

Introducing KACARE's Technology Localization and Commercialization (TLC) Initiative Round 3 RFPs

K·A·CARE TLC Department

Driving value for our stakeholders



National Industrial
Development and
Logistics Program



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K·A·CARE is a Saudi government agency with a mandate to support renewable and atomic energy

K.A. CARE aspires for the Kingdom to play a leading role in the atomic and renewable energy sectors, regionally in the short term, and internationally in the long term, by sustainably building these sectors to reach the optimal national energy mix.



Maximizing economic impact, driving positive environmental impact, and focusing on sustainable development



Introducing renewable energy into the national energy mix, according to local requirements, while staying oriented to regional and global demand



Introducing atomic energy into the national energy mix in accordance with domestic requirements and international obligations



Empowerment and Capacity Building



Innovation and Research



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رؤية 2030
المملكة العربية السعودية
KINGDOM OF SAUDI ARABIA

The Initiative focuses on technology localization and commercialization



Promote and facilitate technology localization to enable sustainable development of the Renewable Energy sector in the kingdom

STRATEGIC GOALS



A. Introducing Technologies to the Kingdom



B. Finding mechanisms to create a Sustainable Supply of Emerging Technologies



C. Enabling the Private Sector to Commercialize Renewable Energy Technologies

The Technology Localization & Commercialization Department

Roles and Responsibilities

ROLES



Utilizing reports to identify targeted technologies



Planning and developing technology localization programs



Cooperate with the private sector to execute technology localization programs



Developing and implementation of technology localization plan



Monitoring the localization and commercialization of technologies



Supporting the industry as necessary to create a sustainable economy for the sector



THE TLC INITIATIVE

Facilitating the development of the Kingdom's renewable energy sector, by providing a range of funding programs

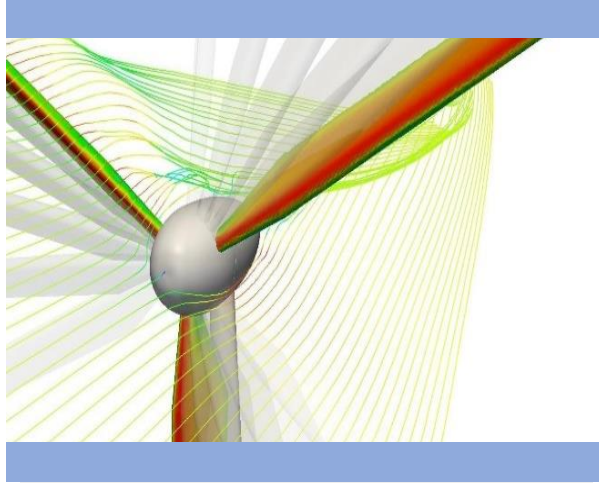


The TLC Initiative administers four programs which convert technology research into industry solutions



01

**PROOF OF
CONCEPT**



02

**PRODUCT
DEVELOPMENT**



03

**FEASIBILITY
STUDIES**



04

**DEMONSTRATION
PROJECTS**



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The four programs have different outputs

Program	Proof of Concept	Commercial Product Development	Feasibility Study	Commercial Demonstration
Project Output	Prototype of a component, subsystem, or system	Adaptation of products to meet Saudi market needs	A business plan, and conceptual design for a commercial demonstration	A complete, installed renewable energy system, paid for by a Saudi customer
Project Lead	Saudi universities, research centre, and Saudi SMEs	Saudi company or Saudi research institution	International or Saudi company	Saudi company
Funding Mechanism	Fixed price contract (no cost share)	50% of project cost	Fixed price contract (no cost share)	50% of project cost
Maximum K.A.CARE Investment	4 M SAR	8 M SAR	375 K SAR	20 M SAR
Maximum Project Duration	18 months	18 months	12 months	36 months



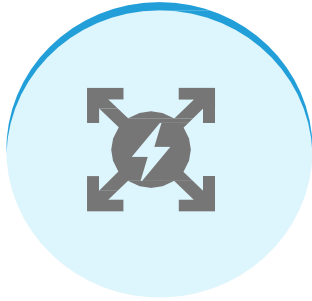
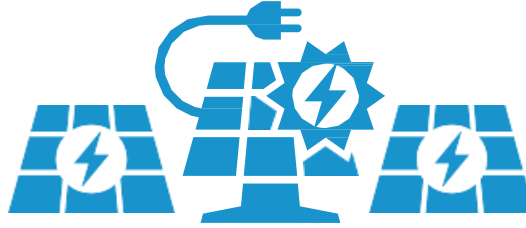


