDGET (cont.)

Organization name: Company A

Description	Details	Cost ($)	Total ($)

III. Expendable Materials & Supplies

	Description	Cost ($)
Item 1	Materials 1	10,000
Item 2	Materials 2	0
Item 3		0
Item 4		0
Item 5		0
Item 6		0
Item 7		0
Item 8		0
Item 9		0
Item 10		0
Item 11		0
Item 12		0
Item 13		0
Item 14		0
Item 15		0
	Subtotal, Expendable Materials & Supplies	10,000

IV. Travel

Foreign Travel

	Destination	Purpose	Cost Per Person Per Trip ($)	No. of Trips	No. of People Per Trip	Duration Per Trip (days)	Cost ($)
Dest. 1	Destination A (USA)	Purpose A	4,000	3	1	7	12,000
Dest. 2	Destination B (Israel)	Purpose B	6,000	3	2	10	36,000
Dest. 3				0			0
Dest. 4				0			0
Dest. 5				0			0
Dest. 6				0			0
		Subtotal, Foreign Travel		6			48,000

Domestic Travel

	Destination	Purpose	Cost Per Person Per Trip ($)	No. of Trips	No. of People Per Trip	Duration Per Trip (days)	Cost ($)
Dest. 1	Destination C (USA)	Purpose C	2,000	4	2	3	16,000
Dest. 2				0			0
Dest. 3				0			0
		Subtotal, Domestic Travel		4			16,000
		Subtotal, Travel					64,000

V. Subcontracts

	Service to be Performed	Name of Subcontractor	Country Service Given	Cost ($)
Subcont. 1	Service 1	Subcontractor A	USA	75,000
Subcont. 2	Service 2	Subcontractor B	Israel	155,000
Subcont. 3				0
Subcont. 4				0
Subcont. 5				0
Subcont. 6				0
	Subtotal, Subcontracts			230,000

VI. Consultants

	Service to be Performed	Name of Consultant & Country Service Given	Hourly Rate ($/Hr.)	No. of Hours	Cost ($)
Consult. 1	Service C	Consultant A (USA)	200	50	10,000
Consult. 2	Service D	Consultant B (IL)	150	100	15,000
Consult. 3				0	0
Consult. 4				0	0
Consult. 5				0	0
Consult. 6				0	0
	Subtotal, Consultants				25,000

TOTAL BUDGET (cont.)

Organization name: Company A

Description	Details	Cost ($)	Total ($)

VII. Other Expenses

	Description	Cost ($)
Item 1	Other expense A	41,593
Item 2	Other expense B	60,000
Item 3		0
Item 4		0
Item 5		0
	Subtotal, Other Expenses	101,593

Subtotal budget, before G&A Expenses	952,381
General & Administrative Expenses (G&A) @5%	47,619
Total Proposal Budget for Organization	1,000,000

Projected Expenditure, by Segment

Segment #	Segment Duration (months)	% of Total Budget	Projected Expen-diture ($)
1	6	40%	400,000
2	6	60%	600,000
3	6		0
4	6		0
5	6		0
6	6		0
7	6		0
8	6		0
9	6		0
10	6		0
Total:	60	100%	1,000,000

Table 13: Content, Structure and Format of the **Total Budget** of each CM, Generated by the EBW (example) (continuation)

7.14.3 Step-By-Step Explanation on Budget Preparation

1. Proceed to build each CM's Budget using the EBW. You can start the process with any of the Tasks and in any order, by activating the corresponding worksheet labeled "Task 1" through "Task 25" (see Table 10, above, for the format of "Task Budget:"). You are asked **to relate only to the input data cells, colored yellow**.

   Note: Instructions and comments related to specific expense components and data items in the EBW are given for items colored light green. You can read the comments by pointing to the specific cell. The instructions and comments are also given below.

2. Whenever there is a need to define the name of a specific expense, such as the name and profession of a specific employee (in direct labor), the name and purchase cost of a specific equipment item, the name of a specific expendable material, etc., enter the definition in the appropriate location (always in a yellow-colored cell) of the **"Total Budget" worksheet**. The information you enter in the "Total Budget" worksheet will be copied to and will appear in all the Task worksheets.

