



## Controls and Automation

### Corporate Deck

2019

The background of the slide features a light green abstract pattern resembling a circuit board. It consists of various geometric shapes, including circles, squares, and lines, connected by thin, light green lines that create a sense of flow and connectivity. The pattern is more dense in the lower half of the slide, with several circular nodes and branching lines, while the upper half is more open, with a few scattered nodes and lines.

**AET engineers solutions, delivers projects and provides perfection in offering Controls and Automation expertise across various sectors. In-depth domain knowledge and attention to detail makes us stand apart.**

**With a team of motivated and responsible people, combined with an association of Industry leading technologies and customer centric approach, we take pride in successfully delivering the most challenging tasks. In every endeavor, we strive to satisfy our customers by meeting and exceeding their expectations.**

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# Introduction

## WHO WE ARE ?

Our ideas are innovative, our solutions are customer driven and our response is engineered. From Field level devices, through Monitoring and Control Systems and ascending to the Management and Planning Systems, we design, engineer and integrate. With in house state of the art design and engineering capabilities to complete integration of Control Panels at our works, our commitment to quality and an enhanced value chain for a project is delivered.

The company is made up of teams of Project Engineers, Programmers and Designers who are capable of Implementing a full range of engineering solutions from single loop control to the installation and programming of state of the art distributed control systems.

Our personnel are capable of full project and fiscal management and can oversee the installation of equipment to full on site commissioning. Documentation and full training on the completed systems is also available from professionally qualified experts, for technical staff.

### *Industries we serve*



**Petrochemical**



**On Shore & Off Shore**



**Refinery**



**Power sector**



**Steel**



**Pharmaceutical**



**Food**



**Automotive**



**Process**



**Commercial & Residential**



**Water**

## Serve

We are proud of our reputation for putting the client first in every area of our operations, and giving them what they asked for. We feel that this attitude is true to our values and one of the most important contributors to our success and to the success of the clients we serve.

## Succeed

The success of our company lies completely in the hands of our employees. We enhance their ability to perform by helping them improve their skills through extensive training and support. We strive to build trust and company-wide teamwork through open, candid communication.

## Sustain

At AET, we believe in sustainability and have high expectations of ourselves and we encourage our customers to have them too. We have earned the trust of our customers through ingenuity, superior workmanship responsiveness. Our continual effort to exceed current goals is a guarantee of superior performance and fulfillment of our commitments. We are driven to identify sustainable opportunities for clients. We wish to do everything sustainably, and want to ensure sustainability for our clients.

# Values



# Capabilities

*Our Strength and expertise*

Our project personnel are able to provide experience, expertise and support to a wide range of projects from minor assignments to major complete plant installations. In addition, the Department is also able to provide Project Management, Project Engineering or Site Management services to Clients who undertake their own discipline engineering or require assistance in controlling the interface management & co-ordination of several contractors and subcontractors.

Our skilled development and construction professionals have a unique track record of completing high-quality turnkey projects throughout the region. Over the successful development of millions of square feet of projects, we have established a rigorous, streamlined turnkey project management process that produces the most cost-efficient and time-efficient results.

Effective project control is essential if the agreed program and budget limits are to be maintained, particularly with regard to the management and valuation of design and scope changes. To this end the Department uses a variety of computer aided planning, project control and reporting methods using both proprietary and in-house developed software.

Our Project Managers and Engineers have a diverse range of engineering backgrounds and we can therefore provide key personnel with experience of project managing and project engineering capital projects

# Environmental Ready

*Health & Safety enabled*

**AET is committed to reducing the environmental impact and continually improve our environmental performance as an integral and fundamental part of our business strategy and operating methods. It is our priority to encourage our customers, suppliers & all business of delivering on our duty of care towards future generations.**

**Our objective is to provide a safe and healthy place of work for all staff members and to meet all our duties and obligations to our clients. It is Automated Environmental Technologies' intention to protect our employees from accident or ill health at work. The company will seek to ensure that all our equipment and systems do not constitute a risk to the Health & Safety of our employees and we will consult with employees on risk improvements.**



