ADVISORY SERVICES
CASE STUDY

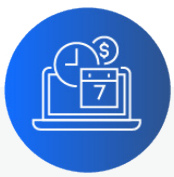
Leading Energy Infrastructure Developer Integrates Competitive Intelligence to Improve Project Schedule & Cost Estimates for Confident Capital Allocation

GO / NO GO DECISION DATA-DRIVEN BY ARBO

Overview

A leading midstream energy company with over $2.5 billion in assets needed reliable data and analyses of competitors' pipeline project costs to inform their project team's cost benchmarking. For prior projects, the development teams used internal data to estimate costs; however, this team wanted to better understand the universe of projects they were competing against. They were planning to enter a new market and expecting a more uncertain regulatory climate and ever increasing volatility creating the imperative to expand their best and worst case scenario models and associated probabilities.

To meet this need for expanded benchmarking, the company engaged Arbo to leverage its data acquisition, research, and visualization capabilities. The result was a detailed and comprehensive breakdown of historic cost report statistics for comparable projects and consultation on regulatory and other events that could impact cost and schedule. The engagement significantly enhanced the scenario modeling and increased the leadership team's confidence levels in the capital allocation decision.



PROJECT CONCEPTION & SCOPING

- Initial Scoping
- Data Identification
- Project Schedule
- Deliverable Structure

DATA ACQUISITION & STRUCTURING

- Obtain Data
- Evaluate Data for Inconsistencies
- Clean Data
- Structure Data

DELIVERABLE ASSEMBLY

- Visualize Findings
- Deliverable Creation
- Quality Assurance Review

DELIVERY MEETING & ITERATION

- Deliverable Walk-through + Q&A
- Project Impact
- Iteration & Feedback

The Problem

Arbo's midstream customer faced increasing regulatory uncertainty that would likely impact cost and schedule forecasts for major capital projects. They needed to improve their existing competitive benchmarking analyses by obtaining more and better data. Previous analyses relied only on internal data and lacked additional accuracy and insights obtainable by including external cost data from other comparable pipelines.

The customer's internal cost benchmarking standards were of very high quality. The data was precise to the line-item level and enabled calculation of relevant key performance indicators to manage construction and overhead expenses. The project team knew from research and experience that external data available from public filings could be less specific, variable and even incomplete. They lacked the bandwidth and expertise to acquire, clean, structure and leverage the universe of available data beyond what they warehoused internally. As a result, they sought solutions to augment their team with regulatory and market data engineering capabilities and pipeline project expertise, which led to engaging Arbo.

The available cost data had standard filing requirements in place for exhibit Ks, but the underlying accounting standards were not consistently enforced leading to wide variability in project accounting as filed. The customer needed certainty in the standardization and assimilation of the external data to compare to their internal project key performance indicators and provide the project approval team with the confidence to execute a go/no-go decision.