   Note: If the formats of specific input cells do not provide enough space to insert a meaningful description of the expense items, please attach an appendix to the budget form containing the referenced full-length description of these expense items.

3. After defining a specific expense, return to the Task worksheet you have started to work on and complete the input information concerning the specific expense (again, by entering data only in the yellow-colored cells). Repeat this sequential procedure for all the expense categories relevant to the Task.

4. Follow the procedure described in items 2 and 3, above for all the Tasks in your Proposal Program. The total cost of a Task will be calculated at the bottom of the Task worksheet (including all built-in overhead allowances) and will also appear in the "**Tasks Report**" summary worksheet, itemized by expense type (see Table 12, above).

5. The **cumulative values** of all the expense components in all Tasks will appear in the "Total Budget" worksheet, at the corresponding location of the expense component in the Tasks worksheets.

   *Note: Only the 2 pages of the "Total Budget" worksheet (see Table 13, above) for each CM should be included in Section L ("The Budget") of the Proposal. Please **do not attach** the budget worksheets of the individual Tasks to the Proposal document. The complete EBW softcopy of the "Task Budget", which includes the individual Budgets of each Task, **should be uploaded** to the EC / BIRD upload system (https://ec-upload.birdf.com), in parallel with the submittal of the hardcopy.*

6. The budget can include expenses incurred **only in Israel and in the US**.

7. For any specific budget item that is **over $50,000**, provide a breakdown and more detail.

7.14.4 Guidelines for Each Functional Expense in the Budget

I. Direct Labor

The Gross Annual Salary, an input item, is the actual current salary plus social ("fringe") benefits of employees expected to work on the Program. The maximum annual salary (including social benefits for a full-time position) currently recognized is **$125,000** for Israeli organizations and **$175,000** for U.S. organizations. Typically, in addition to the engineering and technical personnel, the staff includes prototyping, R&D documentation and marketing personnel. NOT to be included are corporate executives, secretarial staff, legal staff, administrative staff or staff engaged in selling activities. Such expenses are included in the **overhead allowance.**

The % on Program, an input item, is the average portion of any given worker's time spent directly on the Program throughout the entire duration of the Program (maximum 3 years), given as a percent.

The Cost to Project, a computed item, is the product of the Gross Annual Salary (including social benefits) x % on Program x number of months on the project / 12.

Overhead (O/H), at the rate of **25% on the total direct labor,** is a computed item and includes all indirect labor overhead expenses.

II. Equipment

Depreciation - This budget item refers to depreciation allowance on capital equipment employed, and not to capital expenditures.
a. Base for calculation. The depreciation allowance is based on the equipment's net book value, per the company's own standard accounting depreciation records, as of the date the equipment is put into use on the project.
b. Calculation. The depreciation allowance equals: net book value X number of units employed X % of the time the equipment is employed on the project X the annual depreciation rate.
c. Rate and cap. The annual depreciation rate currently allowed is up to 33.3% per year, up to a cumulative maximum of 100% of the equipment's net book value at time of project use.
d. Minimum threshold. Equipment items with a purchase cost below $1,500 are not eligible for this allowance.
e. Fully depreciated equipment. No depreciation shall be recognized for equipment that has already been fully depreciated on the company's own accounting books.
f. No double funding. Expenses for equipment for which the company (or a related party) has received a grant or any other government benefit - directly or indirectly, toward the purchase of that equipment - shall not be recognized.

III. Expendable Materials & Supplies

List and describe each major item or groups of related items categorized as expendable materials and supplies.

*Note: For any item that is over **$50,000**, please provide a breakdown and more detail.*

IV. Travel

Travel expenses should be classified as either **foreign or domestic travel**. In either case, the trips should be itemized by the destination and the purpose of the trip, which should be described in a few words.

The cost ($) is the cost per person per trip (an input item in $) x the number of people per trip (an input item) x the number of trips of the same kind taken throughout the Program (an input item). The duration per trip (in days) is just an informative data item.

