

IM Scope of Work for Contracts

Information Management

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1 Introduction

1.1 Summary

The overall objective of this specification is to ensure that the contractor delivers to Arrow Energy the minimum complete and accurate information required to effectively manage its assets and business, structured in a way that supports Arrow Energy's safe engineering, operations and maintenance processes.

1.2 Scope

1.2.1 Contracts

This specification supports and is mandated for the following types of contract:

- Engineering Concept/Select
- Front-end Engineering Design (FEED)
- Engineer, Procure, Construct, Commission (EPC)
- Engineer, Procure, Construct, Commission, Manage other EPCs (EPCM)
- Maintenance (e.g. specific contract to develop CMMS content)
- Other contracts as explicitly stated in that contract

1.2.2 Information – in scope

All controlled information (documents and data) deliverables as part of the scope of work of a contract:

- Project Management documents
- Design documents
- Vendor documents
- Raw Engineering Data
- Databases

1.2.3 Information – out of scope

- Technical Query and Interface Request processes (refer to the contract or formally issued procedures or specifications);
- Correspondence and minutes of meetings (refer to the contract or formally issued procedures or specifications);
- Correspondence and documents related specifically and exclusively to the contract, including contract variations (refer to the contract or formally issued procedures or specifications);
- Uncontrolled documents

1.3 Terminology used in this document

“Arrow Energy” means Arrow Energy Pty Ltd and its subsidiaries.

The “Contractor” refers to the party that carries out all or part of this Statement of Work including design, engineering, procurement, construction, commissioning or management of a project and, or, operation of a facility, including any and all subsidiaries, staff and subcontractors.

“**Contract**” means any agreement that calls up this standard.

Where used, the term:

- “shall” indicates a mandatory requirement in the context of this specification.
- “should” indicates a recommendation desirable to Arrow Energy.

1.4 Definitions, abbreviations and acronyms

Term	Definition
Application	A computer program performing special functions. Sometimes also referred to as computer system. If not stated includes the underlying database if present.
As-built	Documents, Drawing and Content that records the state of assets on completion of construction, maintenance, or other change.
Contractor	The contractor is the party that carries out all or part of the design, engineering, procurement, construction, commissioning or management of a project and, or, operation of a facility.
Controlled document	A controlled document is a document which is registered in a recognised control system at a known revision, status and ownership. A controlled document follows specific review and approval processes. Periodically it will have its content updated and revised.
CSV	<i>Abbreviation:</i> Comma Separated Values
CSV Data file	A comma-separated values (CSV) file
Data	Raw numerical or other information represented in a form suitable for processing by computer.
Design document	A document deliverable that is generated as part of a project engineering activity including all project management, engineering design, construction, commissioning and as-built documents and drawings. These are different from “vendor documents”.
DCC	<i>Acronym:</i> Document Control Centre

Term	Definition
Document	A user-readable set of data structured in order to be printed and stored as a whole. Documents include pictures, drawings and diagrams.
EPCM/EPC(M)	<i>Acronym:</i> Engineering, Procure, Construct, Commission, Manage other EPCs
FEED	<i>Acronym:</i> Front-end Engineering Design
File	A collection of information stored electronically under a specific name.
Information	The sum of documents and data
Information security	Information Security refers to the protection of information in its broadest sense and covers access to information, protection of information against intrusion and damage and the procedures necessary to maintain the integrity of information.
Intelligent drawing	A drawing created and managed by an application as “data”. Intelligent drawings enable documents to be generated from data; they can include manufacturing know-how and design intelligence, e.g. they can include the rules to generate complex families of parts, generate bills of material, area or mass calculations, etc.
IDR	<i>Acronym:</i> Information Deliverables Register (IDR) is a listing of all the document, records and data deliverables for a contract.
Manufacturer Supplier	The manufacturer/supplier is the party that manufactures or supplies equipment and services to perform the duties specified by the contractor.
Metadata	Data about data or data about documents. Metadata may include descriptive information about the context, quality, condition or other characteristics of the data or documents. Common synonyms of “metadata” are “properties” and “characteristics” which are not used in the specification.

