

Article Title: ARCHIVE | Criteria | Corporates | Industrials: Methodology For Examining Capital Spending Program Risk For U.S. Midstream Energy Companies Data: (EDITOR'S NOTE: — This criteria has been retired and is no longer current.)

1. Standard & Poor's Ratings Services is adapting its methodology for examining capital spending program risk for U.S. midstream energy companies. We are publishing this article to help market participants better understand our approach to reviewing capital spending program risk for the midstream energy companies. This article is related to our criteria article "Rating Criteria For U.S. Midstream Energy Companies," which we published on Dec. 18, 2008.

SCOPE OF THE CRITERIA

2. The methodology for examining capital spending program risk for midstream energy companies focuses on: How we factor capital spending program risk into our business risk assessment of U.S. midstream energy companies. Capital spending is just one aspect of one element within business risk--an element we call "growth strategy, capital spending, and operational capability"--which we broadly describe in our fundamental rating criteria for the sector. Our aim is to clarify how we analyze the "capital spending" component and to describe the factors associated with it that Standard & Poor's rating committees consider. How we classify the risks that projects will involve into different categories, including project planning, execution during construction, and post-completion credit considerations. How we assess a project's overall risk profile and determine its risk classification between "very low" to "very high". How we roll up our view of the individual projects into an assessment of the risks inherent in a company's entire capital spending program. How a company's ability to complete greenfield infrastructure projects on time and within budget can influence its balance sheet and be a factor in its cash flow strength.

IMPACT ON OUTSTANDING RATINGS

3. We do not expect to change any ratings as a result of the methodology. We do, however, expect some changes to our "growth strategy, capital spending, and operational capability" scores within our business risk profile analysis. We will review our assessment of a company's capital spending risk at a minimum annually or whenever material new projects are announced. We intend to state the level of capital spending risk in a company's construction program in our surveillance publishing.

EFFECTIVE DATE AND TRANSITION

4. This methodology is effective immediately for all rated issuers in the U.S. midstream energy sector. We will begin reviewing all capital spending programs in the sector and expect to update our surveillance publishing at the time of their next annual review.

METHODOLOGY

Assessing capital spending program risk

5. Midstream energy companies are generally growth oriented. They tend to have different growth strategies, but most or all of them depend on organic growth. The type and size of a company's organic projects, and its ability to complete them on time and within budget, means that its capital spending program can be a key piece of its balance sheet and a factor in its cash flow strength. Its capital spending plan thus can make a marginal difference when we assess its rating relative to that of its peers. For companies with more capital spending risk we would likely require a stronger financial profile at any given rating level, all else being equal.

6. We look at projects that we deem to be most important within a company's construction plan, with the largest and riskiest projects likely to have the greatest impact on our perception of capital spending risk. Each company has a different perception of the risks that it undertakes and on the project's ability to meet financial expectations. To provide comparability of our analysis between issuers, we break down capital spending risks into different classifications to form a baseline view of the project's potential success. We sort the risks that projects will involve into different categories, including project planning, execution during construction, and post-completion credit considerations. We seek to assess a project's overall risk profile and classify it between "very low" to "very high". The general risk drivers discussed within our criteria are not meant to imply that an individual project or construction program display every possible risk or mitigant to qualify for a given risk assessment level. We expect that positive and negative risk factors will both be evident when evaluating a specific construction program. The tables are included as examples, not as definitive requirements. We then roll up our view of the individual projects into an assessment of the risks inherent in the entire capital spending program. At this stage, we assign a score to a company's capital spending risk profile, which then influences our overall "growth strategy, capital spending, and operational capability" business risk assessment score.

7. The influence of capital spending risk on a company's business profile is only one of many factors that we consider in the rating process. A company's track record of pursuing acquisition-driven growth, its historical ability to complete projects on-time and on-budget, and the issuer's overall operating history