# Organizational Chart



# Project Profile

*Notable Building Automation Projects*

## Design, Supply, Supervision of Installation, Testing and Commissioning of Building Management System, North Jeddah Bulk Plant, 2019

*Saudi Arabia*

*End user: Saudi Aramco*

**Project Details:** Efficient delivery of fuel to various end user's ranging from Fuel stations to Utilities Operators is a key aspect of Energy Industry. A new Fuel Terminal is being developed in North Jeddah to meet these requirements. Reliable Controls HVAC and building controls have been used in operations and utilities buildings across the Terminal to have an Energy Efficient Monitoring and Control of the buildings. This was achieved by providing Design, Supply, Supervision of Installation, Testing and Commissioning of DDC systems for HVAC controls with Reliable Controls MACH Platform, which can work as Standalone or can be networked to be a part of Building Management Systems, at 13 Operations and Utilities buildings for the Bulk Plant.

## Revamp and Upgrade of HVAC and Building Controls, Northern Area Gas project division, 2019

*Saudi Arabia*

*End user: Saudi Aramco*

**Project Details:** Efficient Energy management has been at the forefront of Industry operations. A major component of energy consumption are the HVAC equipment, which can be made efficient through optimized control and monitoring. Reliable Controls MACH Systems were provided to achieve complete control and monitoring of existing HVAC infrastructure along with other interfaces. The scope of Revamp and Upgrade of Complete HVAC Controls, including DDC, field sensors, Damper Actuators and associated panels was done including Design, Engineering, Supply, Testing and commissioning of the complete system at 22 Buildings within the Berri Plant area.

## Power Plant Stream and Electric - HVAC Control Systems, Abqaiq Plants, 2019

*Saudi Arabia*

*End user: Saudi Aramco*

**Project Details:** Design, supply, supervision, testing & commissioning of HVAC control system at new substation building in Abqaiq Stream and Electric Power Plant area with consideration of room pressurization requirements of Battery rooms and Switchgear rooms, interfacing with Plant DCS for critical interlocks of Air quality, Fire Hazard systems and Emergency power supply systems.

## Building Management System for Pharmaceutical Industry, 2019

*Saudi Arabia*

*End user: Baxter*

**Project Details:** A Building Management System (BMS) is being proposed which shall integrate and provide a centralized control and monitoring of 3 areas HVAC Equipment initially, namely BRM, Sampling room and Sterility room. A Reliable Controls Mach-ProWeb controller with interface to the existing controllers and an Operator Work Station (OWS) for monitoring and controlling remotely shall be provided. Smoke and Heat detectors shall be provided at appropriate locations on the equipment to monitor the fire hazard to meet the Environment and Safety requirements.

This scope was achieved through Supply, Supervision of Installation, Testing and Commissioning of DDC panel, Heat detector, Smoke detector and operator workstation. Testing and communication with existing DDC system and local interface through MACH-ProView for Monitoring, Control, Operation Schedule, Single and Multi Trend, Alarm, Equipment ListView Etc.,

## Design, Engineering, Supply, Installation and Integration of Field Instruments and Building Control Systems, Yanbu, 2018

*Saudi Arabia*

*End user: Yanbu Distribution Hub, Saudi Aramco*

**Project Details:** Delivery of Fuel requires a lot of precision. When the delivery is between two cities 450 KM apart, it surely requires a lot of precision and detail. With a Fuel pipeline from Yanbu Distribution Hub (YDH) to North Jeddah, the buildings at YDH need to be efficiently controlled to avoid any disruptions. 16 Buildings at YDH ranging from Security to Administration and Control Rooms are provided with Building Controls from Reliable Controls for Energy Efficient Monitoring and Control.

## Gas Metering Station - HVAC Control Systems, Riyadh Industrial Area, 2019

*Saudi Arabia*

*End user: Riyadh STA, Saudi Aramco*

**Project Description:** at Gas Metering Station in Riyadh Industrial area with consideration of different duty and standby Packged Air Conditioning units to maintain efficient operations of the metering station. Critical requirements of room pressurization of Battery rooms and Switchgear rooms, generating alarms for critical interlocks of Air quality, Fire Hazard systems and Emergency power supply systems.