Term	Definition
Rendition	A representation of a document in an alternative format, for example: a Microsoft Word document converted to a Portable Document Format (PDF) or a scanned image of a hardcopy document. See Arrow's Standard for Document Preparation (ORG-ARW-IMT-STA-00011)
Revision	Highest level of version of a document. See Arrow's Standard for Controlled Documents (ORG-ARW-IMT-STA-00002)
RFSU	<i>Acronym:</i> Ready For Start Up.
Technical Query	External or internal communication to formally capture technical information that is required to resolve an ambiguity in a project.
Transmittal	A transmittal is a formally recorded transaction with a record for both delivery and receipt of a specific package of information (typically one or more documents) from the sender to the recipient.
Transmittal cover sheet	Refer to ORG-ARW-IMT-SPR-00003: Exchanging information with Arrow Energy - Specification
Transmittal package	Refer to ORG-ARW-IMT-SPR-00003: Exchanging information with Arrow Energy - Specification
Vendor	See "Manufacturer/Supplier"
Vendor document	A document supplied by a manufacturer/supplier that relates to equipment or services supplied by that manufacturer/supplier. Examples include: operating manuals, maintenance manuals and certificates.

2 Requirements

2.1 Controls

- Arrow Energy shall state its requirements for information deliverables including design documents, vendor documents and data deliverables either as part of the contract, as part of a stated Scope of Work, Project Specification or other instruction including, but not limited to an Information Deliverables Register (IDR);
- Information deliverables submitted to Arrow Energy, which do not meet the requirements of this specification, shall be rejected and returned for correction and resubmission by the contractor;

- If the contractor is unable to comply with the terms in this document they shall detail all exceptions to Arrow Energy as part of their bid submission;
- Any deviations from the terms in this document must be agreed with Arrow Energy Information Management in writing before information is submitted;
- The contractor shall ensure all information originated by the subcontractors and manufacturers/suppliers comply with Arrow Energy's requirements as outlined in this Scope of Work;
- The contractor shall be responsible for any additional effort and costs associated with ensuring the information supplied by the subcontractors complies with Arrow Energy's requirements.

2.2 Information Security

- The Contractor shall ensure compliance with Arrow Energy information security requirements as stated in the Contract and ensure processes and procedures are in place to safeguard business continuity and minimise business damage. Particular focus should be placed on ensuring:
 - Confidentiality, protecting sensitive information from unauthorised disclosure;
 - Integrity, safeguarding the accuracy and completeness of information;
 - Availability, ensuring information is available as required for the execution of the work.
- The Contractor shall utilise Arrow's information content security classification labels for information assets. Refer to Arrow's standard for Information Security Classifications (ORG-ARW-IMT-STA-00004).
- The Contractor should be guided by ISO/IEC 27001 and ISO/IEC 27002 for technology security requirements.

2.3 Reference Data

- Arrow Energy shall formally issue the contractor a set of reference data after the commencement of the contract. This includes codes, data objects, classes, look-up lists and other data;
- In many instances the reference data provided by Arrow Energy will prescribe the metadata and other attributes to be applied by the contractor, for example:
 - If a Tag is classified as a centrifugal pump, the reference data shall identify which properties for that pump need to be delivered by the contractor. The property requirements would be different if a different classification is used.
 - If a Document is classified as a Piping and Instrumentation Diagram (P&ID), this will identify the final revision of the document to be handed over is required As-built and that the native file shall be supplied.
- The contractor shall ensure all information deliverables supplied to Arrow Energy complies with this reference data in context with related specifications. Where the contractor is unable to utilise Arrow Energy reference data directly in its business processes and applications, the contractor shall map their existing reference data to

that supplied by Arrow Energy and provide the mapping to the Arrow Information Management Team;

- All conversion of data to conform to Arrow Energy's Reference Data requirements shall be done by the contractor before submission to Arrow Energy.

2.4 Documentation

2.4.1 Preparation and format

Arrow Energy key documents are necessary, current, relevant and useful by ensuring a consistency in their design, creation, approval and implementation.