would also influence our assessment. We will review our measure of a company's capital spending risk annually or when it announces new projects. 8. Individual issuers often have several projects underway at the same time, and these projects may span the risk spectrum. This makes it necessary to weigh which issues and projects contribute most to the company's construction plan execution risk. Key aspects of an individual project's weighting include its level of risk relative to the entire construction plan and its share of the total spending plan. Project execution risk 9. Various phases of construction can lead to delays and cost overruns. Some of the main reasons for budget or scheduling problems are project size and complexity, aggressive budgets or schedules, rising raw material and labor costs, delays in receiving permit approvals, lack of cost overrun protection in construction contracts, inadequate management experience or oversight, insufficient initial design and engineering, and ground or site conditions. 10. Assessing project planning issues. Good planning for large capital investments is critical to avoid cost overruns and delays. We attempt to assess the degree to which preconstruction engineering and regulatory issues are likely to influence a project. We do so by considering a number of crucial factors such as project lead time, management expertise, location, environmental issues, and the complexity of permitting, engineering, and design. We feel that these factors are good indicators of a project's potential vulnerability to rising prices, changes in the completion schedule, environmental or regulatory complications, geographical considerations, and inadequate sponsor oversight. 11. Generally, we expect projects with longer lead times to be more risky due to the degree of project complexity, the risk of "rescoping" due to changes in inflation, environmental guidelines, and regulatory orders. We look at the project manager's experience, track record on similar properties, and its overall construction history to gauge the likelihood that it will recognize and mitigate key construction risks before they occur. Location measures the risk of delays caused by geographic spread, population density of the immediate area, local opposition to a project, and typical weather conditions. Environmental, permitting, and engineering and design complexity assess the possibility that a project will be "rescoped," delayed, or forced to incur additional costs due to environmental and regulatory permits, unexpected site conditions, obtaining land rights-of-way, equipment reorders, or project integration or compatibility issues (see table 1).

Table 1 Project Planning Risk	GENERAL RISK LEVEL	PROJECT LEAD TIME	MANAGEMENT EXPERTISE	GEOGRAPHIC LOCATION	ENVIRONMENTAL CONSIDERATIONS	AND PERMITTING	AND ENGINEERING AND DESIGN COMPLEXITY
VERY LOW	--Less than six months.	--Well-established track record.	--Well concentrated area.	--Minimal permitting required at the state or federal level.	--Very low project complexity.	--Project related to a company's core competencies.	--Sparsely populated areas.
LOW	--About one year or less.	--Proven track record.	--Concentrated area.	--Minor permitting required at the state or federal level.	--Low project complexity.	--Project related to a company's core competencies.	--Sparsely populated areas.
MODERATE	--About one to two years.	--Solid track record.	--Regional area.	--Moderate amount of permits required at the state or federal level.	--Moderate project complexity.	--Project similar to the company's core competencies.	--Moderate population density.
HIGH	--About two to three years.	--Mixed track record.	--Spread out area.	--Multiple permits required at the state or federal level.	--High project complexity.	--Project is outside of the company's core competencies.	--High population density.
VERY HIGH	--Above three years.	--Minimal or checkered track record.	--Very well spread out area.	--Expansive state and federal approvals (five+ authorities).	--Very high project complexity.	--Project represents a new business activity for the sponsor	--Very high population density.
	--Extreme exposure to weather variability (i.e., offshore projects).	--High potential for condemnation proceedings.	--Very large greenfield projects.	--Material engineering work needs to be completed			

before construction begins 12. Assessing construction risk issues. Although a project may be solid conceptually before construction begins, execution is paramount -- and several issues can cause a plan to go awry. We thus assess a project's vulnerability to changes in raw material and labor costs and the risks inherent in its construction contracts. Pricing and availability drive raw materials and labor costs, which can be volatile, so our main focus is on cost certainty versus probability as well as inflation expectations. We also evaluate construction contracts to highlight potential cost escalation, fault, and other risk transfer elements either to or away from the project. We also seek to understand the contractors' history of working with the sponsor, experience in building the facility in question, and its ability to pay penalties, if necessary, to compensate for contractual deficiencies (see table 2).

Table 2  
**Construction Risk GENERAL RISK CONSIDERATIONS GENERAL RISK LEVEL RAW MATERIAL PRICES AND LABOR COSTS CONSTRUCTION CONTRACTS**

**VERY LOW** --All or nearly all of costs are fixed before construction begins. --Risk of cost overruns lies solely with the contractor or the sponsor's customer. --Very low inflationary periods. --Turn-key contracts. --Low exposure to cost overruns.