V. Subcontractors

Please identify each subcontractor, the service to be performed, the country in which the service will be given and the cost for each service.

*Note: For any item that is over **$50,000**, please provide a breakdown and more detail.*

VI. Consultants

Please identify each consultant, the nature of the consulting activity, the country in which the service will be given, the hourly rate upon which the charge will be made (an input item given in $/hr.) and the

estimated number of consultant hours (an input item).

*Note: For any item that is over **$50,000**, please provide a breakdown and more detail.*

VII. Other Expenses

Typical "Other Expenses" include items such as exhibits, regulatory activities, standards certifications, field trials, patent registration, market surveys or other miscellaneous development-related expenses not covered by any of the previous expense categories.

Please note that **patent registration** costs are allowable at up to **$30,000 per patent**

*Note: For any item that is over **$50,000**, please provide a breakdown and more detail.*

VIII. General & Administrative Expenses (G&A)

G&A expenses, computed at **5% of the subtotal budget**, represent all operating overhead items such as secretarial services, legal staff, rent, utilities, etc.

IX. Projected Expenditure, by Segment

The overall Program period (duration), of 3 years, is organized in **equal segments** of **6 months each,** for the purpose of monitoring, reporting and payment of the conditional grant funds. For each segment in the Program, please specify the segment duration **(6 months, unless otherwise approved by the EC / BIRD)** and the estimated relative expenditures for the segment (given as % of the total budget). Please note that the total segments duration must equal the total overall project duration and that the % of total budget for all segments must sum to 100%.

7.14.5 Summary of the Total Budgets of the IL and the U.S. CMs

The **consolidated** (total) **Budgets** of all U.S. CMs (the **USB**) and the consolidated (total) **Budgets** of all Israel CMs (the **ILB**) (see Sections 3.4. and 3.5, above), are presented in the Full Proposal, covering the **entire duration** of the Proposal (maximum 3 years).

To the sum of the Total Budgets of the ILCA and of the USCA are added (**automatically**) a "Administrative Overhead Budget allowance" of **2.5% of the total combined budgets,** as can be seen in the Combined Budgets Classified by **Tasks** in Table 14, by **CMs** in Table 15 and by equal **Program Segments** of 6 months each in Table 16, below:

Country: IS

Task #	Task Name	Task Duration (days)	Cos Components of Task: ($) Direct Labor	Labor Overhead (25%)	Equipment	Expendable Materials & Supplies	Travel	Sub-contracts	Consultants	Other Expenses	G&A Overhead (5%)	Total Task Cost	Total Task Cost Incl. ILL/USL Overhead
1	Task 1	12	192,607	48,152	51,288	1,860,000	25,000	2,110,000	25,000	159,449	223,575	4,695,071	**4,812,448**
2	Task 2	12	150,000	37,500	54,575	95,000	60,000	200,000	60,000	100,000	37,854	794,929	**814,802**
3	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total for Country		**342,607**	**85,652**	**105,863**	**1,955,000**	**85,000**	**2,310,000**	**85,000**	**259,449**	**261,429**	**5,490,000**	**5,627,250**
	ILL/USL overhead allowance:	**2.5%**	8,565	2,141	2,647	48,875	2,125	57,750	2,125	6,486	6,536	**137,250**	
			========	========	========	========	========	========	========	========	========	========	
	Total for Country Incl. ILL/USL Overhead		**351,172**	**87,793**	**108,510**	**2,003,875**	**87,125**	**2,367,750**	**87,125**	**265,936**	**267,964**	**5,627,250**	

Table 14: Summary of the **Combined Budgets of all CMs** in IL / U.S., classified by **Tasks** (example for the ILB).