- The Contractor shall prepare all design and vendor documents according to Arrow Energy's Document Preparation Standard (ORG-ARW-IMT-STA-00011);
- Documents shall be provided in an acceptable native format as per Arrow Energy's Document Preparation Standard (ORG-ARW-IMT-STA-00011);
- Documents shall be submitted in portable document format (PDF) during the drawing/document review and approval process, unless specifically requested by Arrow Energy in native format. Upon request by Arrow Energy and at any time including during the review and approval process, the Contractor shall provide native files of any document;
- Documents shall be published as a PDF file directly from the native file (e.g. CAD; Microsoft Word; etc.) and have full-text search capability as well as indexing through the use of the bookmark function;
- Drawings with multiple sheets shall be provided as single sheet PDF files while maintaining the appropriate page numbering and adhering to Arrow Energy's Controlled Document and Drawing Numbering Standard (ORG-ARW-IMT-STA-00003);
- Prior to submission to Arrow Energy, all scanned documents containing text should be post-processed to run optical character recognition (OCR) to capture all content and bookmarking allowing text to be selected and searched;
- The quality of scanned documents containing characters shall be measured by running an OCR scan on a printed version of the document and 99 % of the characters on the document shall be recognised without errors.

2.4.2 Hardcopy documents

Arrow Energy aims to maximise electronic information storage and exchange however some hardcopy documents may be necessary in specific circumstances (original "wet signed", X-ray, core sample). Where a hardcopy is required it shall be:

- Agreed with Arrow Information Management prior to being stored as a record;
- Deemed to be the original native format;
- Managed with and related to any electronic renditions of the same document;
- Where a hardcopy is approved, it will be deemed to be the original native format and shall be supplied with a digital rendition, refer to Arrow's Standard for Document Preparation (ORG-ARW-IMT-STA-00011).

- In good condition with no unintended marks, staples or other permanent bindings and on clean white paper of a minimum of 80gsm.

2.4.3 Hardcopy files

Hardcopies shall only be accepted by Company with written approval. Hardcopy handover must comply with the following:

- Files must contain documents of a single type and purpose such that they represent collectively a single record;
- The sequence of the documents in the file must represent the record and an index be provided as the first page of the file;
- Files must be named as per the Arrow Electronic Document and Record Naming Conventions Standard (ORG-ARW-IMT-STA-00006).

Note that Boxes are considered containers and not files for record keeping purposes. Where boxes are used to store or provide files and, or, documents to Arrow they shall:

- Clearly display the name of the Originator providing the documents;
- Be a standard archive box size of approximately 41cm (L) x 27cm (H) x 31cm (W) and weigh no more than 14Kg per box;
- Be numbered externally;
- Include a manifest of the contents of the box including all document numbers, titles and revisions, the box number and the date the box was completed.

2.5 Data Deliverables

The contractor shall provide data for each data set as defined under the contract and any instructions relating to the contract including:

- Plant breakdown structure (PBS) – the data describing the asset hierarchy of a plant;
- Tag, equipment and model classification and properties (TEMCP) – the data describing how tags, equipment and models are categorised and the characteristics that are required as raw data;
- Document classification and properties (DCP) – the data describing the relationships between documents and objects in the PBS, the categorisation of documents and the characteristics that are required as raw data;

Arrow Energy requires this data in order for it to effectively populate its information management systems, including:

- Document Control System;
- Electronic Document and Records Management System (EDRMS);
- Engineering Data Warehouse (EDW);
- Computerised Maintenance Management System (CMMS).

2.5.1 Raw data

- The contractor may use its own software applications in developing the data deliverables (unless noted otherwise in the contract), but sharing and handover of

information shall follow the Arrow Energy specified format. This shall require format translation (without loss of quality) by the contractor where the applications are not the same;

- Individual data sets may be “work in progress” when submitted, with the exception of the final submission.

2.5.2 Databases

- When data is stored in many application databases or documents (e.g. Tag), the contractor shall ensure that data is identical (e.g. If the pump tag “P-0903B” is generated from a P&ID it should also exist as “P-0903B” in the 3D model);
- All other data or databases that are generated as part of the contract shall be made available to Arrow Energy as specified in section 2.5 of this document.

2.6 Exchange of Information with Arrow Energy

Arrow Energy employs continuous delivery and review of documentation and data throughout the project lifecycle to ensure the efficiency of project delivery and the control of information from and to contractors. To support the integrity and traceability a formal transmittal process shall be used as outlined in Arrow’s specification for the exchange of information (ORG-ARW-IMT-SPR-00003).

2.6.1 Documents originated by Arrow Energy

- Arrow shall issue documents specific to the project including instructions, requirements, etc.;
- Arrow Energy may issue corporate documents (which are not specific to a particular project or contract);
- Documents shall be provided under the formal transmittal process;
- It is the contractor’s responsibility to ensure that the correct documents are made available to all resources including their staff and contractors.