**LOW** --About 75% of costs are fixed before construction begins. --Risk of cost overruns lies primarily with the contractor or the sponsor's customer. --Low inflationary periods. --Primarily turn-key contracts. --Variable cost contingency budget of roughly 5%-10% for moderate-risk projects or 20%-30% for high-risk projects. --Diverse labor requirements.

**MODERATE** --About 50%-75% of costs are fixed before construction begins. --Risk of cost overruns lies mostly with the contractor or the sponsor's customer. --Moderate inflationary periods. --Mix of turn-key and time-and-materials contracts. --Variable cost contingency budget of roughly 10%-20% for moderate-risk projects or 30%-40% for high-risk projects.

**HIGH** --Less than 50% of costs are fixed before construction begins. --Risk of cost overruns lies primarily with the sponsor and less so with the contractor or the sponsor's customer. --High inflationary periods. --Primarily time-and-materials contracts. --Variable cost contingency budget of roughly 20%-30% for moderate-risk projects or 40%-50% for high-risk projects. --Significant local labor requirements.

**VERY HIGH** --Minimal amount of costs are fixed before construction begins. --Risk of cost overruns lies solely with the sponsor. --Very high inflationary periods. --Time-and-materials contracts. --High exposure to cost overruns.

Post-construction credit considerations 13. The level of risk a company assumes during planning and construction and how the project influences overall business risk influences the company's financial risk profile after construction is finished. Our capital spending assessment includes the risks we deem to be most common across midstream companies to determine whether the project's plan can reasonably be executed upon and if it can lead to potential financial deterioration during the spending cycle and whether the back-ended recovery in cash flows is adequate at the given rating level. While a company's credit metrics may drop during construction, Standard & Poor's generally has some tolerance for such short-term weakening, as long as its capital projects have positive business profile characteristics and solid, predictable cash flow.

14. To reduce long-term risk, we expect companies to return their key credit metrics to more normal levels, and keep those in line with management's stated goals, when large capital spending cycles are complete. Poor project execution that leads to material construction delays or cost overruns may prevent an individual project from achieving the cash flow or returns it initially expected.

15. The project's profile post-completion and how it influences the company's overall financial risk profile relative to its capital spending risk assessment is key in calculating the potential change in a company's credit quality. Our post-completion assessment focuses on the certainty of the project's cash flow. We review the project's amount and tenor of its capacity that is contracted, its type of offtake contracts (fee-based vs. nonfee-based), degree of commodity price risk, the creditworthiness of its customers, and potentially the ability to flow through certain costs, such as its capital costs, into tariffs. The project's EBITDA multiple (defined as the project's cost over its expected level of EBITDA) also provides insight into the overall level of financial risk of potential cash flows (see table 3). Projects with lower EBITDA multiples are generally viewed as less likely to impact post-construction credit quality either because expected returns will be very high or that construction costs are low.

Table 3  
**Assessing Financial Considerations GENERAL RISK LEVEL POST-CONSTRUCTION CREDIT CONSIDERATIONS**

**VERY LOW** --Project is fully contracted. --Fee-based contracts. --Almost no EBITDA at risk due to commodity price changes. --Very low EBITDA return multiple (less than 3x). --Very strongly rated capacity customers ('AA').

**LOW** --Project is nearly all contracted (over 80%). --Primarily fee-based contracts. --Less than 10% of

EBITDA at risk due to commodity price changes. --Low EBITDA return multiple (about 3x-5x). --Strongly rated customers ('A'). MODERATE --Project is mostly contracted (between 50%-80%). --Large proportion of fee-based contracts. --Between 10% and 20% of EBITDA at risk due to commodity price changes. --Average EBITDA return multiple (about 5x-10x). --Solidly rated customers ('BBB'). HIGH --Project has some contracts (about 25%-50%). --Mix of fee- and nonfee-based contracts. --Between 20% and 50% of EBITDA at risk due to commodity price changes. --High EBITDA return multiple (about 10x-15x). --Weakly rated customers ('BB'). VERY HIGH --Project has no to minimal contracts (less than 25%). --Mainly nonfee-based contracts. --More than 50% of EBITDA at risk due to commodity price changes. --Very high EBITDA return multiple (over 15x). --Poorly rated customers ('B').