THE TLC INITIATIVE

Value Proposition for Stakeholders



Value Proposition for Technology Providers



(A) EXPAND

Into one of the world's fastest developing renewable energy markets



(B) SHOWCASE

Your technology innovations, capabilities and business offerings to a wider audience



(C) PARTNER

To deliver more effectively



(D) COMMERCIALIZE

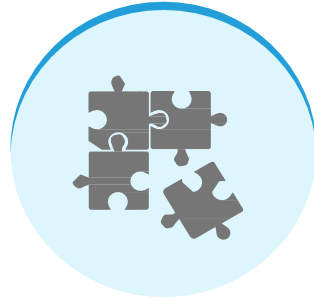
Your technology, subject to meet the growing demand

Value Proposition for Business Developers



(A) PARTICIPATE

in global energy transition



(B) CONTRIBUTE

to KSA's targets for renewable energy



(C) PARTNER

through our matchmaking platform with companies that can bring technologies in



(E) NEW BUSINESS AVENUES

Expand into new business lines that are emerging in the region's Energy sector

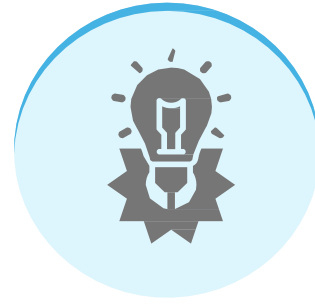


Value Proposition for Universities



(A) SHOWCASE

ongoing research and development process



(B) COMMERCIALIZE

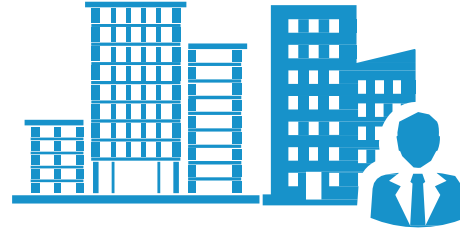
by engaging through the platform with private technology developers



(C) DEMONSTRATE

impact of your R&D programs through KACARE's programs

Value Proposition for Off Takers



(A) REDUCE OPERATING COSTS

For energy consumption by opting to implement validated technologies at your site



(B) CONTRIBUTE

To your country's plans to embrace renewable energy (Vision 2030)