2.6.2 Documents originated by the Contractor

- The contractor shall provide Arrow Energy with documents and data as they apply to a project or other work order as provided by Arrow Energy;
- The contractor shall maintain a master Information Deliverables Register (IDR) for regular submission to Arrow Energy providing a report on the current status of document deliverables, including planned, forecast and actual delivery dates.
 - The contractor shall produce an IDR listing all the documents to be generated in order to satisfy the contracted scope of work.
 - The IDR shall indicate those documents that are identified as being required for issue and review by Arrow Energy.
 - The IDR shall be treated as a controlled document.
- Documents shall be provided under the formal transmittal process.
- It is the contractor’s responsibility to ensure all content provided to Arrow Energy is true and correct, and meets Arrow Energy’s requirements.

2.6.3 Review of information deliverables by Arrow Energy

- Based upon the master IDR submitted by the contractor, Arrow Energy reserves the right to select documents requiring issue to, or review by Arrow Energy, or make changes to that selection;
- Arrow Energy will endeavour to provide comments on documents submitted by the contractor that are “Issue for Review” (IFR) within an agreed Review Period;
- Unless stated elsewhere in contractual documentation or other mutually agreed procedures, the Review Period shall be 10 (ten) working days¹;
- The Review Period shall be deemed to start from when Arrow Energy receives the information from the contractor. This shall be determined by Arrow Energy and shall not be deemed to be the date stated on a transmittal cover sheet as issued by the contractor;
- If other Review Periods are stated in the contract for specific documents, the longer of the two periods shall be applicable unless explicitly stated with reference to this scope-of-work. The contractor should consult Arrow Energy if clarification is required or if changes to the Review Period are requested;
- If a response has not been received by the contractor within the Review Period the contractor shall remind Arrow Energy of the outstanding review and shall always advise Arrow Energy of the intention to precede with work as necessary to avoid delay to the project schedule;
- If Arrow Energy makes no comments, makes late comments or gives no response in relation to a document issued by the contractor for Review (IFR), this shall not relieve the contractor of their responsibilities under the terms of the contract;
- Arrow Energy may wish at any time to review information deliverables. If these reviews result in work that appears to deviate from the contracted work, or when comments given earlier have not been observed to the satisfaction of Arrow Energy, the contractor shall immediately undertake all required remedial actions.

2.6.4 Continuous Handover

- The IDR shall be submitted to Arrow Energy on a monthly basis on the 10th of each calendar month, unless otherwise specified;
- A full package of data sets (PBS, TEMCP, DCP) , referred to as an “Engineering Data Submission”, shall be submitted to Arrow Energy within three months of the contract award date and then on a monthly basis on the 10th of each calendar month. In the event of the data quality being inadequate, this frequency may be increased and similarly if the quality is high, the frequency may be reduced at the discretion of Arrow Energy;
- Following contract award, but within three months, Arrow Energy and contractor shall agree a transfer schedule for databases;
- Information deliverables shall be handed over progressively through the life of the contract as that information is matured.

¹ Working days are deemed to be Monday-Friday for every week of the calendar year but shall exclude public holidays in the state of Queensland.