Examples of our project risk assessments in practice 16. The mix of projects affects how our individual project assessments roll-up into an overall view of a company's capital spending program risk. Projects involve lower risk if they are small to midsize bolt-on projects with predictable cost profiles that fit well within a firm's historically successful strategy. However, there's fundamentally higher risk in a large, greenfield project (i.e., new construction) with uncertain construction costs or potentially contentious environmental, regulatory, or engineering issues. When assigning a project a score, we assess the factors that could increase its marginal risk. We then arrive at a company's overall capital spending risk assessment by calculating each project's share of the total capital budget, with a focus on size and complexity of the larger projects, and correlation of key cost and risk factors for all of a company's projects. (see table 4).

PROJECT TYPE	PROJECT COST (MIL. \$)	DESCRIPTION	GEOGRAPHIC LOCATION	PROJECT LEAD TIME	MANAGEMENT EXPERTISE	ENVIRONMENTAL CONSIDERATIONS AND PERMITTING	ENGINEERING AND DESIGN COMPLEXITY	RAW MATERIAL PRICES AND LABOR COSTS	CONSTRUCTION CONTRACTS	POST-CONSTRUCTION CREDIT CONSIDERATIONS	RISK LEVEL	
Interstate gas pipeline	3,000	1,200-mile natural gas pipeline	Densely populated areas in the Northeast	Greater than three years	Proven track record, but first project of this size	Rights-of-way and environmental permits perceived to be challenging due to population density and general project route through many jurisdictions	About 50% of costs are fixed and contingency budget represents 20% of variable costs	Mix of time-and-materials and turn-key	Nearly all contracted under fee-based long-term arrangements with strongly rated counterparties	Moderate	High	
Interstate gas pipeline	1,000	500-mile natural gas pipeline	Moderately populated areas in the Southeast	With minimal weather variability	About two to three years	and the project has high project complexity	Solid track record and the project is directly related to the sponsor's core competencies	Minor concerns as the project routes through two unpopulated jurisdictions that are environmentally benign areas	About 75% of the costs are fixed and contingency budget represents 20% of variable costs	Turn-key	Nearly all contracted under medium-term arrangements with strongly rated counterparties	Low
Intrastate gas pipeline	looping 75	50-mile natural gas pipeline	Sparsely populated areas in the Mid-Continent region	About one to two years	and the project has moderate complexity	Well-established track record with this type of project	Minimal as the route is along existing right-of-way owned by the sponsor	Over 90% of costs are fixed with a minor contingency reserve	Time-and-materials	Nearly all contracted on a fee basis over the medium-term to a few non-investment grade shippers	Moderate/high	Storage 500
New 10 bcf storage facility			Mildly populated area located in the Midwest	with extreme weather variability	Over three years	and the project has very high complexity	Sponsor has minimal track record with the subcontractors, and the project represents a new business activity	Engineered and design 75% complete prior to construction of salt-dome storage facility	About 50% of costs are fixed and contingency budget represents 35% of variable costs	Mix of time-and-materials and turn-key	About 75% firm contracted in the near-term with weak counterparties.	Key construction milestone dates included in customer contracts.
Gathering and processing 150	200 miles		Mildly populated area in the Gulf Coast region	About one to two years	and the project has low complexity	Sponsor has a proven track record with the subcontractors	Minimal right-of-way or permitting concerns with no local opposition	About 50% of the costs are fixed	Time-and-materials	Nearly all contracted, but about one-half are nonfee-based contracts mainly with speculative-grade counterparties	Bcf--Billion cubic feet.	Table 4 Project Type Assessment GENERAL RISK LEVEL