Country: IS

Org.	Organization Name		Cos Components of Tasks ($)									
			Direct Labor	Labor Overhead (25%)	Equipment	Expendable Materials & Supplies	Travel	Sub-contracts	Consultants	Other Expenses	G&A Overhead (5%)	Total Task Cost
A	Company A		142,607	35,652	52,932	25,000	15,000	60,000	15,000	130,000	23,810	500,000
B	University A		200,000	50,000	52,932	130,000	70,000	250,000	70,000	129,449	47,619	1,000,000
C	Contract Research Co. A		0	0	0	0	0	2,000,000	0	0	100,000	2,100,000
D	College A		0	0	0	1,800,000	0	0	0	0	90,000	1,890,000
E	E		0	0	0	0	0	0	0	0	0	0
	Total for Country		**342,607**	**85,652**	**105,863**	**1,955,000**	**85,000**	**2,310,000**	**85,000**	**259,449**	**261,429**	**5,490,000**
	ILL / USL overhead allowance:	**2.5%**	8,565	2,141	2,647	48,875	2,125	57,750	2,125	6,486	6,536	**137,250**
			========	========	========	========	========	========	========	========	========	========
	Total for Country Incl. ILL/USL Overhead:		**351,172**	**87,793**	**108,510**	**2,003,875**	**87,125**	**2,367,750**	**87,125**	**265,936**	**267,964**	**5,627,250**

Table 15: Summary of the **Combined Budget**s of all CMs in IL / U.S., classified by **CMs** (example for the ILB)

Country:					Name of Organization		Name of Organization		Name of Organization		Name of Organization		Name of Organization	
			Total ILL/USL Budget ($)											
Segment #	Segment Duration (months)(*)	% of Total ILL/USL Budget	Without Overhead Allowance	With Overhead Allowance	Percent of Total Budget (%)	Projected Expenditure ($)	Percent of Total Budget (%)	Projected Expenditure ($)	Percent of Total Budget (%)	Projected Expenditure ($)	Percent of Total Budget (%)	Projected Expenditure ($)	Percent of Total Budget (%)	Projected Expenditure ($)
1	6	-	0	0	0%	0	0%	0	0%	0	0%	0	0%	0
2	6	-	0	0	0%	0	0%	0	0%	0	0%	0	0%	0
3	6	-	0	0	0%	0	0%	0	0%	0	0%	0	0%	0
4	6	-	0	0	0%	0	0%	0	0%	0	0%	0	0%	0
5	6	-	0	0	0%	0	0%	0	0%	0	0%	0	0%	0
6	6	-	0	0	0%	0	0%	0	0%	0	0%	0	0%	0
7	6	-	0	0	0%	0	0%	0	0%	0	0%	0	0%	0
8	6	-	0	0	0%	0	0%	0	0%	0	0%	0	0%	0
9	6	-	0	0	0%	0	0%	0	0%	0	0%	0	0%	0
10	6	-	0	0	0%	0	0%	0	0%	0	0%	0	0%	0
Total:	**60**	**0%**	**0**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**

(*) As reported by Company A

Table 16: Summary of the Combined Budgets of all CMs in IL / U.S., classified by Project Segments (of 6 months each)

To obtain the sum of the Total Budgets of all the Israeli and of all the U.S. CMs (the **ILB** and the **USB**, accordingly), which are calculated in the EBW and presented in the Proposal by **functional classification**, follow the procedure below:

1. Rename the EBW file of any Israel CM: **Member A - budget.xlsx, Member B – budget.xlsx,** etc., and store them in the file directory named: **E:\EC**

   Likewise, rename and store the EBW file of any U.S. CM as in item 1, above

2. Download from BIRD's website (https://us-isr-energycenter.org/guidelines-forms/) "File #5 - EC2 Proposal Budget Summary for ILCA & USCA (25 tasks) V1.xlsx" and store it in the same file directory as in 1, above (**E:\EC**).

3. Open / run the Excel worksheet that was downloaded in 2, above ("File #5 - EC2 Proposal Budge Summary for ILCA & USCA (25 tasks) V1.xlsx").

4. Copy / Paste Table 14-16 (three tables for the ILB and three for the USB) from the Excel worksheet in (3) to the Full Proposal.

Note: The Excel worksheets in (3), above (File #5), one prepared by the ILCA and the second by the USCA, are also uploaded to the EC / BIRD upload system ((https://ec-upload.birdf.com).

