

دور المختبر الخليجي في تعزيز السلامة والجودة للربط الكهربائي

The Role of GCC Lab in Enhancing Safety & Quality for Electric Interconnection



GCC Lab's Major Highlights

10 Shareholders-Market Leaders



25%



20%



20%



15%



5%



5%



10%



Total Budget for Power Scope: \$ 192 MM

Total Budget for Strategic Growth: \$ 95 MM

Outlines

- **Highlights on GCC Lab Initiative**
- **Safety & Quality Enhancement**
- **Conclusion**



GCC Lab Strategic Growth (2 Staged)

Growing the GCC Lab to its Potential towards Sustainable Business and creating a One-Stop-Shop

Stage#2 (2016-2020) Expanded Electrical Testing Scope

Investment: SR 720 MM
IRR: ~ 11.3%
Financing: 85/15

6 Focus Areas (TIC Model)

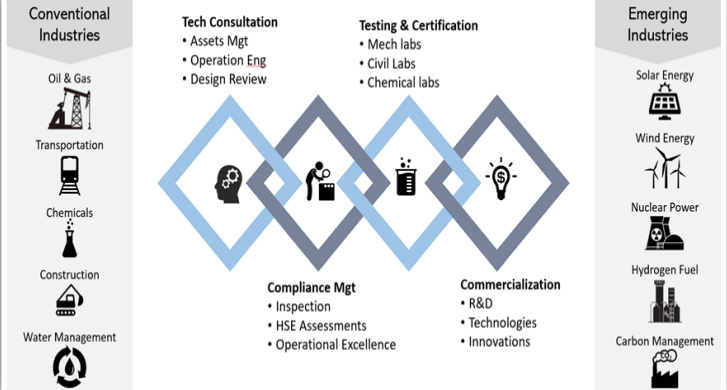
GCC Lab Business Portfolio



Stage#3: (2020- onwards) One-Stop-Shop Model (triggered by Aramco):