(C) BENEFIT FROM NEW TECHNOLOGY

That is evaluated to be fit for purpose by a panel of international experts



(D) SAVE ON CAPEX

After being approved for participation in the cost share program



On-going Projects



On-going Projects



PV-DIESEL
Desert
Technologies



SOLAR COOLING
GreenAire



SOLAR HEATING
Qudra Energy
Company

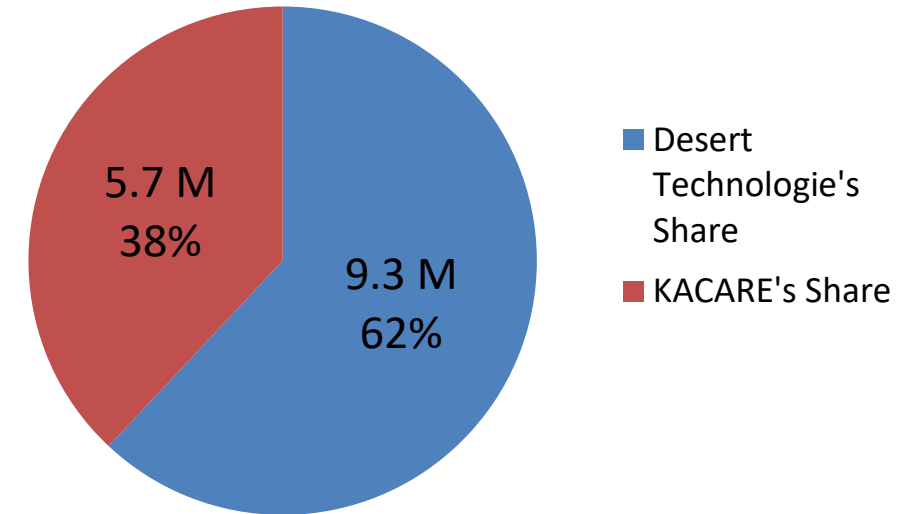
Technology: PV Diesel

Awardee:
DESERT Technologies



Objective	<ul style="list-style-type: none"> PV-diesel hybrid systems in the Kingdom. Economic competitiveness of PV-diesel hybrid systems compared to conventional fuel systems . Competitive business case to deploy PV-diesel hybrid systems in the Kingdom. PV/diesel hybrids represent a major opportunity for a "quick win" for solar energy in the Kingdom with clear and immediate economic benefit
Project Contractor	Desert Technologies
Project Off taker/ Location	Southern Can Making Company (SCMC) Factory Jeddah Makkah Highway, Makkah
Duration of the Project	27 Months
Total Project Cost	SAR 15,024,550

Project Cost Breakdown



KACARE's share is 38% of the total project completion cost



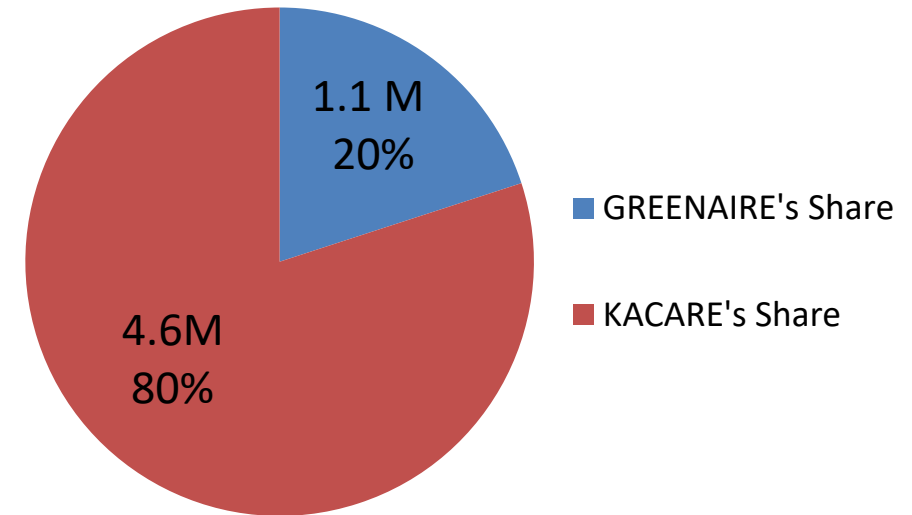
Technology: Solar Cooling

Awardee:
GREENAIRE



Objective	<ul style="list-style-type: none"> GreenAire will demonstrate that locally manufactured air conditioning units, integrated with photovoltaic solar panels and parabolic solar panels can save 70 – 90% of energy used for cooling. Working with the Center for Engineering Research of the King Fahd University of Petroleum & Minerals (KFUPM), GreenAire will test and prove the efficacy of their technology using indirect and direct evaporative coolers (IDEC). GreenAire technology will provide comfortable air conditioning superior to traditional units by lowering the temperature while controlling the indoor humidity level. For high humidity areas, IDEC can be integrated with existing traditional ACs.
Project Contractor	GreenAire for Air Conditioning Company and Renewable Energy Trading Company (RECO)
Project Off taker/ Location	6 test sites (four in the dry Central region and two in the humid Eastern region)
Duration of the Project	20 months
Total Project Cost	SAR 5,794,449