7.15 Section M: Risk Analysis

Use Table 17, below, to describe the **main risks** of the Program:

TABLE A: Identify at most **5 main risks**. Number the risks and give each one a short identification name. Keys for probability ranking and for evaluating impacts are provided in the 4 boxes, hereinafter.

TABLE B: Describe each of the identified risks concisely. Use additional space, if needed for clarity. Assign a "type" to each risk. Risks can be of different types, as exemplified in the (*) explanation to the table. Other types may be used by adding them to the explanations.

Notes: (1) The "Risk Analysis" template (Table 17) is included in the downloadable FP template (File #2).

(2) Do not make any changes in format or structure to the template.

TABLE A

Risk #	Name/Description	Ranking	Impact		
			Duration[1]	Budget[2]	Commercialization Potential[3]
1					
2					
3					
4					
5					

TABLE B

Risk #	Name/Description	Type*
1		
2		
3		
4		
5		

*Type: Technical (T), Project Management/Resources (M), External to the Project (E)

Ranking	Probability of Risk Occurring
High	Above 50%
Medium	30 – 49%
Low	10 – 29%
Very Low	1 – 10%

Duration

Impact	Duration[1]
High	Above 2 years
Medium	Up to 1 year
Low	Up to 6 months

Budget

Impact	Budget[2]
High	Above 20% increase
Medium	10% to 20% increase
Low	Below 10% increase

Commercialization Potential

Impact	Commercialization Potential[3]
High	Above 50%
Medium	30% to 50%
Low	1% to 29%

References above:

1. **Duration** of Program extended by the amount given in the above box.
2. **Budget** - Cost of the Program increases by the % given in the above box.
3. **Commercialization Potential** - Forecasted sales in the first 3-5 commercialization years reduced by the % given in the above box

Table 17: Risk Analysis Template

7.16 Section N: Sundry Information – Mandatory

To enable the EC to prepare the ECFA on a timely basis following approval of the grant application by the ECEC, please provide the following contact information in the Proposal itself:

	Israel Administrator Organization (ILCA)	**U.S. Administrator Organization (USCA)**
Company / Organization Name(*)		
Venue for the **applicable law** governing the ECFA	Israel	(choose one of the U.S. States)
Program Manager		
Full name and title		
Position in Co. / Org.		
Email address		
Direct telephone number		
Mobile telephone number		
Fiscal Information Official		
Full name and title		
Position in Co. / Org.		
Email address		
Direct telephone number		
Mobile telephone number		

(*) As it appears on the Certificate of Incorporation

Note: The above "Sundry Information" table is included in the downloadable FP template (File #2).

7.17 Section O: APPENDIX – TRL Definitions

Relative Level of Technology Development	Technology Readiness Level	TRL Definition	Description
System Operations	**TRL 9**	The actual system operated over the full range of expected mission conditions	The technology is in its final form and operated under the full range of operating mission conditions.
System Commissioning	**TRL 8**	Actual system completed and qualified through test and demonstration	The technology has been proven to work in its final form and under expected conditions. In almost all cases, this TRL represents the end of true system development. Examples include developmental testing and evaluation of the system. Supporting information includes operational procedures that are virtually complete. An Operational Readiness Review (ORR) has been successfully completed prior to the start of hot testing.
	TRL 7	Full-scale, similar (prototypical) system demonstrated in a relevant environment	This represents a major step up from TRL 6, requiring demonstration of an actual system prototype in a relevant environment. Examples include testing full-scale prototype in the field with a range of simulants. Supporting information includes results from the full-scale testing and analysis of the differences between the test environment, and analysis of what the experimental results mean for the eventual operating system/environment. Final design is virtually complete.
Technology Demonstration	**TRL 6**	Engineering/pilot-scale, similar (prototypical) system validation in a relevant environment	Engineering-scale models or prototypes are tested in a relevant environment. This represents a major step up in a technology's demonstrated readiness. Examples include testing an engineering scale prototypical system with a range of simulants. Supporting information includes results from the engineering scale testing and analysis of the differences between the engineering scale, prototypical system/environment, and analysis of what the experimental results mean for the eventual operating system/environment. TRL 6 begins true engineering development of the technology as an operational system. The major difference between TRL 5 and 6 is the step up from laboratory scale to engineering scale and the determination of scaling factors that will enable design of the operating system. The prototype should be capable of performing all the functions that will be required of the operational system. The operating environment for the testing should closely represent the actual operating environment.
Technology Development	**TRL 5**	Laboratory scale, similar system validation in a relevant environment	The basic technological components are integrated so that the system configuration is similar to (matches) the final application in almost all respects. Examples include testing a high-fidelity, laboratory scale system in a simulated environment. Supporting information includes results from the laboratory scale testing, analysis of the differences between the laboratory and eventual operating system/environment, and analysis of what the experimental results mean for the eventual operating system/ environment. The major difference between

