Effective date: Immediately, except in those markets that require prior notification to and/or registration by the local regulator, where the criteria will become effective when so notified by S&P Global Ratings and/or registered by the regulator. These criteria address the fundamentals set out in "Principles Of Credit Ratings."

METHODOLOGY

7. These criteria explain how we factor the potential for extraordinary support (or extraordinary negative intervention) into the ICR of an entity that is a member of a group. Such extraordinary support (or negative intervention) is beyond that which we already factor into the entity's SACP, as explained in "Stand-Alone Credit Profiles: One Component Of A Rating (/en_US/web/guest/article/-/view/sourceId/6219375)."

8. We factor the potential for extraordinary support or extraordinary negative intervention into the ICR even when the need for such support or the possibility for such negative intervention may appear remote

9 We apply a six-step process for determining the ICR of group members (see chart 1), as follows:

(i) Identify the group parent and the group members (together called the group).

(ii) Assess the creditworthiness of the group (or subgroup) to determine a group SACP and GCP. The potential GCP is based on the group SACP, adjusted for potential external sources of extraordinary support if we believe such support will be extended to the group, or potential extraordinary negative intervention. Finally, we apply any relevant sovereign constraints to determine the GCP (see chart 2). See "Ratings Above The Sovereign—Corporate And Government Ratings: Methodology And Assumptions (/en_US/web/guest/article/-/view/sourceId/8343660)."

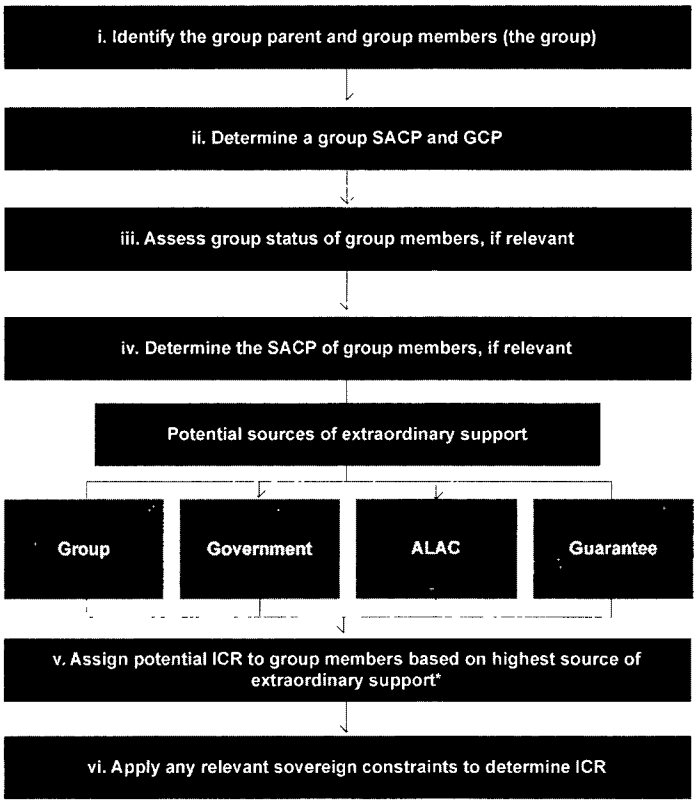
(iii) Assess the group status of each group member to be rated, if relevant.

(iv) Determine the SACPs of group members to be rated, if relevant

(v) Assign a potential (indicative) ICR to group members. The potential ICR is based on the entity's SACP, if relevant, and the potential for extraordinary support (or extraordinary negative intervention). Extraordinary support is the higher of any group or government influence, or other external support factors (such as additional loss-absorbing capacity (ALAC) support or a guarantee). This step also factors in the degree of insulation, if any, that a group member has from potential negative influence by other weaker group entities.

