



System Architecture

CO₂ Capture – BOD & Tender Specifications

AEB Amsterdam

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Abbreviations

Abbreviation	Definition
AEB	Afval Energie Bedrijf / Waste to Energy Company
AEC	Afval Energie Centrale / Waste to Energy Unit
CAT	Category
CCP	CO ₂ Capture Plant
DCS	Distributed Control System
ES	Engineering Station
ESD	Emergency Shutdown System
F&G	Fire & Gas
HRC	Hoog Rendement Centrale
IAMS	Identity and Access Management Service
I&C	Instrumentation and Control
I/O	Input/Output
ISBL	Inside Battery Limits
IRP	Identity Registration Protocol
JB	Junction Box
KVM	Keyboard, Video, Mouse
MCC	Motor Control Centre
OS	Operator Station
OSBL	Outside Battery Limits
PCC	Post-combustion CO ₂ Capture
PLC	Programmable Logic Controller
RIO	Remote Input/Output
UCP	Unit Control panel
VFD	Variable Frequency Drive
WP	Work Package

1 Introduction

This document covers the Instrument and Control System Architecture of the new Post-combustion CO₂ Capture Plant (PCC) which covers all its associated work packages in the ISBL & OSBL scope. It is defined based on the assumption that all the PCC plant field instruments and control systems will be connected to the newly proposed ABB 800xA Control system. The existing plant (AEC/HRC) ABB Procontrol14 control systems will be connected serially coupled to the new ABB 800xA system.

1.1 I&C System

The PCC plant's I&C System is comprised of different types of field instrumentation and programmable control systems for the monitoring and control of the process (DCS), safety of the plant, personnel, and environment (ESD) and the detection of fire and toxic gases (F&G). Few work packages in the new plant will have a dedicated controller (PLC/UCP) which will be interfaced to the plant master control system. The purpose of I&C systems in AEB plant is to enable and support safe and reliable operation of the PCC plant through controlling the plant processes.

1.2 I&C Architecture

The representation of the new PCC plant's proposed Control system and its associated sub systems in the work packages with their logic/control flow is shown in the Appendix A.



Appendix A

System Architecture