Project Cost Breakdown



KACARE's share is 80% of the total project completion cost



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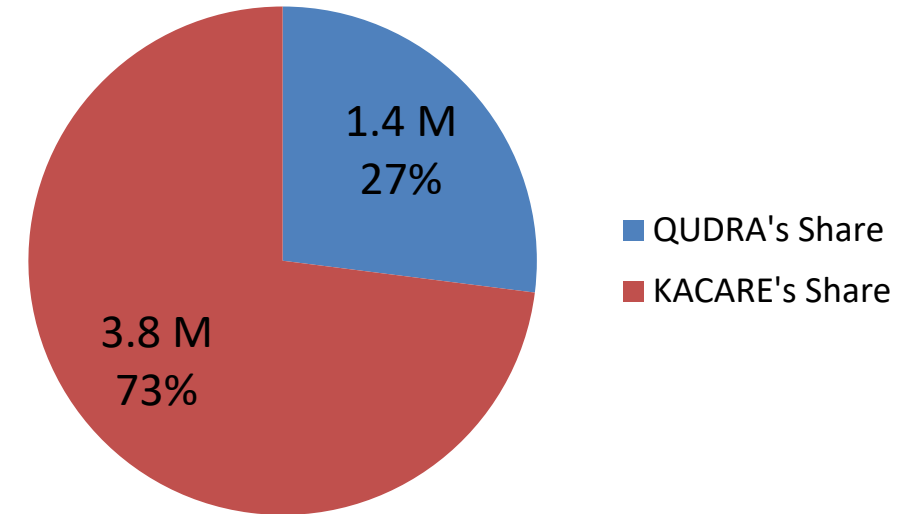
Technology: Solar Heating

Awardee:
QUDRA Energy Company



Objective	<ul style="list-style-type: none"> Recognizing that demand for medium-temperature process heat represents a large percentage of global demand for process heat, Qudra Energy (QE) has proposed a game-changing, locally-developed solution that can bridge the wide gap between the high demand for medium-temperature process heat and the lack of economically viable solar process heat solutions that meet that demand. In collaboration with King Saud University (KSU), QE developed a unique concept that provides a cost-effective and robust method to focus sunlight on a fixed receiver using its patented heliostat design.
Project Contractor	Qudra Energy Company
Project Off taker/ Location	Watania
Duration of the Project	36 Months
Total Project Cost	SAR 5,237,500

Project Cost Breakdown



KACARE's share is 73% of the total project completion cost



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Technology Focus Areas for Round 3 RFPs



Topic Area Selections

Defined on the basis of techno-economic analysis, market studies, and factoring in expert opinions



**Common
Renewable
Energy Topic
Areas for
K·A·CARE TLC
Initiative**

9 THEMES



Building Integrated Renewable Energy Systems



Solar Thermal Applications



Renewable Energy in Water Management



Renewable Technologies for Grid Management



Shallow Geothermal Applications



Solar Cooling and Cold Storage



Green Hydrogen



Waste to Energy



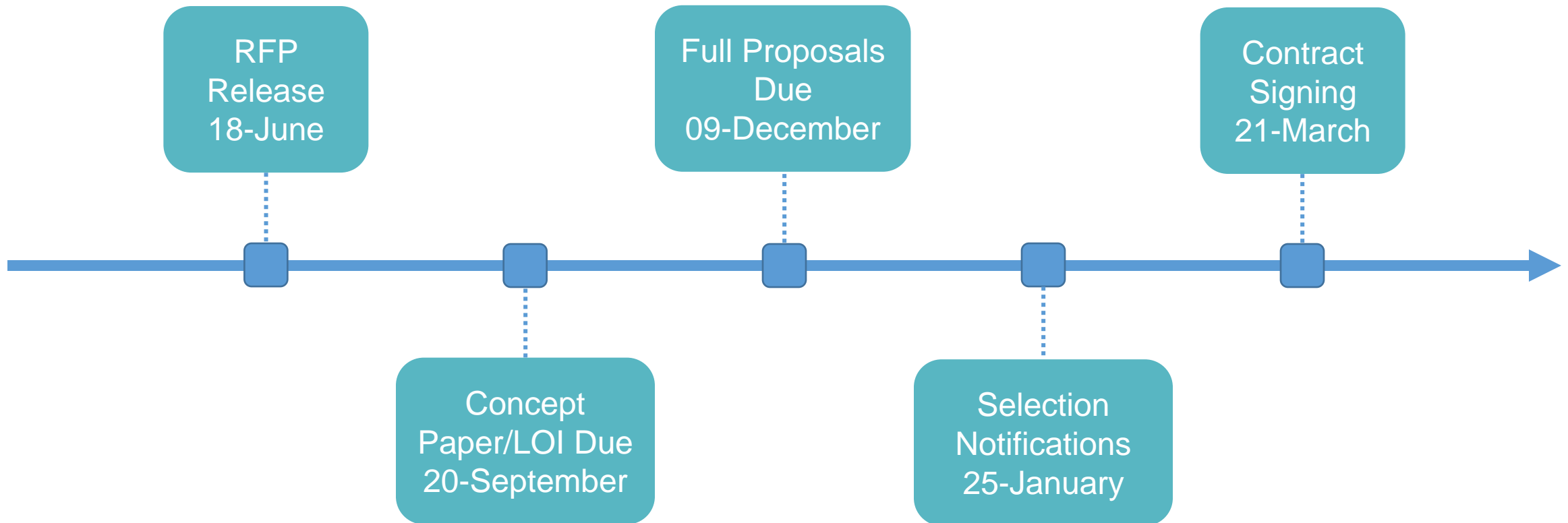
Other Promising Renewable Energy Technologies