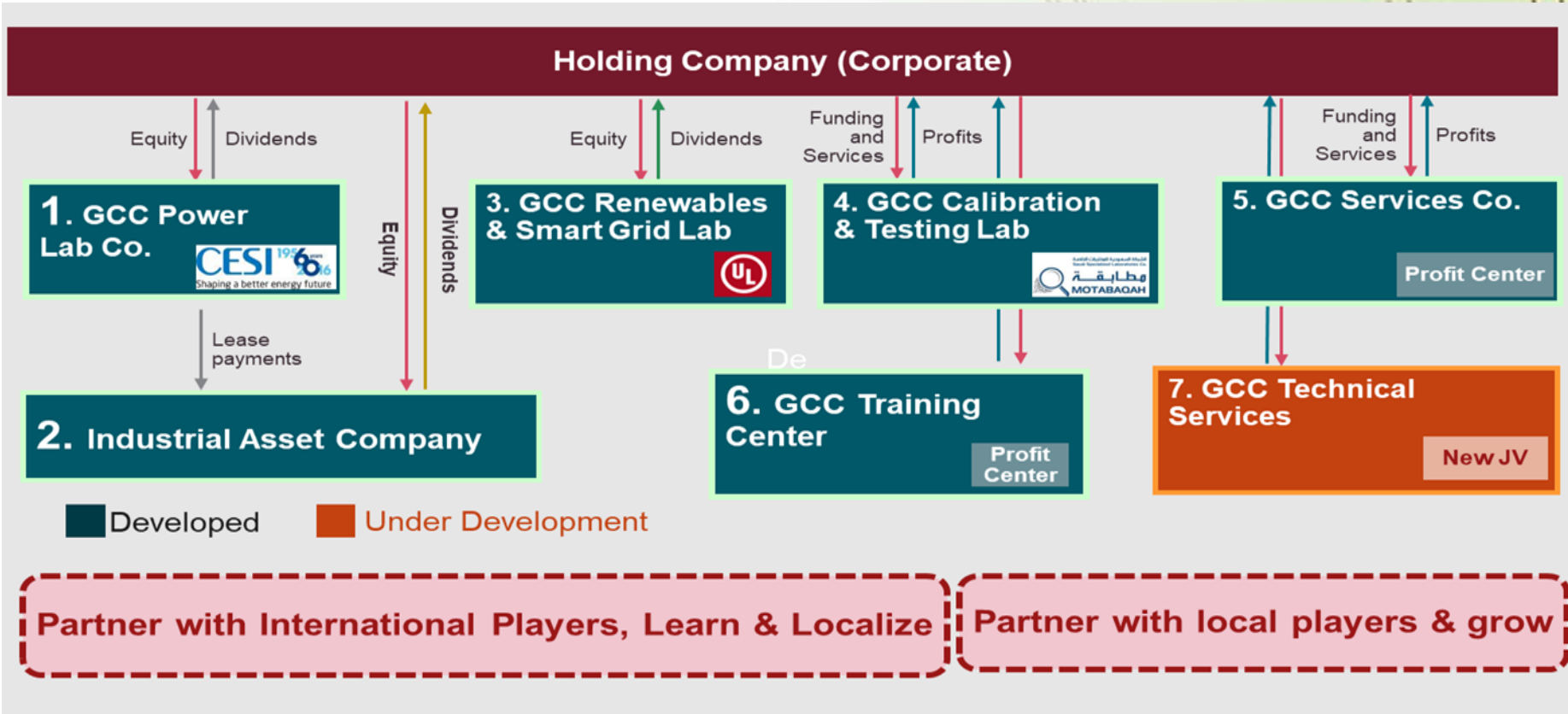
Investment: SR 356 MM
IRR: ~ 31%

Grow Beyond Electrical (TIC & Tech Svcs)



GCC Lab's Operating Model

7 Affiliates; more than 200 Employees, ~80% Nationals



GCC Lab's Major Highlights

GCC Lab's Facilities

GCC Lab has 6 Operational Locations to get closer to its customer



GCC Calibration & Testing Lab
GCC Lab Building - Riyadh



Head Office
GCCIA Building -
Dammam



GCC Service Offices
Manamah, Masqat



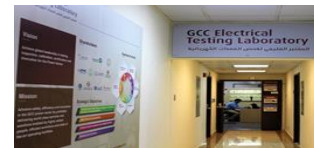
Gulf Calibration Labs
Dammam Port



Saudi Industrial Inspection Co.
Riyadh
Jeddah



Microwave Lab
Dammam Port



Electrical Testing Labs
Saudi Aramco – Dhahran



Gulf Industrial Lab
Modon 3 – Dammam
Gulf Renewables Lab
LV & HV Labs

Advancement of Capabilities Building

GCC Lab had an advance Go-to-Market Strategy, although Testing Facilities are still under construction

Calibration



Consultation



Renewable



Inspection



Smart Meters



Energy Svcs



Training



On Site Testing



Advancement of Capabilities Building

GCC Lab had achieved all required international & national certifications to provide world-class services

شهادة اعتماد
Accreditation Certificate

بشود المفتبر السعودي للاعتماد (سأف) بأن
Saudi Accreditation Center (SAC) Declare that

GCC Lab for Calibration Services Co. Lab.
Address: Riyadh
Scope: Measurement and Calibration

مفتبر شركة المفتبر الخليبي لخدمات المعايرة
المؤهل: الرياض
النشاط: القياس والمعايرة

قد حقق مفتبرات المفتبر السعودي للاعتماد (سأف) ومن اعتماده وطاقم مفتبرات المعايرة القياسية السعودية
SASO / ISO / IEC (2017) 17025 في الامتثال المتكامل لهذه الشهادة
Has met the Requirements of Saudi Accreditation Center (SAC) and has been accredited in compliance with SASO/ISO/IEC
17025:2017 for the scope attached with this Certificate

المفتبر التنفيذي: المفكر المفتبر السعودي للاعتماد
SAC Chief Executive Officer

د. عادل بن عبدالعزيز الفقييد
Dr. Adel A. Alkaid

21/07/1444 / تاريخ انتهاء / Expire Date 22/07/1441 / تاريخ الصلاحية / Issue Date N-C-00100

ACCREDITATION CERTIFICATE
Calibration Laboratory
No. ACL 0013
GCC Electrical Testing Laboratory

DPC 941 - Building 3188 Power Systems Support - Old Airport Road, SAUDI ARABIA/ DOKKI/MAK, Saudi Arabia

is accredited by the GCC Accreditation Center (GAC) in accordance with the recognised International Standard ISO/IEC 17025:2017.
"General requirements for the competence of testing and calibration laboratories"

A laboratory's fulfillment of the requirements of ISO/IEC 17025 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid calibrations. The management system requirements in ISO/IEC 17025 are written in language relevant to laboratory operations and operate generally in accordance with the principles of ISO 9001 (refer to joint ISO-ILAC-IAF communique, April 2017).