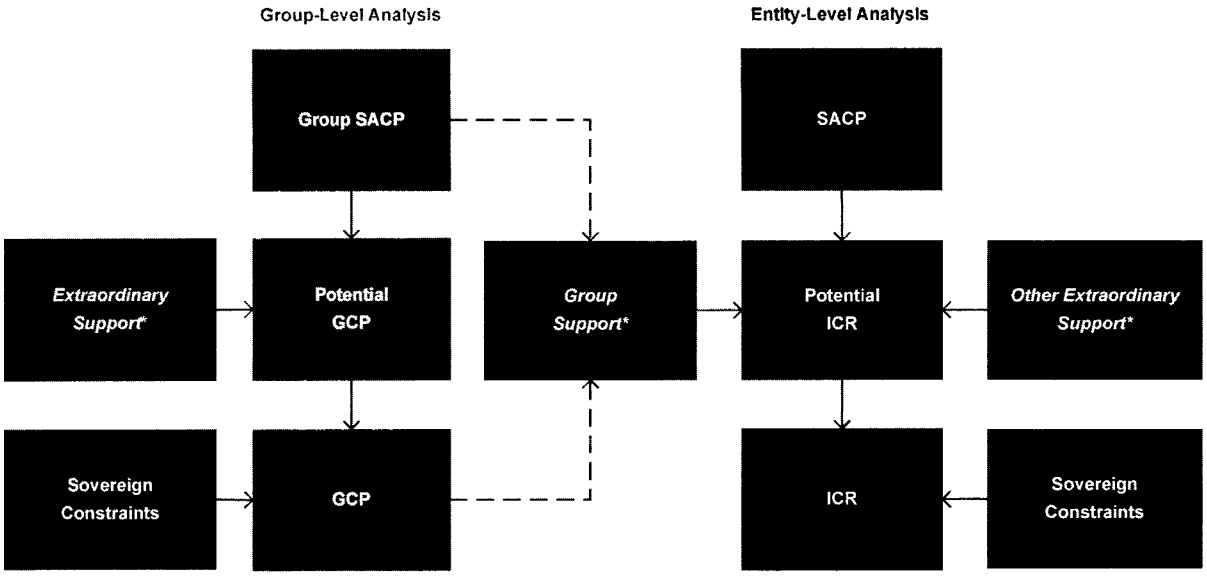
(vi) Assign the final ICR after taking into consideration any relevant sovereign constraints (see "Ratings Above The Sovereign—Corporate And Government Ratings: Methodology And Assumptions (/en_US/web/guest/article/-/view/sourceId/8343660)").

Chart 1
Determining The Issuer Credit Rating On Group Members



*Subject to any insulation GCP--Group credit profile Group SACP--Group stand-alone credit profile SACP--Stand-alone credit profile ALAC--Additional loss-absorbing capacity (applies to certain prudentially regulated entities or groups) ICR—Issuer credit rating

Chart 2--Group Rating Methodology Framework



– — → The relevant reference for determining the impact of group support is either the group SACP or GCP

GCP--Group credit profile Group SACP--Group stand-alone credit profile SACP--Stand-alone credit profile ICR--Issuer credit rating *Or negative intervention

10. These criteria define five categories of group status: core, highly strategic, strategically important, moderately strategic, and nonstrategic. These categories indicate our view of the likelihood that a group member will receive extraordinary support from the group (see table 1).

Table 1

Summary Of Associating An Entity's Group Status With A Potential ICR

Group status	Brief definition	Potential ICR*
Core	Integral to the group's current identity and future strategy. The rest of the group is likely to support these entities under any foreseeable circumstances.	GCP
Highly strategic	Almost integral to the group's current identity and future strategy. The rest of the group is likely to support these group members under almost all foreseeable circumstances.	One notch lower than the GCP, unless the SACP on that entity is equal to, or higher than, the GCP. In such a case, the potential ICR is equal to the GCP.
Strategically important	Less integral to the group than "highly strategic" group members. The rest of the group is likely to provide support in most foreseeable circumstances. However, some factors raise doubts about the extent of group support.	Three notches above SACP. This is subject to a cap of one notch below the GCP, unless the SACP is at least equal to the GCP, in which case the potential ICR is equal to the GCP.
Moderately strategic	Not important enough to warrant support from the rest of the group in some foreseeable circumstances. Nevertheless, there is potential for some support from the group.	One notch above SACP. This is subject to a cap of one notch below the GCP, unless the SACP is at least equal to the GCP, in which case, the potential ICR is equal to the GCP.
Nonstrategic	No strategic importance to the group.	SACP, subject to a cap defined by the GCP.