# Project Profile

*Notable Building Automation Projects*

## P&C Services Building BMS System, 2019

*Saudi Arabia*

*End user: Royal Commission of Yanbu and Jubail*

**Project Description:** Design, supply, supervision, testing & commissioning of Building management system for monitoring and control of HVAC systems, Lighting, PA systems for 6 Buildings and Start up.

## BMS System – Hospital Expansion project, 2019

*Saudi Arabia*

*End user: Saud Al Babtain Cardiac Centre Dammam*

**Project Description:** Design, supply, supervision, testing & commissioning of Building management system for supervisory control of HVAC systems and interfacing of Lighting controls and Fire Alarm Systems.

## Building Management Systems, 2019

*Saudi Arabia*

*End user: General Electric Building Dammam*

**Project Description:** Design, Implementation, Mounting and installation of DDC for HVAC equipment, Field wiring and Termination in Cabinets, Loop checking, Installation, Interfacing with Honeywell BMS, Commissioning and Start- up support.

## HVAC Controls and Building Management System – Storage Area, 2019

*Saudi Arabia*

*End user: IKEA, Dammam*

**Project Description:** Design, supply, supervision, testing & commissioning of Building management system for supervisory control of HVAC systems and interfacing of Lighting controls and Fire Alarm Systems.

## Building Management System, 2018

*Saudi Arabia*

*End user: Al Jazirah Mall, Riyadh*

**Project Description:** Design, supply, supervision, testing & commissioning of Building management system for supervisory control of HVAC systems and interfacing of Lighting controls and Fire Alarm Systems. control Panels along with Junction Boxes, Cable laying, terminations Loop Checking, Commissioning and Start up.

## Building Management System, 2017

*Saudi Arabia*

*End user: Development Center, Asir Region*

**Project Description:** Design, supply, supervision, testing & commissioning of Building management system for supervisory control of HVAC systems and interfacing of Lighting controls and Fire Alarm Systems.

## HVAC Controls and Building Management System, 2017

*Saudi Arabia*

*End user: Al Gossaibi Mosque, Jubail*

**Project Description:** Design, supply, supervision, testing & commissioning of Building management system for supervisory control of HVAC systems and interfacing of Lighting controls and Fire Alarm Systems.

## HVAC Controls and Building Management System, 2017

*Saudi Arabia*

*End user: Al Inma Bank, Al Khobar*

**Project Description:** Design, supply, supervision, testing & commissioning of Building management system for supervisory control of HVAC systems and interfacing of Lighting controls and Fire Alarm Systems.

# Project Profile

## Notable Building Automation Projects

### HVAC Controls for Utilities Buildings, 2018

*Saudi Arabia*

*End user : Domestic Airport, Al Jouf*

**Project Description:** Design, supply, supervision, testing & commissioning of HVAC Control systems and interfacing of DDC with Motor Control Centers and Power systems with remote monitoring and Alarm notifications.

### DDC Systems for Metering and Tankage Buildings, 2018

*Saudi Arabia*

*End user : Saud Al Babtain Cardiac Centre Damman*

**Project Description:** Design, supply, supervision, testing & commissioning of Building management system for supervisory control of HVAC systems and interfacing of Lighting controls and Fire Alarm Systems.

### Building Management Systems, 2018

*Saudi Arabia*

*End user : Farabi Petrochemicals, Jubail*

**Project Description:** Design, supply, supervision, testing & commissioning of DDC for HVAC equipment and networked with Plant Control systems to monitor and control the temperature and pressurization requirements of different areas.

### Building Management System for School Buildings, 2018

*Saudi Arabia*

*End user : Ministry of Education, Jubail*

**Project Description:** Design, supply, supervision, testing & commissioning of Building management system for monitoring and control of HVAC systems, Lighting, PA systems of different areas.