This accreditation demonstrates technical competence for a defined scope, as detailed in and at the locations specified in the scope of accreditation, the accreditation scope to this certificate is an essential accreditation document and from time to time may be revised and reissued by the GCC Accreditation Center. The most recent issue of the scope of accreditation which bears the same accreditation number as this certificate, is available from the GAC website: www.gcc-accreditation.org

The accreditation is subject to continuing conformity with GAC Accreditation requirements and the status of accreditation can be checked in the GAC's website to confirm the validity of this accreditation.

Issue Date: 08 December 2019

Director General, GCC Accreditation Center

IAS INTERNATIONAL ACCREDITATION SERVICE®

CERTIFICATE OF ACCREDITATION

This is to attest that

GCC ELECTRICAL TESTING LABORATORY
P.O. BOX 39558, KHOBAR-DOHA 31942
KINGDOM OF SAUDI ARABIA
Inspection Agency AA-789
Type A

has met the requirements of AC98, IAS Accreditation Criteria for Inspection Agencies, and has demonstrated compliance with ISO/IEC Standard 17020:2012, Conformity assessment - Requirements for the operation of various types of bodies performing inspection. This organization is accredited to provide the services specified in the scope of accreditation maintained on the IAS website (www.iasonline.org)

This certificate is valid up to January 1, 2021.

Raj Nathan
President

intertek
Total Quality Assured.

CERTIFICATE OF REGISTRATION

This is to certify that the management system of:
GCC ELECTRICAL TESTING LABORATORY

Certificate Number: 0087716
Initial Certification Date: 27 February 2019
Date of Certification Decision: 27 February 2019
Issuing Date: 27 February 2019
Valid Until: 26 February 2022

Main Site: P.O. Box 39558, Khobar-Doha31942- Kingdom of Saudi Arabia
Has been registered by Intertek as conforming to the requirements of:
ISO 9001:2015

The management system is applicable to:
Provision of Calibration Services for Electrical testing equipment.

Calin Moldovean
President, Business Assurance
Intertek Certification Center, 200 Victoria Park, Victoria Road, Derby DE24 8JZ, United Kingdom
Intertek Certification Limited is a UKAS accredited body under Schedule 4 of the Accreditation Act, 2014.

intertek
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intertek
Total Quality Assured.

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This is to certify that the management system of:
GCC ELECTRICAL TESTING LABORATORY

Certificate Number: 0087717
Initial Certification Date: 27 February 2019
Date of Certification Decision: 27 February 2019
Issuing Date: 27 February 2019
Valid Until: 31 March 2021

Main Site: P.O. Box 39558, Khobar-Doha31942- Kingdom of Saudi Arabia
Has been registered by Intertek as conforming to the requirements of:
OHSAS 18001:2007

The management system is applicable to:
Provision of Calibration Services for Electrical testing equipment.

Calin Moldovean
President, Business Assurance
Intertek Certification Center, 200 Victoria Park, Victoria Road, Derby DE24 8JZ, United Kingdom
Intertek Certification Limited is a UKAS accredited body under Schedule 4 of the Accreditation Act, 2014.

ACCREDITATION CERTIFICATE
Calibration Laboratory
No. ACL 0006
GCC Lab for Calibration Services
2nd Industrial City, Street 201, Matbah Complex, Area Code 11662, Riyadh KSA

is accredited by the GCC Accreditation Center (GAC) in accordance with the recognised International Standard ISO/IEC 17025:2005.
"General requirements for the competence of testing and calibration laboratories"

A laboratory's fulfillment of the requirements of ISO/IEC 17025 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid calibrations. The management system requirements in ISO/IEC 17025 are written in language relevant to laboratory operations and operate generally in accordance with the principles of ISO 9001 (refer to joint ISO-ILAC-IAF communique, April 2017).