The Solution

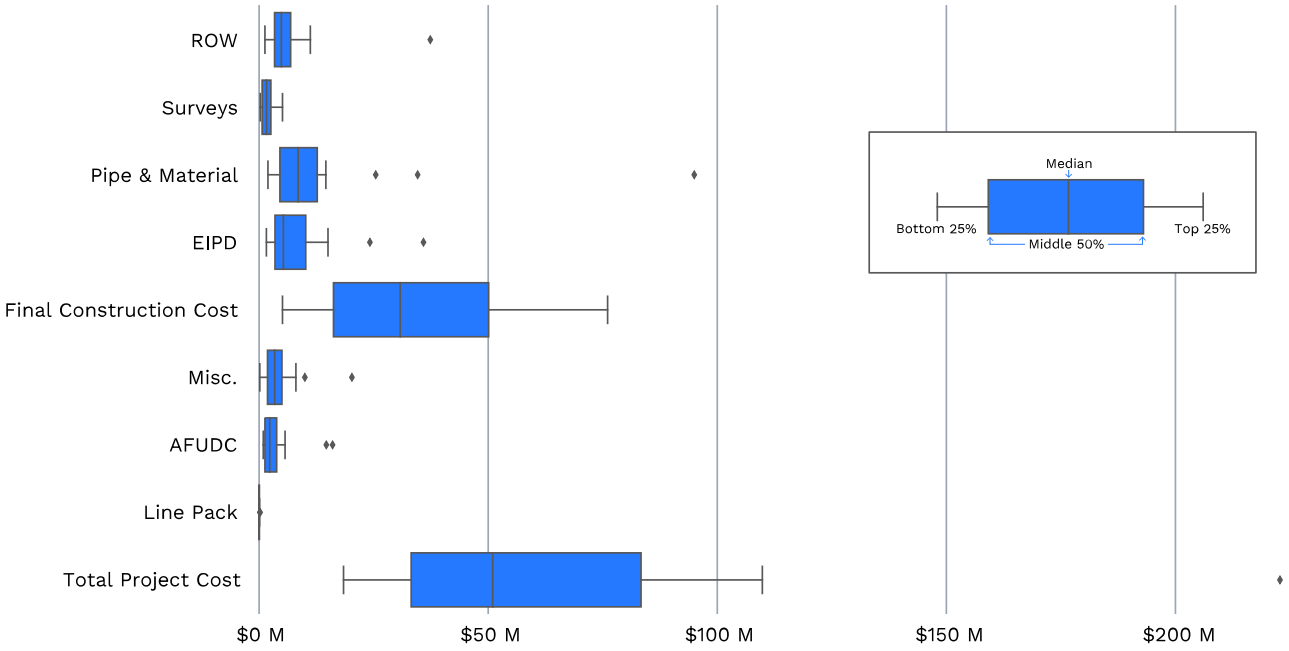
Arbo's mission is to transform regulatory data into business intelligence and insights that drive infrastructure commerce and permitting decisions. The Arbo team is trusted by midstream industry leaders to support project development and ongoing asset optimization. Their industry leading regulatory data acquisition system is engineered to crawl and parse through myriad cost report filings from multiple unstructured and unstandardized public sources. Combined with deep expertise in the relevant federal and state regulatory processes, Arbo can quickly and accurately compile data sets of comparable projects according to a customer's analytical criteria. To solve this customer's problem, the Arbo team applied deep knowledge and understanding of project costs and leveraged its data acquisition system to quickly obtain data, evaluate for inconsistencies, clean and structure the data, and visualize the findings. After assembling the subset of similar projects, the multi-disciplinary Arbo team recategorized the line items of each external cost report to adhere

Compressor Station 410

	Line Item	Description	Final Cost	$/HP
1 Unit	132	Right-Of-Way	$80,937	$5
16,000 HP	133	Damages	$0	$0
	134	Surveys	$118,384	$7
	135	Materials	$21,886,096	$1,368
	136	Labor	$16,103,237	$1,006
	137	Engineering & Inspection	$8,862,572	$554
	144	Overhead	$51	$0
	145	AFUDC	$5,149,699	$322
	146	Contingencies	$0	$0
	147	Legal Fees	$243	$0
	148	Other Services	$478,539	$30
		Total	$52,679,758	$3,292

Compressor Station 410 - Standardized

	Line Item	Description	Final Cost	$/HP
1 Unit	1	ROW	$80,937	$5
16,000 HP	2	Damages	$0	$0
	3	Survey	$118,384	$7
	4	Materials	$21,886,096	$1,368
	5	Labor	$16,103,237	$1,006
	6	Engineering & Inspection	$8,862,572	$554
	7	Line Pack	$0	$0
	8	Admin & Overhead	$51	$0
	9	AFUDC	$5,149,699	$322
	10	Contingencies	$0	$0
	11	Legal & Other Service Fees	$478,782	$30
		Total	$52,679,758	$3,292



Outlier: Leidy South Expansion Project
Final Construction Cost: $258,936,231 **Total Project Cost:** $380,444,777

to the customer's line item standardization protocol and internal metrics and KPIs, layering in expert analysis to ensure standardization across largely non-uniform data sets.

The emerging analysis then benchmarked the customer's pipeline project against competitors' projects applying the customer's internal benchmarking standards and provided comprehensive visualizations and data reports summarizing cost breakdowns. This included:

- Individual project cost breakdowns customized and standardized by line item with matched KPIs
- Comparison of total final costs for similar external projects
- Visualizations of aggregated project distribution for each line item

The Impact

Instead of having to search through thousands of projects and manually analyze the associated docket filings to identify individual cost reports, the customer was able to successfully verify their project's final cost distribution against their competitors' in a matter of days to inform a vital business decision.

Without Arbo, this asset and competitive benchmarking project would have relied solely on internal data and lacked additional certainty provided by including competitive intelligence. The customer may have missed critical data and insights pertinent to the project's success.

Ultimately, the analysis provided corroborated the project team's confidence and informed their decision to proceed and submit for board approval and a final investment decision. Arbo was proud to support the project in keeping with our vision to help sustain America's ability to build and operate critical energy infrastructure.