### HVAC Control System for 13M Substations, 2018

*Saudi Arabia*

*End user : Royal Commission of Yanbu and Jubail, Yanbu*

**Project Description:** Design, supply, supervision, testing & commissioning of HVAC Control systems and interfacing of DDC with Motor Control Centers and Power systems with remote monitoring and Alarm notifications.

### BMS and Energy Monitoring system for Packaging Plant, 2017

*Saudi Arabia*

*End user : Al Obeikan Industries, Riyadh*

**Project Description:** Design, supply, supervision, testing & commissioning of Building Management systems interfaced with HVAC Control systems DDC, Machine Motor Control Centers and Power systems with remote monitoring and Energy efficiency reporting.

### Building Management System for Exhibition Center, 2017

*Saudi Arabia*

*End user : Eastern Province Municipality, Al Ahsa*

**Project Description:** Design, supply, supervision, testing & commissioning of Building Management systems interfaced with HVAC Control systems DDC, and occupancy sensors for various areas of building for monitoring and control of temperature and lighting requirements.

### Building Management System for Educational Buildings, 2017

*Saudi Arabia*

*End user : Ministry of Education, Majmaah*

**Project Description:** Design, supply, supervision, testing & commissioning of Building management system for monitoring and control of HVAC systems, Lighting, PA systems of different areas.

# Project Profile

*Notable Industrial automation projects*

## Design, Supply, Installation and Commissioning of Hydrocarbon Waste Management System, Jazan Refinery Complex, 2018

*Saudi Arabia*

*End user : Saudi Aramco*

**Project Details:** Effective Management of Hydrocarbon Waste is top priority to avoid Environmental and Safety Hazard. With the vast size and operations of Refinery Complex, any disruption caused due to ineffective management of hydrocarbon waste would be a certain disaster. Identifying the process and designing a system, selecting all the essential components from properly sized API pumps to fluid and gaseous leak detection; implementation with coordinating all the disciplines and meeting critical deadlines is required.

## Design, Supply, Installation and Commissioning of Sanitary Waste and Fire Pump Control Systems, Jazan, 2018

*Saudi Arabia*

*End user : Jazan Economic City*

**Project Details:** Infrastructure for a new Economic Zone requires reliable and lasting systems. With tough Environmental conditions, efficient Control Systems are required for Sanitary Lift Stations and Fire Water Stations that can withstand higher temperatures and humidity. Likewise, engineering these systems as per the sequence of operation and making them as user friendly as possible for operations and maintenance personnel is required.

## Design, Engineering and Project Management for Potable Water Pipeline Instrumentation and Controls, KGP, 2018

*Saudi Arabia*

*End user : Khursaniyah Gas Plant*

**Project Details:** Supply of potable water for critical applications inside a gas processing facility is always critical to the plant requirement. Additional capacity tanks for potable water were installed in plant and were being filled up through new pipeline. Design and Engineering for in line instrumentation and Control system suitable for process was required . Major task being the management of installation of field devices and control system with minimum possible downtime to avoid any disruptions in the operations.

## Control System for Diesel Unloading along with Volume Correction Integration, Arar, 2018

*Saudi Arabia*

*End user : Saudi Electricity Company*

**Project Details:** Diesel, used as a backup fuel for Power Plant operations is stored in Tanks and needs to be kept ready in case the requirement arises. These tanks are filled through unloading of diesel from trucks at different locations within the plant. The Unloading Skids are monitored and controlled through a control room, for which an efficient control system is required. This system shall also be able to calculate the corrected volumes as per the API 11.1 standards. The system shall also be capable of providing grounding interlocks prior to unloading of fuel to avoid any safety hazards.

## Design, Engineering, Supply and Commissioning of PLC Panels for Water treatment plant, Jeddah, 2018

*Saudi Arabia*

*End user : Ministry of Health*

**Project Details:** Treated water is essential in medical requirements. For hospitals in various locations, water treatment facilities are to be provided with individual controls and monitoring through PLC's. Local interface is also required to operate manually. Ease of use for operators is always required to have a proper functioning system.