* The above conventions do not apply where: potential ICRs exceed the GCP due to insulation (see "Insulated Entities" section); the group SACP is used to determine uplift for group support (see "External support factors in the GCP" section); the GCP is 'ccc+' or lower (see paragraph 13); and when paragraph 42 applies.

11. A potential ICR on a group member that exceeds its SACP reflects our view of the likelihood of that entity, in a credit-stress scenario, receiving timely and sufficient group or government support (beyond that already factored into the SACP), thereby strengthening its creditworthiness. Examples of support include additional liquidity or capital to the group member, or one-off transfers of risk from the group member.

12. A potential ICR on a group member that is lower than its SACP reflects our view that if the group or relevant government were in a credit-stress scenario, the group or government would draw resources from the group member (an example of extraordinary negative intervention), thereby weakening its creditworthiness.

13. If the GCP is 'ccc+' or lower, the potential ICR on a group member cannot be lower than 'b-' unless the conditions for a potential ICR of 'ccc+' or lower are met (see "Criteria For Assigning 'CCC+', 'CCC', 'CCC-', And 'CC' Ratings (/en_US/web/guest/article/-/view/sourceId/7554329)," henceforth referred to as "CCC criteria"). The potential ICR would include the potential for extraordinary negative intervention from the group or government

Identifying The Group And Its Members

14. For the purposes of these criteria, the term "group" refers to the group parent and all the entities (also referred to as group members) over which the group parent has direct or indirect control.

15. The group parent is not necessarily the ultimate holding company in the group structure but is the top entity in the structure that we believe is relevant to the group's credit quality. Accordingly, additional holding companies may exist above the group parent, but be excluded from our group assessment if we believe they have no material liabilities or operating assets and therefore no bearing on the group's overall credit quality. The control chain may include several successive layers of controlling or joint-control interest in other entities. We would generally not consider a natural person, or entities such as family firms, foundations, managed fund, or financial sponsors, to be a group parent. Where we determine that an entity (for instance, an investment holding company) does not have control of an investee company, we do not consider that entity to be the group parent

16. "Control" refers to the ability to direct a group member's strategy and the disposition of its cash flow. Control may be present even if the group owns 50% or less of the group member's shareholder capital.

17. We generally apply this methodology to an entire group, but may also apply it to a distinct subgroup. A subgroup focus may be appropriate when the subgroup and its components have a distinct credit profile that is separate from that of the broader group. This could be due to factors such as jurisdictional location, regulatory oversight, or support factors that apply only to the subgroup. References to the term "group" in this methodology can apply to either a subgroup or a group viewed in its entirety.

The Group SACP And Group Credit Profile (GCP)

18. The group SACP and GCP are our opinions of a group's creditworthiness as if it were a single legal entity (subject to any potential restrictions on cash flows associated with insulated entities).

19. The group SACP and GCP are not ratings. They are components contributing to the determination of the ICRs on group members. The group SACP does not take into account sources of potential extraordinary support or negative intervention that we consider external to the assessed group. However, the potential GCP incorporates extraordinary external support that we believe is available to the group, or conversely, extraordinary negative intervention. Finally, the GCP takes into consideration any relevant sovereign constraints. See "Ratings Above The Sovereign—Corporate And Government Ratings: Methodology And Assumptions (/en_US/web/guest/article/-/view/sourceId/8343660) "

20. Group SACPs and GCPs range from 'aaa' (the highest assessment) to 'd' (the lowest assessment), on a scale that parallels the ICR ('AAA' to 'D'). The lowercase letters indicate their status as a component of a rating rather than as a rating. Like ICRs, group SACPs and GCPs can carry the modifier "+" or "-". Typically, a group SACP or GCP is 'd' only in the case of a generalized group default. In the case of a legal entity within a group, we lower the ICR on that entity to 'D' or 'SD' (selective default) only if we determine the entity is in default (see "S&P Global Ratings Definitions (/en_US/web/guest/article/-/view/sourceId/504352)").

21. To determine the group SACP and GCP, we assess the consolidated group using the relevant sector methodologies. The assessed group includes all group entities that we believe have a bearing on the group's credit quality (as per the explanation detailed in the section "Identifying The Group And Its Members"), and may potentially deconsolidate insulated entities as per the "Insulated Entities" section. We typically conduct the assessment of the group SACP and GCP as though the group were a single legal entity.