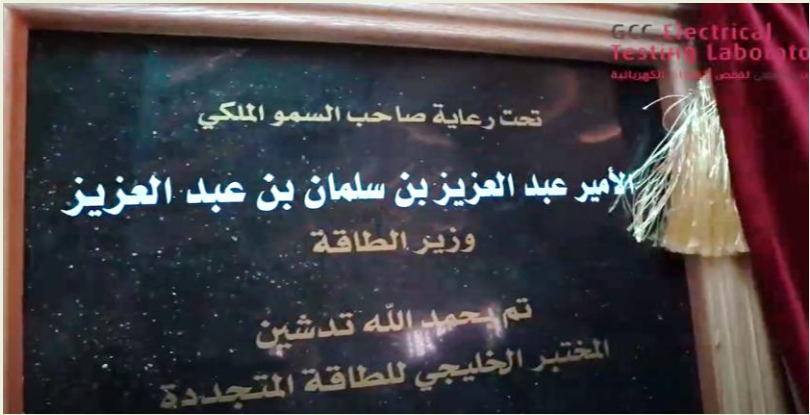
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Issue Date: 31 March 2019

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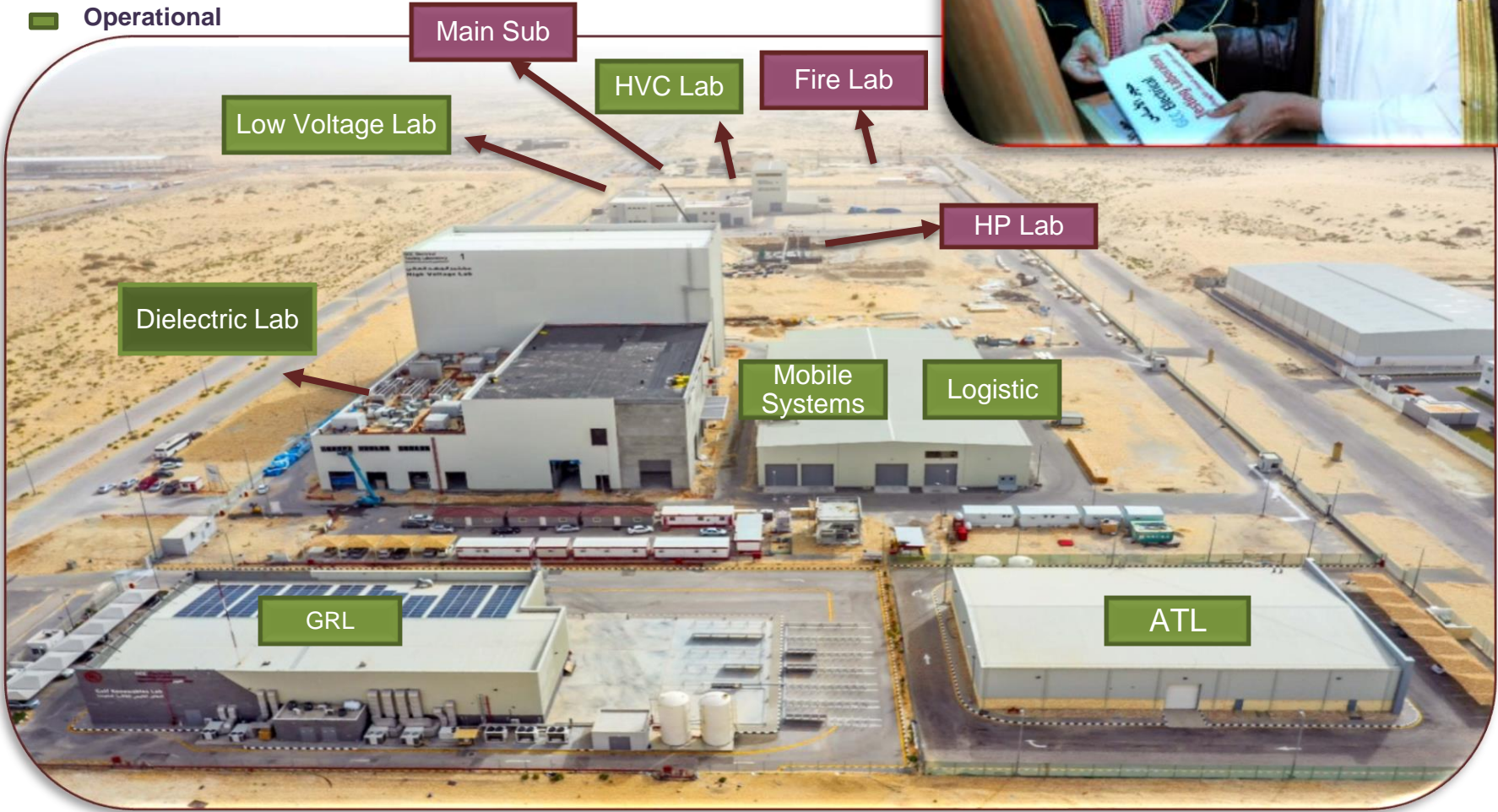
Building State-of-the-art GCC Lab Infrastructure:



Building State-of-the-art GCC Lab Infrastructure:

- State-of-the Art Testing Complex
- 170,000 Sq Meter
- Overall = ~ 95%

 Under Construction
 Operational



Building State-of-the-art GCC Lab Infrastructure:

Renewable Lab

100%

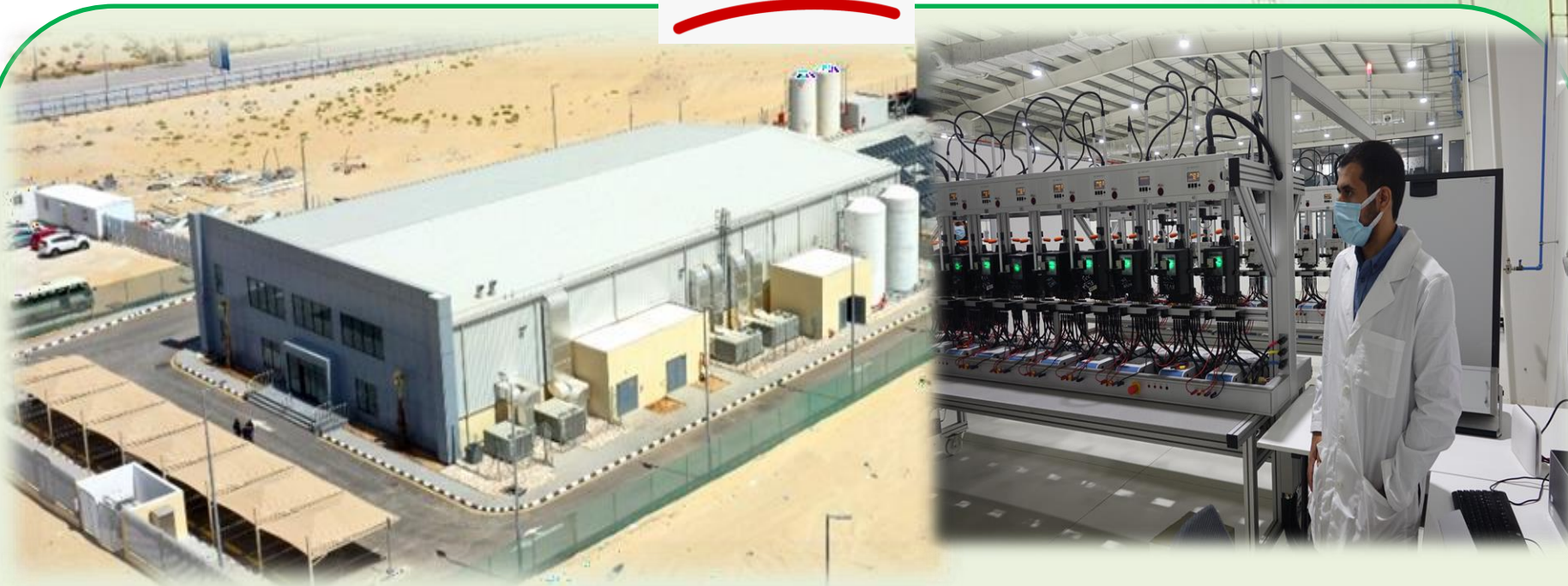


GCC Renewable & Environmental Lab - Fully Operational

Building State-of-the-art GCC Lab Infrastructure (Scope-1):

Advanced Testing lab

100%



**Advanced Testing Laboratory
(Smart Meters, EMC, Fiber Optics, Efficiency)**

Building State-of-the-art GCC Lab Infrastructure (Scope-1):

Low Voltage Lab

100%



LV Lab(Operational- Q4 2021)

Building State-of-the-art GCC Lab Infrastructure (Scope-1):

High Voltage Cable Lab

100%



HV Cable Testing Lab - (Operational Q4 2021)



Building State-of-the-art GCC Lab Infrastructure (Scope-1):

High Voltage Lab

97%



HV Testing Lab - (Project Completion Q4 2022)



Building State-of-the-art GCC Lab Infrastructure (Scope-1):

GCC Safety & Fire lab

85%



Safety & Fire Testing Lab - (Operational Q1 2023)

