

International Construction Consulting Independent Project Review (IPR)

Overview

International Construction Consulting, LLC has developed an Independent Project Review (IPR) Program consisting of a suite of 5 modules. The Program involves tools for conducting 5 distinct types of IPR's at critical decision points along the project execution timeline. The modules consist of:

1. Project Reviews
2. Risk Assessments
3. Constructability Reviews
4. Construction Readiness Assessment
 - 4.1 Fabrication Readiness Review
 - 4.2 Construction Performance Review
5. Operational Readiness Assessment

The details of each of the modules are shown below:

1. **Project Reviews** These reviews are varied and can be tailored to a specific need. In general, they will include reviews such as:
 - Project Readiness
 - Assess the overall readiness of the project to proceed. This can be done at any project stage to evaluate the readiness for the project to move to the next major project phase.
 - Project Assurance
 - Project Framing Reviews
 - Project Execution Plan Reviews
 - Project Cold Eyes Review
 - Safety, Fire, and Health Plan Review
 - Emergency Response Plan Review
 - Others as required
2. **Risk Assessments (RA)** – these are scenario based and would normally be conducted at:
 - Conceptual
 - FEED
 - Detail Design
 - Prior to start of construction

RA's, which should be specified in the Risk Management Plan (RMP), would be to develop a detailed listing of project and execution vulnerabilities along with mitigations and in some high impact issues, a resolution plan for close out. If an RMP does not exist, I can assist in developing one that will use recognized best practices to:



- Prioritize key risks
- Communicate those risks to stakeholders
- Develop a clear path to address and/or mitigate the key risks

An RMP typically consists of a table or series of tables, which lay out for each uncertainty a resolution plan and a strategy for the Project. Understanding risk, its management, and achieving alignment with decisions makers on these variables is critical in improving decision quality.

3. **Constructability Reviews** – these would typically be performed at:

- Conceptual
- FEED
- Early in Detail Design
- At 50% completion of detailed design

The objectives of Constructability Review is to meet the objectives of sound Project Management which is to assist in the identification of upgrades/ initiatives which will enhance project safety, quality, cost, schedule and risk management early in the project.

There are quantifiable benefits from a series of comprehensive Constructability Reviews, some of which are:

- Tangible Benefits
 - Construction Industry Institute (CII) claims reductions of approximately 4% of total project cost and 7.5% schedule reductions are not uncommon
- Intangible Benefits
 - Other project objectives enhanced (maintainability, reliability, operability, quality, and safety)
 - Design-Construction Interface Enhanced

4. **Construction Readiness Assessment (CRA)** – to be conducted prior to start of construction and would be to assess that adequate progress and plans are in place to initiate specific construction, fabrication or installation activities.

CRA's are not meant to be a technical audit or a complete validation of the project cost and schedule estimate. An independent assessment of the



likelihood of achieving cost and schedule targets is not provided. Specific deliverables are reviewed for the primary purpose of confirming the status and effectiveness of existing project & construction management systems, processes, procedures, and plans. The primary objectives of the CRA are to:

- Provide an unequivocal message to Management
- Provide an independent assessment to Project Management and Senior Management
- Provide a Management tool for stewardship of risks and vulnerabilities
- Assess deliverables
- Assess adequate readiness to proceed to initiate specific site activities
- Identify risks and vulnerabilities related to the both the PMT and construction Contractor activities
- Gain co-venture and stakeholder alignment (i.e. by participating in the CRA if appropriate)

4.1 Fabrication Readiness Review. This Review is implemented to ensure the following objectives are met:

- Provide a degree of quality assurance that the project, including the Company and Contractor project teams, has the necessary organization and processes in place to effectively and efficiently commence fabrication
- Provide outside, unbiased suggestions to help the project team improve their fabrication execution plans and results
- Provide decision makers with more insight and a higher level of confidence in the execution plans

4.2 Construction Performance Review. This Review is implemented to ensure the following objectives are met:

- Provide a degree of quality assurance that the project, including the Company and Contractor project teams, has the necessary organization and processes in place to effectively and efficiently execute construction
- Provide a final assessment that the Contractor and Owner teams have made all the necessary arrangements to ensure safe, predictable and sustainable execution of the Project construction scope
- Provide outside, unbiased suggestions to help the project team improve their construction execution



- Provide decision makers with more insight and a higher level of confidence in the construction execution of the project

5. **Operational Readiness Assessment (ORA)** – to be conducted:

- FEED
- Detail Design
- At start of construction
- At a predetermined time prior to construction completion & turn over

The ORA is tailored to assess the current state of a project's pre-operations planning. The results are an upgrade to operational assurance, identifying gaps in deliverables, prioritizing the focus items, and agreeing on actions required to achieve operational readiness by the end of the current project phase. This process can be applied on an existing project regardless of the phase or where a change in project scope or direction might determine that a re-look at a project's pre-operational activities is prudent.

If you think there may be a need for use of any of these tools, let me know and I can put together some additional information for you, including a cost proposal.