22. For cross-sector groups (including their holding companies), the specific rating methodology applied to assess the group SACP is the one relevant for the operations that most strongly influence the group's credit profile. This influence can reflect the amount of capital employed, level of earnings, cash flow, dividend contribution, or other relevant metric. However, where the analysis of consolidated financial statements using a single sector's criteria framework may not produce a meaningful picture of credit quality, we may apply a combination of rating methodologies to assess the group SACP. This may be done by applying the relevant methodologies to determine SACPs for the different group members. We would then aggregate these SACPs to derive the overall group SACP. The group SACP would also include adjustments to account for any benefits or risks not captured in the aggregation of the component SACPs.

a) Multiple ownership and joint ventures

23. If a group member is under the joint control of at least two parents--for example, a joint venture (JV)--the insolvency or financial difficulty of one parent may have less impact than if the entity had a single parent.

24 For JVs, we may attribute support from one of its owners (JV partner) even if the JV partner does not have majority ownership in the JV. We typically attribute support from the JV partner that would result in the highest potential ICR on the JV. This would apply where we believe the JV partner would support the JV, regardless of the actions of the other owners. This could include situations where that JV partner makes day-to-day business decisions, or the JV is of critical importance to the supporting JV partner's operations or strategy. In such cases, however, the group status of the JV to the JV partner would typically not exceed strategically important. In addition, we would also take the potential resource demands of the JV on the JV partner into consideration when determining the JV partner's credit profile.

25. The analytical approach for a group's jointly owned business operations, such as whether to fully consolidate, partially consolidate, or equity account the operations when assessing the group SACP, is determined by the relevant methodologies for assessing corporates, financial institutions, insurance companies, or other entity types.

26. In cases where a shareholder agreement or similar arrangement exists that we believe would prevent an otherwise controlling parent from directing the strategy and cash flows of a group member, we may assess that control is not present. When we determine control is not present, we would typically treat the member as an equity affiliate and consider only the projected dividend flows from that member in our group SACP assessment.

b) Insulated entities

27. Where we determine that consolidating an insulated group member does not adequately capture the impact on the group SACP of any material restrictions on cash flows or financial resources within the group, we either.

Adjust the group SACP down (typically by one or two notches); or
Treat an insulated group member as an equity affiliate, and reflect this deconsolidated approach in determining the group SACP.
28 When assessing a group that has a bank subsidiary with a potential ICR that is above the GCP either because it is of high systemic or moderate systemic importance (as per "Banks: Rating Methodology And Assumptions (/en_US/web/guest/article/-/view/sourceId/6921376)"), in the country where it is domiciled, or because of ALAC support, the group SACP will take into account the impact of any local restrictions on the flow of capital, funding, and liquidity, and any implications for the business and risk positions of the parent.

c) Entities owned by a financial sponsor

29. If the owner of a group entity is a "financial sponsor" (see Glossary), the potential ICR on that group entity does not directly factor in the likelihood of support from the financial sponsor, nor is it directly constrained by our view of the financial sponsor's creditworthiness. However, the financial sponsor's ownership may still affect the potential ICR through the application of the relevant sector-specific criteria

30 The group SACP for a group owned by a financial sponsor may, however, include one or more intermediate holding companies of the operating entity, but would exclude the financial sponsor's own financials and its other holdings. This approach reflects our view that an intermediate holding company's primary purpose is to acquire, control, fund, or secure financing for its operating companies, and is generally reliant on those companies' cash flow to service its financial obligations.

d) U.S. public finance obligated groups

31. U.S public finance obligated groups typically consist of a group of entities that are cross-obligated as security for specific debt. Obligated group structures are most commonly used by not-for-profit hospitals, health systems, and senior living organizations.

32. Obligated groups are created for purposes of securing debt, and do not have operating or governance independence from the larger group. While debt covenants may contain some restrictions, for example limitations on the transfer of assets out of the obligated group, covenants are generally not strong enough to insulate the obligated group from the strategic and operating influence of the group. An obligated group, therefore, is typically not rated higher than the GCP.

33. Individual obligated group members may have separate legal incorporation and varying strategic value to the group. However, since the purpose of the obligated group is to secure debt on a joint and several basis, group status will be determined for the obligated group as a whole, not for its individual members. In applying these criteria, we consider obligated groups a single entity.