## Design, Engineering, Supply and Commissioning of Pump Station Control System, 2019

*Saudi Arabia*

*End user : Dhahran STP*

**Project Details:** Discharge pumps need efficient functioning and control to meet the requirements of a Sewage treatment plant. A PLC system was provided with a remote interface to monitor and control sequence of operation as per the required capacities of the Treatment plant. Interface with various other critical plant utilities such as GAs Monitoring, Odor control, HVAC and fire systems was provided to ensure smooth functioning of the pumping station.



# Project Profile

## Notable Projects accomplished

### Al Khodari, Ras Al Khair, 2017

Saudi Arabia

**Project Description:** Design, Engineering, Supply and Integration of Main Control System and Remote I/O's, HMI, VFD's, Field Instruments Integration of Cabinets, Wiring and Termination of Field Instruments

**Project HW/SW:** Rosemount, Endress & Hauser, Swagelok, Allen Bradley

**Project Details:** Installation and Mounting of Field Instruments, PLC Panels, HMI Stations and VFD Panels along with Junction Boxes, Cable laying, terminations Loop Checking, Commissioning and Start up.

### Al Yamama Co, STP- Dahrn Housing, 2017

Saudi Arabia

**Project Description:** Design, Supply and Integration of Interposing Relay Panels and Junction Boxes with PLC Panel, Integration of Cabinets, Wiring and Termination of Field Instruments

**Project HW/SW:** Rittal, Allen Bradley

**Project Details:** Design, Installation and Mounting of IRP along with Junction Boxes, Cable laying, terminations Loop Checking, Commissioning and Start up.

### McDermott Arabia, Abu Ali - Offshore, 2017

Saudi Arabia

**Project Description:** Supply and Integration of Pump Control Panels and Junction Boxes Suitable for Offshore Platforms, Integration of Cabinets, Wiring and Termination of Field Instruments

**Project HW/SW:** Allen Bradley, Cooper

**Project Details:** Design, Installation and Mounting Pump control Panels along with Junction Boxes, Cable laying, terminations Loop Checking, Commissioning and Start up.

### Dodsall, MGS- I, 2017

Saudi Arabia

**Project Description:** Supply and Integration of 4 Pump Control Panels including VFD and Switchgear, Integration of Cabinets, Wiring and Termination of Field Instruments

**Project HW/SW:** Schneider Electric, Square D, and Hoffman.

**Project Details:** Design, Integration of Control Panel, Field wiring and Termination in Cabinets, Loop checking, Installation, Commissioning and Start-up support.

### NESMA, Ras Tanura, 2017

Saudi Arabia

**Project Description:** Supply and Integration of Pump Control Panels and Junction Boxes along with Level Transmitters, Integration of Cabinets, Wiring and Termination of Field Instruments

**Project HW/SW:** Endress & Hauser, Allen Bradley, Rittal

**Project Details:** Design, Installation and Mounting of Level Instruments and Pump control Panels along with Junction Boxes, Cable laying, terminations Loop Checking, Commissioning and Start up.

### CAT, Haradh, 2017

Saudi Arabia

**Project Description:** Integration of Instrumentation and MOV with existing DCS

**Project HW/SW:** Foxboro I/A series

**Project Details:** Supply, install and interface field instrumentation with existing Foxboro I/A series DCS, Serial Interface & HMI, Internal Testing, FAT, Pre-Commissioning, Start-up

### Al Yamama, Dhahran, 2017

Saudi Arabia

**Project Description:** Supply and Integration of Pump Control Panels including VFD and Switchgear, Integration of Cabinets, Wiring and Termination of Field Instruments

**Project HW/SW:** Schneider Electric, Square D, Hoffman.

**Project Details:** Design, Integration of Control Panel, Field wiring and Termination in Cabinets, Loop checking, Installation, Commissioning and Start-up support

### Al Yamama, Dhahran, 2017

Saudi Arabia

**Project Description:** Supply and Integration of 3 Pump Control Panels including VFD and Switchgear, Integration of Cabinets, Wiring and Termination of Field Instruments

**Project HW/SW:** Schneider Electric, Square D, and Hoffman.

**Project Details:** Design, Integration of Control Panel, Field wiring and Termination in Cabinets, Loop checking, Installation, Commissioning and Start-up support.