Building State-of-the-art GCC Lab Infrastructure (Scope-1):

Calibration & Inspection Services

100%



Three GCC Calibration & Inspection Labs - Fully Operational

Building State-of-the-art GCC Lab Infrastructure (Scope-1):

Onsite HV Testing Services

100%



Onsite HV Testing Services - Fully Operational

Building State-of-the-art GCC Lab Infrastructure (Scope-1):

GCC Training Center

100%



Hands-On Training & Certifications for Engineers & Technicians

Building State-of-the-art GCC Lab Infrastructure (Scope-1):

Main Supply Substation

65%

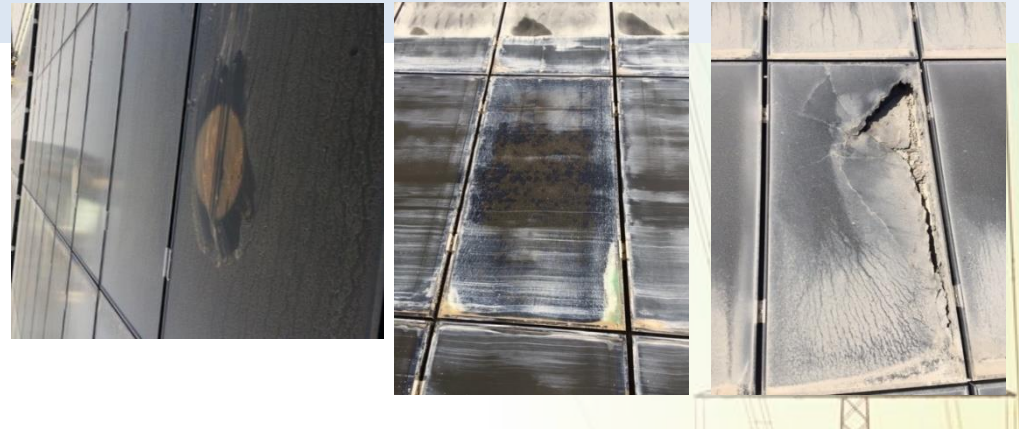


Dedicated Power Supply to the GCC Lab Complex

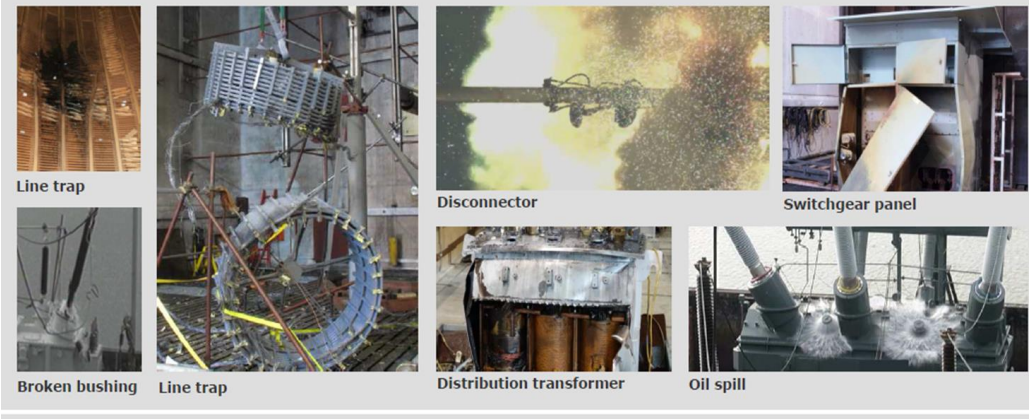
Safety & Quality Enhancement

Challenges:

- Regional Climate
- Corrosion / Humidity
- Temperature/ Dust
- Aging / Obsolescence
- Design / Workmanship



Around 25% of test-objects initially fail to pass type-tests



GCC Lab's Success Factors



Synergy with 2030 Visions of GCC Countries



Uniqueness



Key Stakeholders



International Partnerships



Contracts with Major Clients



One-Stop- Shop

Conclusion

- Synergy with Visions Countries in the Region
- Mitigate Challenges (*Safety, Quality, Reliability & Cost*)
- Create Centers of Excellence (*Asset Management, Spare Parts, Retrofits, Condition Assessment*)
- Influence Technical Specifications (*Life-Cycle Control, Climate*)
- R&D and Innovation (*Conventional, New Technologies*)
- Knowledge Hub for ALL





Thank You