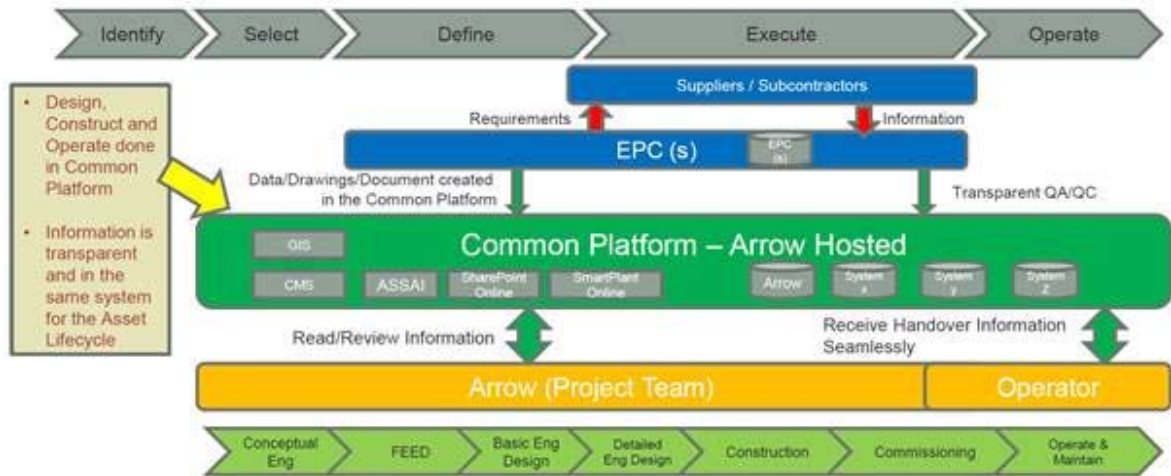
2.6.5 Final Handover

- Prior to the completion of the contract or achievement of a contract milestone, the contractor shall handover all outstanding information to the satisfaction of Arrow Energy;
- The contractor shall deliver Critical Information Deliverables (as stated in Appendix A and elsewhere in the contract), up to date (meaning “As-built”) and prior to RFSU for systems or assets represented by this information.;
- Delivery of all other information shall be completed within 3 months of RFSU for systems or assets represented by this information or prior to the contract close-out, whichever is the earlier;
- The contractor shall deliver populated databases that have been generated as part of the scope-of-work, this includes all databases including, but not limited to:
 - Intelligent drawings
 - 3D models
 - P&ID databases
 - Instrumentation databases
 - Spare parts database
 - Interchangeability records
 - Maintenance data
 - Commissioning system/database
- All configurations, reference files and libraries such that a fully operable application can be created elsewhere shall be included in any database handover. The structure shall be approved by Arrow Energy prior to submission;
- All handovers of data of this type shall be done with consultation with Arrow Energy Information Management who reserves the right to specify how this information shall be handed over.

2.7 Common Engineering Platform for Contractors

The Company framework for capital projects introduces a common platform that will be hosted by Company with an objective that any data, information or system based deliverable to be handed to Company should be hosted by Company as part of the Common Platform. This Common Platform is represented by the schema in Figure 2-1 .

Figure 2-1 Arrow Common Platform



The common platform is intended to drive standardisation of systems, processes and access to information. The common Platform provides a single source of truth for information allowing for streamlined verification and QA of deliverables.

2.8 Software applications

Contractor shall ensure that only the applications listed in Table 2-1 shall be used for the delivery of all scopes of work unless written agreement to deviate has been granted by Company.

Where Company requires that the Contractor purchases applications for use under the Contract, the applications are to be licensed to Company and Company will provide purchased licenses to Contractor for use.

Company's strategy is to have a common platform of systems, applications and tools that will be used by the Contractor (and sub-Contractors) for the scope of the Master Agreement and Contracts. Where the systems, applications and tools are provided by the Company Common Platform the Contractor shall not procure or request procurement of these and shall utilise the Company's systems, applications and tools via the Common Platform.

Contractor shall provide all native files used in the completion of the scope in accordance with the agreed handover process.

Contractor shall ensure that all major software packages are integrated and ensure that all data will be managed and aligned to the common platform throughout the delivery of the scope. Where Contractor performs work using approved software and applications outside of the common platform, the Contract shall ensure that the version used is compatible with Company version. Where a Subcontractor is engaged for the execution of any part of the scope, Contractor shall submit for Company approval, an Integration Plan addressing how information is integrated between Contractor and Subcontractor, including validation and verification of data and information.

Table 2-1 Mandatory Applications and Software

Application/Software Name	Usage
12D	Earthworks design and modelling
Acrobat Suite	Document Publication
AutoCAD 2D	Drafting (Civil Drafting Only)
BowTie	
CAESAR II	Piping stress/flexibility analysis
EasyRisk	Risk Management
ESPIR	Electronic Spare Parts List and Interchangeability Records
ESRI ArcGIS	Geo-Spatial information
ETAP	Electrical calculations & studies
ExtendSIM	Simulation Software
FLACS CFD Blast/Explosion	Process Safety
Flarenet	Flare radiation
Unisim / PipeSim	Process simulation
Geocortex	
GoldSim	Water balance modeling and simulations
Internet Explorer	Internet browser
MAC (DCS/ICSS)	To conduct reviews of MAC/DCS and the likes configuration programs
MS Office Professional	Office Suite (to include Visio)
CadnaA or Soundplan	Noise Study
NozzlePro	Pressure vessel and piping component analysis
OLGA	Flow Assurance Studies
OPEST	Operations Cost Estimation
Pathloss	Telecommunication
Petroleum Expert GAP	
PETREL Eclipse	
PetroVR	