# Project Profile

## Notable Projects accomplished

### Daragados Gulf Construction, Saudi Kayan, 2017

Saudi Arabia

**Project Description:** Programming Of 13 Nos. GE MM300 Relay For Electrical Relay Settings at Substation 83A with all the Functional Tests

**Project HW/SW:** GE Multilin 300, EnerVista

**Project Details:** Design, Implementation of Logic, Serial Interfaces, Field wiring and Termination in Cabinets, Loop checking, Installation, Commissioning and Start-up support.

### Energy & Power Contracting Company, SABIC- 2017

Saudi Arabia

**Project Description:** Supply, Design and Installation of GE F650 Relay and Programming of Electrical Relay Settings at ER-12 with all the Functional Tests

**Project HW/SW:** GE Multilin F650 , EnerVista

**Project Details:** Design, Implementation of Logic, Serial Interfaces, Field wiring and Termination in Cabinets, Loop checking, Installation, Commissioning and Start-up support.

### NOMAC, SWCC, 2017

Saudi Arabia

**Project Description:** Replacement and installation of AB Panel view 1000 Terminal HMI and interfacing with existing process.

**Project HW/SW:** AB Panel View 1000 HMI, Studio Logix 5000

**Project Details:** Installation OF AB Panelview 1000 HMI and integrating with PLC's, Programming as per the process, Graphics designing, Serial Interfacing, Termination in Cabinets, Loop checking, and Commissioning

### ARCON, GE Dammam, 2017

Saudi Arabia

**Project Description:** Supply, Install and Commissioning of MCC for HVAC controls and interfacing with Honeywell BMS

**Project HW/SW:** GE, Honeywell

**Project Details:** Design, Implementation, Mounting and installation of Motor Control Center for HVAC motors and pumps, Field wiring and Termination in Cabinets, Loop checking, Installation, Interfacing with Honeywell BMS, Commissioning and Start-up support.

### SENDAN International, United, 2017

Saudi Arabia

**Project Description:** Design, Manufacturing and implementation of Sample Handling System

**Project HW/SW:** Swagelok, Sandvik.

**Project Details:** Design, Implementation, Interfacing with existing systems Serial Interfaces, Field wiring and Termination in Cabinets, Loop checking, Commissioning.

### Nomac, SWEC, 2017

Saudi Arabia

**Project Description:** Supply, Installation and commissioning of AllenBradley PLC's

**Project HW/SW:** AB Control Logix, Studio Logix 5000

**Project Details:** Installation, Programming of PLC's, providing redundancy using Redundant Switches for every plant PLC, Serial Interfacing, Termination in Cabinets, Loop checking, and Commissioning

### NOMAC, SWEC, 2017

Saudi Arabia

**Project Description:** Supply, Install and Commissioning of Soft starters for Motors at different plants

**Project HW/SW:** Schneider Electric Telemacanique.

**Project Details:** Design, Implementation, Mounting and installation of Soft starters for motor and pump controls, Field wiring and Termination in Cabinets, Loop checking, Installation, Commissioning and Start-up support, Creating Test Patterns, Plotting of Test Results.

### Shandong, SWCC, 2017

Saudi Arabia

**Project Description:** Supply, Installation and commissioning of Siemens PLC's.

**Project HW/SW:** Siemens S7 400, Simatic S7

**Project Details:** Installation, Programming of PLC's, providing redundancy using Redundant Switches for every plant PLC, Serial Interfacing, Termination in Cabinets, Loop checking, and Commissioning

## Our clients



## Associations



Engineering | Electrical | Instrumentation | Automation | HMI & SCADA Development  
Electro-Mechanical and Integration of Control Panels Services.

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