Relative Level of Technology Development	Technology Readiness Level	TRL Definition	Description
			TRL 4 and 5 is the increase in the fidelity of the system and environment to the actual application. The system tested is almost prototypical.
Technology Development	**TRL 4**	Component and/or system validation in a laboratory environment	The basic technological components are integrated to establish that the pieces will work together. This is relatively "low fidelity" compared with the eventual system. Examples include integration of ad hoc hardware in a laboratory and testing with a range of simulants and small scale tests. Supporting information includes the results of the integrated experiments and estimates of how the experimental components and experimental test results differ from the expected system performance goals. TRL 4-6 represent the bridge from scientific research to engineering. TRL 4 is the first step in determining whether the individual components will work together as a system. The laboratory system will probably be a mix of on hand equipment and a few special purpose components that may require special handling, calibration, or alignment to get them to function.
Research to Prove Feasibility	**TRL 3**	Analytical and experimental critical function and/or characteristic proof of concept	Active research and development (R&D) is initiated. This includes analytical studies and laboratory-scale studies to physically validate the analytical predictions of separate elements of the technology. Examples include components that are not yet integrated or representative tested with simulants. Supporting information includes results of laboratory tests performed to measure parameters of interest and comparison to analytical predictions for critical subsystems. At TRL 3 the work has moved beyond the paper phase to experimental work that verifies that the concept works as expected on simulants. Components of the technology are validated, but there is no attempt to integrate the components into a complete system. Modeling and simulation may be used to complement physical experiments.
Basic Technology Research	**TRL 2**	Technology concept and/or application formulated	Once basic principles are observed, practical applications can be invented. Applications are speculative, and there may be no proof or detailed analysis to support the assumptions. Examples are still limited to analytic studies. Supporting information includes publications or other references that outline the application being considered and that provide analysis to support the concept. The step up from TRL 1 to TRL 2 moves the ideas from pure to applied research. Most of the work is analytical or paper studies with the emphasis on understanding the science better. Experimental work is designed to corroborate the basic scientific observations made during TRL 1 work.
	TRL 1	Basic principles observed and reported	This is the lowest level of technology readiness. Scientific research begins to be translated into applied R&D. Examples might include paper studies of a technology's basic properties or experimental work that consists mainly of observations of the physical world. Supporting Information includes published research or other references that identify the principles that underlie the technology.

Source: U.S. Department of Energy guidelines (See https://www2.lbl.gov/dir/assets/docs/TRL%20guide.pdf)

8 Procedures for Proposal Submissions and Grant Award Decisions

8.1 Procedures and Guidelines for Proposal Submissions

The following sequential procedures and guidelines should be adhered to by the Consortium in the Proposals submission process:

- This "Call for Proposals **Submission Procedures Handbook**" can and should be downloaded from BIRD's website (https://us-isr-energycenter.org/guidelines-forms/) and reviewed by all CMs.
- Mark down the **Submission deadline for the Executive Summary and for the final Full Proposal,** published in the EC website (https://us-isr-energycenter.org/cfp/) and in several other media.
- It is recommended that representatives from both the U.S. and IL Founding Members (FMs) meet with a BIRD representative at least **14 weeks prior** to the submission deadline for final Full Proposals, to introduce the entities planning to form the Consortium, their innovative technology and the essence of their planned Proposal.
- As soon as a decision is made to form a Consortium and submit a Proposal to the EC, both the IL FM and the U.S. FM should register at the **EC upload-system** (https://ecupload.birdf.com), including the Consortium name and Proposal title.