PROJECT LEAD TIME MANAGEMENT EXPERTISE High Interstate gas pipeline 3,000 1,200-mile natural gas pipeline Densely populated areas in the Northeast with significant weather variability Greater than three years and the project has high complexity Proven track record, but first project of this size Moderate Interstate gas pipeline 1,000 500-mile natural gas pipeline Moderately populated areas in the Southeast with minimal weather variability About two to three years and the project has high project complexity Solid track record and the project is directly related to the sponsor's core competencies Low Intrastate gas pipeline looping 75 50-mile natural gas pipeline Sparsely populated areas in the Mid-Continent region About one to two years and the project has moderate complexity Well-established track record with this type of project Moderate/high Storage 500 New 10 bcf storage facility Mildly populated area located in the Midwest with extreme weather variability Over three years and the project has very high complexity Sponsor has minimal track record with the subcontractors, and the project represents a new business activity Low/moderate Gathering and processing 150 200 miles Mildly populated area in the Gulf Coast region About one to two years and the project has low complexity Sponsor has a proven track record with the subcontractors Bcf--Billion cubic feet. 17. Identical types of capital projects may have different risk profiles depending on the specifics of each construction program. For example, we may decide that two interstate gas pipelines have different risk profiles, even though their lead times and the experience of their managers are roughly similar. One project is larger and will cost more, leaving it with greater exposure to time-and-materials construction contracts and a lower percentage of fixed costs. The absolute size of the two projects is also an important differentiating factor as the size of the high risk pipeline project is roughly three times larger than the moderate risk project. 18. It's not unusual for midstream energy companies to have several different projects underway at once. Where there is a portfolio of construction projects, our view of construction risk will depend on the following factors: The overall size of the construction program. Larger programs will generally imply higher business risk because more of the balance sheet will be put at risk during construction and good execution on the spending program will likely become a key ratings and cash flow consideration. Diversity of the construction program. Spending that is spread more evenly across several projects posting low risk correlations is likely to entail lower risk than a capital program that is heavily geared toward the success of one or two projects. Management's risk appetite. The extent to which an issuer's construction program reflects a relatively high level of risk taking because of the number of projects or a relatively high level of average risk in the portfolio would suggest a weaker business profile relative to an issuer's peers. 19. Hypothetical examples elucidate how a Standard & Poor's rating committee might view these portfolio risks (see table 5). For instance, the committee might deem Company A as having a high level of capital spending risk due to a large capital plan both in nominal terms (\$4.75 billion in expected spending) and due to the number of projects underway. The \$3 billion interstate pipeline project, which we are likely to view as a key business risk factor during construction, highlights the higher risk of this construction program. Conversely, Companies B and C demonstrate lower risk profiles. Both Company A and Company B will likely incur risks related to their successful completion of the interstate gas pipeline and storage facility. However, the smaller size of the spending program, among other factors, suggests less near-term business risk for Company B. Finally, Company C has a relatively modest capital program of low risk projects that are unlikely to become a key rating factor during construction. Table 5

Company	Project Type	Project Cost (MIL. \$)	General Risk Level
Company A	High Interstate gas pipeline 3,000	Moderate	High
Company B	Interstate gas pipeline 1,000	Low	Moderate
Company C	Intrastate gas pipeline looping 100	Low/moderate	Low/moderate

Assessments OVERALL COMPANY ASSESSMENT: HIGH OVERALL COMPANY ASSESSMENT: MODERATE OVERALL COMPANY ASSESSMENT: LOW/MODERATE GENERAL RISK LEVEL PROJECT TYPE PROJECT COST (MIL. \$) GENERAL RISK LEVEL PROJECT TYPE PROJECT COST (MIL. \$) High Interstate gas pipeline 3,000 Moderate Interstate gas pipeline 1,000 Low Intrastate gas pipeline looping 100 Moderate Interstate gas pipeline 1,000 Low Intrastate gas pipeline looping 100 Low/moderate Gathering and processing 150 Low Intrastate gas pipeline looping 100 Moderate/high Storage 500 Moderate/high Storage 500 Low/moderate Gathering and processing 150 Low/moderate Gathering and processing 150 RELATED RESEARCH "Rating Criteria For U.S. Midstream Energy Companies," published Dec. 18, 2008. These criteria represent the specific application of fundamental principles that define credit risk and ratings opinions. Their use is determined by issuer- or issue-specific attributes as well as Standard & Poor's Ratings Services' assessment of the credit and, if applicable, structural risks for a

given issuer or issue rating. Methodology and assumptions may change from time to time as a result of market and economic conditions, issuer- or issue-specific factors, or new empirical evidence that would affect our credit judgment. Special Report Click on the links below to see other articles in "Special Report: 2010: A Turning Point For U.S. Midstream Energy." Click on this link to go to the Special Report Archive. The Changing Landscape Of U.S. Midstream Energy Credit How Standard & Poor's Arrives At Natural Gas Liquids Pricing Assumptions For U.S. Midstream Energy Companies 2010: U.S. Midstream Energy's Prospects For A Brighter Future For U.S. Midstream Energy Companies, Advanced Biofuels Offer Credit Risks Similar To Ethanol's