34. Most U.S. public finance ratings are issue ratings, although we sometimes assign ICRs. The issue rating could differ from the ICR based on the specific security package for the rated bonds. We expect that, barring subordination or structural enhancement, U.S. public finance issue ratings will generally be the same as the ICR.

e) External support factors in the GCP

35.Government support. The potential for extraordinary government support can be factored into either the ICRs of certain group members or the GCP, depending on the nature of this support (see Rating Government-Related Entities· Methodology And Assumptions (/en_US/web/guest/article/-/view/sourceId/9032821) [GRE criteria], and Banks: Rating Methodology And Assumptions (/en_US/web/guest/article/-/view/sourceId/6921376)). We use the group SACP as a basis from which to determine the GCP when using the government support tables in the GRE criteria or bank criteria.

36. The assessment considers whether government support, driven by GRE status or systemic importance, would likely accrue to all or only some members of the group (see table 2).

37. To determine the potential ICR for a particular group member, where the assessment indicates that the government:

Is likely to extend such extraordinary support directly to that entity (bypassing the group), any uplift for such support is added to the SACP of that entity in determining the potential ICR;
Is likely to extend such extraordinary support indirectly, via the group, to the entity, the reference point for determining any uplift for group support (or negative group intervention) is the GCP (which would include uplift, if any, for extraordinary government support); or
Is unlikely to extend such extraordinary support to the entity, the reference point for determining any uplift for group support is the lower of the group SACP or the GCP.

Table 2

Rating Government-Supported Entities--Likelihood Of Government Support Versus Group Support

SACP level	If the subsidiary is likely to benefit directly from extraordinary government support *	If the subsidiary is likely to benefit from extraordinary government support indirectly through the group	If the subsidiary is unlikely to benefit from extraordinary government support either directly or indirectly
SACP is lower than the group SACP	Potential ICR = Higher of (i) the SACP plus uplift for government support, or (ii) SACP plus uplift for group support. The outcome is subject to a cap at the level of the GCP (unless the subsidiary is insulated).	Potential ICR = SACP plus uplift for group support (with reference to the GCP)	Potential ICR = SACP plus uplift for group support (with reference to the lower of the group SACP or the GCP)
SACP is higher than or equal to the group SACP	Potential ICR = SACP plus uplift for government support, subject to a cap at the level of the GCP (unless the subsidiary is insulated)	If SACP < GCP, potential ICR = SACP plus uplift for group support (with reference to the GCP). If SACP >= GCP, potential ICR = SACP, subject to a cap at the level of the GCP (unless the subsidiary is insulated).	Potential ICR = SACP, subject to a cap at the level of the GCP (unless the subsidiary is insulated)

No SACP	SACP required, unless subsidiary is a GRE with almost certain likelihood of government support*	If core, potential ICR = GCP. If highly strategic, potential ICR = GCP - 1.	If core, potential ICR = lower of the GCP or group SACP. If highly strategic, potential ICR = lower of the GCP - 1 or group SACP - 1

* See GRE criteria for further details, including when an SACP is not required for entities with almost certain likelihood of government support. SACP--Stand-alone credit profile. ICR--Issuer credit rating

38.ALAC support. The potential for extraordinary external ALAC support can be factored into either the ICRs on certain group members or the GCP, depending on the nature of this support (see "Bank Rating Methodology And Assumptions: Additional Loss-Absorbing Capacity (/en_US/web/guest/article/-/view/sourceId/9138480)"). To determine the potential ICR on a particular group member, where the assessment indicates that ALAC support in the GCP:

Is likely to extend indirectly, via the group, to the entity, the reference point for determining any uplift for group support (or negative group intervention) is the GCP; or
Is unlikely to extend to the entity, the reference point for determining any uplift for group support is the lower of the group SACP or the GCP.

Assigning The Issuer Credit Rating

39. A potential ICR on a group member reflects its SACP (if relevant) and the potential for external extraordinary support (or negative intervention). We then determine the final ICR by applying any relevant sovereign constraints to the potential ICR.