Note: Only one (1) representative from all the Israeli FMs and one (1) representative from all the U.S. FMs can register as the contact person / user in the EC upload system.

- It is required to prepare and submit to the EC (https://ecupload.birdf.com) an **Executive Summary (ES)** for EC staff review, before the deadline for ES submission (see (https://us-isr-energycenter.org/cfp/). The ES must be signed by the FMs of each country. Based on this ES, a GO/NOGO decision will be made and submitted in writing to all the FMs. If the decision is “GO”, recommendations and guidelines will be given by the EC staff on the preparation of the Full Proposal (FP). The ES form (see Table 18, below) can be downloaded from BIRD's website (File #1 in https://us-isr-energycenter.org/guidelines-forms/)
- The **Full Proposal (FP)** should be prepared following the format and guidelines in Section 7 of the "Submission Procedures Handbook" (this document). Specific WORD forms and EXCEL worksheets to be included in the FP (see Table 18, below) can be downloaded from BIRD's website (“File #2 – EC2 FP template” in (https://us-isr-energycenter.org/guidelines-forms/).
- It is recommended (yet, it is optional) to submit to the EC (https://ecupload.birdf.com) a draft of the FP for EC staff review, before the deadline for draft FP submission (see https://us-isr-energycenter.org/cfp/). Comments and recommendations by the EC staff on missing information and on improvements to the FP will be forwarded to the Consortium within 1 week from receipt of the draft FP.
- The final FP document, including all complementary / supporting documents, must be submitted electronically to the EC (see https://ecupload.birdf.com) by the **Submission deadline for final FP** (see https://us-isr-energycenter.org/cfp/). Email notification will be sent by the EC to all FMs, acknowledging receipt of all FP documents submitted.

File #	Table / Fig #	Mentioned In Section	File Type	File / Form Description
1	Tables 2-7	6.2; 7.5	Word	Executive Summary of EC Proposal
2	Tables 8-9	6.4; 7.1	Word	Full Proposal Template
3		6.10.1	PDF	Energy Center Funding Agreement (ECFA)
4	Tables 10-13	7.14	Excel	Proposal budget Template (25 tasks). including: Task Budget Form, Total Budget Form, Budget Summary by Tasks
5	Tables 14-16	7.14.5	Excel	Summary of the Combined Budgets of all CMs in each country, administered by the ILCA & USCA

Table 4: Templates and Tables that can be Downloaded for Preparation of the Executive Summary and of the Full Proposal

8.2 Procedures and Guidelines for Grant Award Decisions

The following main sequential procedures and events related to the EC grant award decisions are expected following the FP submission process:

- Following submission of the final FP, the FMs (from both countries) will be contacted by an MOE reviewer and an IIA reviewer to schedule a **date for a review meeting** (most probably, virtual) with the FMs. All reviewers will forward the FMs the expected meeting agenda and their requirements for background info / presentations to be prepared by the FMs, in advance of the review meeting.
- The notification (by email) on the decision by the EC's Executive / Selection Committee (ECEC) whether to approve / reject a given submitted Proposal by a given Consortium will be made simultaneously to the IL FM and US FM. The approval notifications will include the decision on the **grant sum** awarded to each Consortium. Alternate awardees may be selected.
- The decisions of the ECEC are final and may not be appealed or submitted for reconsideration.
- Subsequent to the ECEC approval / rejection decision notification to the FMs of all Consortiums which submitted FPs, the EC will publish (in several media) a notification of the grant awardees, including, for each Consortium, the names of the FM entities, the title and short description of the proposal, and the maximum grant award sum. Identities of Consortiums which Proposals were rejected by the ECEC will not be published.