Round 3 – Proposal Timeline



Timeline for Submitting Necessary Documents





Submitting a concept paper/Letter of Intent





مدينة الملك عبد الله للطاقة
الذرية والمتجددة K.A.CARE

- K.A.CARE has provided a template to assist in preparing your concept paper/ LOI

Proof of Concept Project Title

Prime bidder institutional name

Prime bidder institutional address

Prime bidder corporate registration number (applicable for Saudi bidders)

2020 K-A-CARE Request for Proposal: RENEWABLE ENERGY TECHNOLOGY LOCALIZATION & COMMERCIALIZATION **PROOF OF CONCEPT PROJECT LETTER OF INTENT**

RFP Topic Area

Name of Principal Investigator

Email address of Principal Investigator

Phone number of Principal Investigator

Physical address of Principal Investigator

Provide Basic
Project Information
on the Cover Page

2020 K-A-CARE Proof of Concept Projects RFP
Letter of Intent – Project Title
Prime bidder institutional name

Project Title

Letter of Intent

INSTRUCTIONS (delete this textbox prior to submission)

Please prepare your organization's letter of intent submission using this template. Use font size no smaller than 11 pt.

While use of this template document is not required, bidders may find it helpful to better structure their letter of intent in response to this RFP. The template includes the appropriate headers, and page numbering that should be used. Also included is guidance text that should be replaced with your organization's text. Placeholder figures and tables are included to demonstrate the appropriate use of descriptive captions, however it is possible that bidder letters of intent may not have any figures or tables. If your organization uses this template, please make sure to replace all guidance or placeholder text with the appropriate text describing your organization's letter of intent.

Letter of intent submissions shall be made via email. Completed letters of intent shall be emailed in PDF format as attachments to TLC@energy.gov.sa.

1 Research Project Abstract

Provide a brief description of the proposed research project, including the renewable energy technology being targeted, the prototype that will be developed, and the technical performance target for the prototype.

Create your own sub-headers as appropriate.

Figure 1: Caption text to describe the figure presented. Use font size no smaller than 8 pt within the figure.

Follow the instructions provided, then
delete the instructions from the document

2 Team Structure and Members

Provide a listing of each of the participating team members (prime bidder and any subcontractors), and their role in completing the Proof of Concept project.

Provide a list of key personnel and their relevant qualifications and past experience.

Table 1: Caption text to describe the table presented. Use font size no smaller than 8 pt in the table.


1

How to participate

- Download the templates here
<https://www.energy.gov.sa/en/tlc/pages/Templates.aspx>.
- Pick the program you want to apply for and find the concept paper or letter of intent template
- Complete the concept paper/letter of intent
- Email the completed concept paper/LOI to TLC@energy.gov.sa by the Sept 20 deadline



Our Website




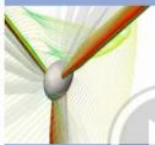


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» Technology Localization and Commercialization (TLC)

Home Log In X

K.A.CARE has extended the deadline to submit concept papers/letters renewable energy technology localization programs

The TLC Initiative administers four programs which convert technology research into industry solutions

			
01	02	03	04
PROOF OF CONCEPT	PRODUCT DEVELOPMENT	FEASIBILITY STUDIES	DEMONSTRATION PROJECTS

K.A.CARE

K.A.CARE is a Saudi government agency with enabling and implementing atomic renewable energy in the Kingdom. K.A.CARE promotes renewable energy technology in the Kingdom and creates opportunities for the private sector to create successful renewable energy businesses and set into motion the development of a self-sustaining circular economy, within the renewable energy technology domain.

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- Visit the TLC Website for more info:
<https://www.energy.gov.sa/en/tlc/Pages/default.aspx>

THANK YOU
شكراً