PHAST	HSE (Loss Prevention & Environment)
PHA Pro	HAZOP, SIL, LOPA action recording software (or agreed equivalent)
PIPESIM v2012.2	Steady state hydraulic analysis
Primeavera 6	Project Planning and Scheduling
PVElite	Pressure vessel design
QEDI (GoCompletions)	Commissioning & Completions register
RRM-RBI	Risk & Reliability Maintenance-Risk and Reliability Tools
RRM-SIF Pro	Risk & Reliability Maintenance-Safety Instrument Protective Functions
RRM-RCM	Risk Based Maintenance-Risk Centered Maintenance
SharePoint	Online Content and collaboration for managed documents
SIFPro	Safety Systems Management
SmartPlant P&ID (SPPID)	Piping & Instrumentation Design
SmartPlant Instrumentation (SPI)	Instrumentation, Telecommunications
SmartPlant Electrical (SPEL)	Electrical
SmartPlant 3D	Plant 3D Modeling
SmartPlant Foundation (SPF)	Engineering Data Warehouse (EDW) required for progressive engineering data inconsistency checks
SmartPlant Handover	Progressive SPF data handover
SmartPlant Review	3D Data & Model Review
SmartPlant Isometric	Create and generate Isometric Drawings
SPACE GASS	Structural analysis and design
SPARC	Reliability Availability and Maintainability modelling
UNISIM v R430	Steady State and Dynamic Process Simulation
WellSpring/Energisight	Field Development Planning software
Winprop or equivalent	Radio Coverage calculation

3 Process

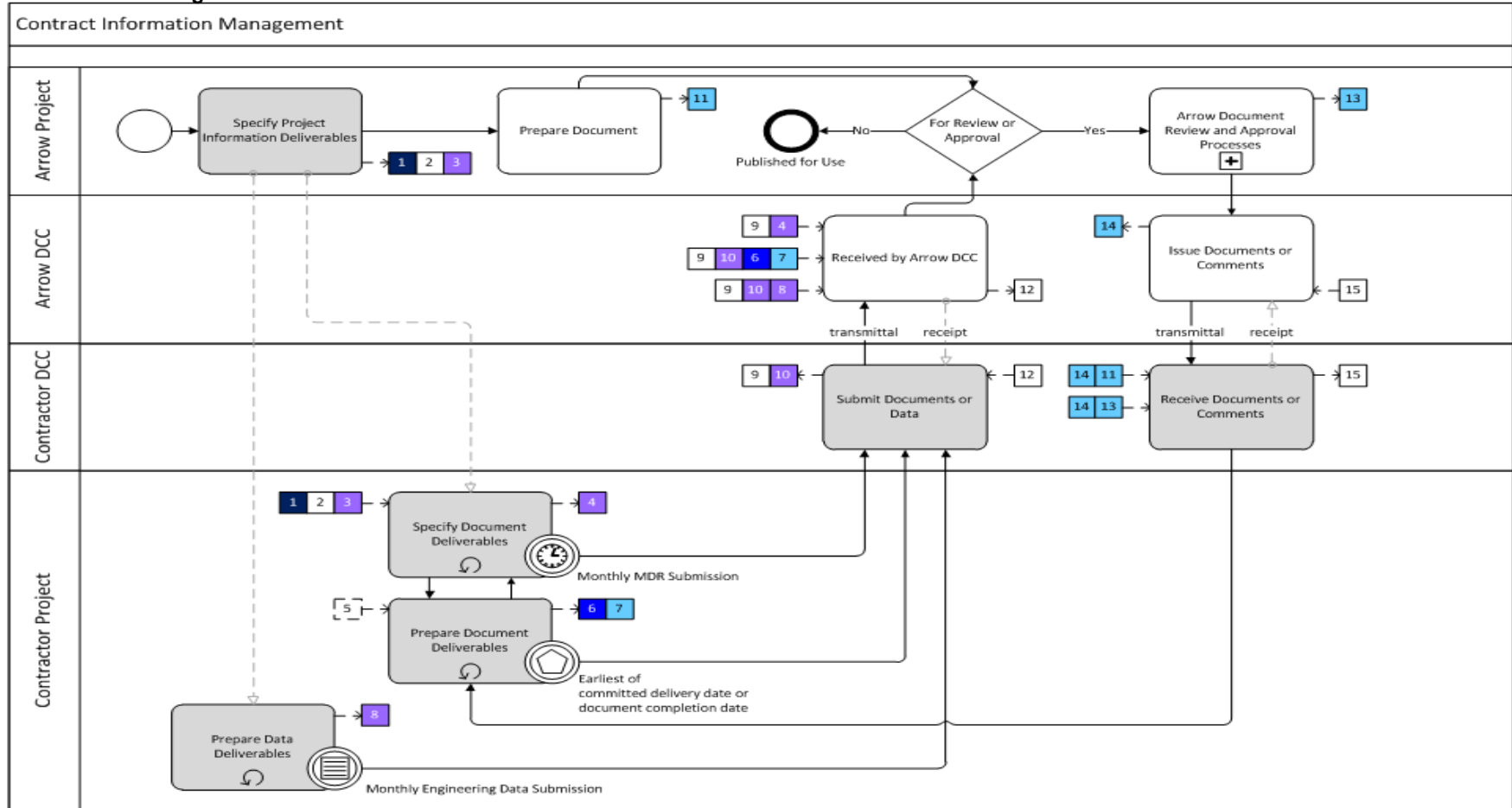
This section of the document gives an overview of the processes involved in managing information deliverables:

- A process model diagram (Figure 1)
- A listing and description of the sub-processes, with cross referencing to detailed descriptions of these processes (section 3.1)
- A summary listing of the key inputs and outputs (section 3.2)

3.1 Process and sub-process listing

Process/Sub-process Name	Process Description	Described in section
Specify Project Information Deliverables	The process by which Arrow Energy defines its requirements for information deliverables such as in the contract, or other instruction.	3
Specify Document Deliverables	The process by which the contractor defines, and continues to define, the documents that it will deliver to fulfil the requirement of the contract, and by which this register of deliverables is regularly provided to Arrow Energy. The continued update and submission of a master Information Deliverables Register (IDR)	4
Prepare Document Deliverables	The process by which the contractor prepares document deliverables. Including lifecycle management, classification, content, layout, format, and electronic file management. The accurate preparation of documents is important to ensure quality and completeness. All documents shall be prepared according to Arrow's requirements in this SOW and Arrow's Standard for Document Preparation (ORG-ARW-IMT-STA-00011).	5
Prepare Data Deliverables	The process by which the contractor prepares data deliverables. Including Plant Breakdown Structure, Tag and Equipment properties and document and data relationships The accurate preparation of data is important to ensure quality and completeness. All data deliverables shall be prepared according to Arrow's requirements in this SOW and Arrow's Standard for Engineering Data (99-JA-SP-0005).	6
Submit Documents or Data	The process by which the contractor submits documents or data to Arrow Energy. The controlled and accurate delivery of information between Arrow and its Contractors is important to ensure quality and completeness. All transfer of information shall be done according to Arrow's Standard FOR Engineering Data (99-JA-SP-0005).	7
Receive Documents or Comments	The process by which the contractor receives documents or comments (on documents) from Arrow Energy.	7
Contractor Information Quality Assurance	The process by which the contractor demonstrates its quality management and assurance.	8

Figure 2. Information Management Process



3.2 Process inputs and outputs

Numbers in the table cross-reference with those on Figure 2.

Ref	Input/output	Format	Description
[1]	Contract	Document	The contract between Arrow Energy and the contractor
[2]	“Scope-of-work”, “Project Specification”, other contractual document	Document	A document or written instruction that may list or infer the required deliverables
[3]	Information Deliverables Register	List	A formal register that lists the information generated by the contractor.
[4]	master Information Deliverables Register (IDR)	CSV Data File	A revision of the master Information Deliverables Register (IDR) for submission to Arrow Energy.
[5]	Document template (multiple)	Document (native format)	Template for document deliverables including drawings
[6]	Document Deliverable (native format)	Document (native format)	A document deliverable in its native file format
[7]	Document Deliverable (rendition)	Document (rendition)	A rendition (i.e. PDF file) of a document deliverable
[8]	Engineering Data Submission	A set of CSV Data Files	A set of CSV data files each containing a set of data deliverables
[9]	Transmittal cover sheet	Document (unspecified)	A transmittal cover sheet prepared by the contractor.
[10]	Document Metadata List	CSV Data File	A CSV Data File containing the metadata of documents included within a transmittal
[11]	Document	Document (rendition)	A document originated and prepared by Arrow Energy.
[12]	Transmittal receipt	Not specified	The transmittal receipt from Arrow Energy to the contractor.
[13]	Document with comments	Document (rendition) or other	A document originated by the contractor and commented on by Arrow Energy.
[14]	Transmittal cover sheet	Document (rendition)	A transmittal cover sheet prepared by Arrow Energy
[15]	Transmittal receipt	Not specified	A transmittal receipt from the contractor to Arrow Energy

4 Quality

4.1 Information Quality Management Framework

Within twenty [20] Business Days of the Master Agreement Commencement Date, Contractor shall develop an Information Quality Management Framework (IQMF)

The IQMF shall describe the processes, controls, organization and planning required to ensure the complete and successful information handover to Company. It shall provide an overview of how the Contractor will execute Information Management activities with the detailed specification developed for each information deliverable, ensuring quality and consistency as described within the IQMF.

As a minimum the IQMF shall describe:

- a. the responsibility for information creation, security and information quality;
- b. a demonstration that the Contractors information management staff are adequately skilled to perform their duties.
- c. the implementation and process for issuing and generating tags
- d. compliance with Company's Engineering Equipment Tagging specification naming standards for all types of equipment;
- e. identification of the major information sources including vendors and Subcontractor data and information;
- f. data dictionaries, symbols and objects per application;
- g. integrated reference data change control that will be implemented for the execution of all scope;
- h. integrated reference data coding structures;
- i. data mapping of Company/Contractor reference data;
- j. how information Quality Control i.e. master document, data and revisions and processes for correction will be achieved and monitored;
- k. the procedure for internal review process that ensures the appropriate technical authorities review, comment, check and approve all new or revised documents
- l. the procedure for receiving document comments and how comments received from Company are incorporated after document review
- m. the procedure(s) to validate the quality of the data (completeness, consistency, correctness) within the Contractors engineering application databases
- n. consistency and integrity tools and procedures; and
- o. completeness checking tools and procedures.

The validation of documents and data are essential for Flawless Project Delivery and Operational Excellence in order to eliminate any errors that may be present. The IQMF shall include a validation procedure that verifies technical integrity.

4.2 Compliance and assurance

- Compliance with the requirements established in this SOW will be reviewed as part of Arrow Energy's assurance activities;
- Monitoring and verification of the key requirements of this SOW will also be included as part of the Arrow Energy key performance indicator reporting requirements.

5 Document Administration

This document has been created using ORG-ARW-IMT-TEM-00006 v4.0

Revision history

Revision	Revision Date	Revision Summary	Author
4.0	09-07-2018	Issued For Use	T.Pendlebury
3.1	20-02-2018	Updated with CEOP – Issued for Review	T.Pendlebury
3.0	06-06-2014	Approved. Issued For Use. Change to this version relates to the removal of the phrase “Major Contract” to ensure this SOW is applicable to all projects undertaken by Arrow, not just major capital projects	C. Mowett
2.0	30-10-2013	Approved. Issued for use.	P. O’Connell
1.3	17-10-2013	Review comments included. Issued for approval.	P. O’Connell
1.2	04-07-2013	Review and markup of full document	R. Green
1.1	18-06-2013	Removed look up lists (referenced as individual docs), added in additional documentation format and preparation detail, refined metadata requirements.	C. Mowett
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Key document location

[\[DOCUMENT CONTROL TO CREATE LINK TO KEY DOCUMENT LIBRARY ON THE RESERVOIR\]](#)

Related documents

Document Number	Document title
ORG-ARW-IMT-STA-00011	Standard - Document Preparation
ORG-ARW-IMT-STA-00006	Standard - Electronic Document and Record Naming Convention
ORG-ARW-IMT-STA-00004	Standard - Information security classification
ORG-ARW-IMT-SPR-00003	Specification - Exchange of Information with Arrow
ORG-ARW-IMT-SPR-00012	IM Specification – Engineering Data Requirements

Acceptance and release

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