40. We determine the potential ICR as follows, unless paragraph 41 applies:

Core group entity is equal to the GCP;
Highly strategic entity is one notch lower than the GCP, unless the SACP on that entity is equal to, or higher than, the GCP. In such a case, the potential ICR is equal to the GCP;
Strategically important entity is rated three notches higher than its SACP. This is subject to a cap of one notch below the GCP, unless the SACP is at least equal to the GCP, in which case the potential ICR is equal to the GCP;
Moderately strategic entity is rated one notch higher than that entity's SACP. This is subject to a cap of one notch below the GCP, unless the SACP is at least equal to the GCP, in which case, the potential ICR is equal to the GCP; or
Nonstrategic entity is rated the same as that entity's SACP, subject to a cap defined by the GCP.

41. The above conventions do not apply where: the potential ICR exceeds the GCP due to insulation (see "Insulated Entities" section), the group SACP is used to determine uplift for group support (see "External support factors in the GCP" section); the GCP is 'ccc+' or lower (see paragraph 13); or when paragraph 42 applies.

42. We may apply a one-notch adjustment to determine the potential ICR (as described in paragraph 40) to better reflect our holistic view of potential extraordinary group support. This adjustment is only applicable if we have determined an SACP and the gap between the potential ICRs, based on group status assessments of highly strategic and strategically important, is at least three notches. The adjustment, if applicable, is as follows:

When the group status is highly strategic, we may apply a negative one-notch adjustment. The potential ICR could, therefore, be two notches lower than the GCP rather than one notch; or
When the group status is strategically important, we may apply a positive one-notch adjustment. The potential ICR could, therefore, be four notches higher than its SACP rather than three notches.
For example, if we determine an entity exhibits characteristics consistent with a highly strategic entity, while a change in group status to strategically important could lead to a potential ICR change of three notches, the potential ICR could be two notches below GCP while the group status remains highly strategic; alternatively, if we determine the entity now exhibits characteristics consistent with a strategically important entity, we will revise the group status to strategically important and the potential ICR could be four notches above the SACP.

Group Status Of Individual Members

43. A group member's group status reflects the extent and timeliness of extraordinary support we expect it will receive from the rest of the group when that entity is under credit stress. We may also assess a group member's group status to a subgroup and the group status of a subgroup to a broader group. This section describes the framework that supports the classification of a member's group status into one of five categories:

Core;
Highly strategic;
Strategically important;

Moderately strategic; or
Nonstrategic.

44 The determination of an SACP for a group member categorized as core or highly strategic is not necessary unless otherwise required or analytically relevant. A group status is not necessary for insulated entities, unless otherwise required or analytically relevant.

a) Core entities

45. A core entity exhibits features highly consistent with the group's franchise, supports the realization of group strategic objectives, and is expected to attract extraordinary support, if required, under any foreseeable circumstance. A core entity would also generally be expected to exhibit all the following characteristics.

Is highly unlikely to be sold;
Operates in lines of business or functions (which may include group risk management and financing) that are very closely aligned with the group's mainstream business and customer base. The entity also often operates in the same target markets;
Has a strong, long-term commitment of support from the group in benign and under stressful conditions, or incentives exist to induce such support (e.g., cross-default clauses in financing documents, or the entity plays an integral role in group risk management or financing);
Is reasonably successful at what it does or does not have ongoing performance problems that could result in underperformance against the group's specific targets and group earnings norms over the medium to long term;
Either constitutes a significant proportion of the consolidated group or is fully integrated with the group,
Is closely linked to the group's reputation, name, brand, or risk management,
Has typically been operating for about five years or more; and
Has been established as a separate entity for legal, regulatory or tax reasons, but otherwise operates more as part of a profit center or division integral to the group.

b) Highly strategic entities

46. A highly strategic group entity generally exhibits almost all of the characteristics of a core entity, and differs only narrowly regarding the extent of expected extraordinary support from the group. An entity assessed as highly strategic is generally expected to have a long-term commitment from the group. There may be situations in which support for the highly strategic entity will be limited, for instance, to preserve the viability of core entities of the group.

c) Strategically important entities

47. We assess an entity as strategically important when we expect it to receive extraordinary support from the group in most foreseeable circumstances, however, there are some doubts about the extent of group support that precludes it from a higher support category. Strategically important subsidiaries would however typically exhibit all the following characteristics:

Is unlikely to be sold;
Is important to the group's long-term strategy;
Has the long-term commitment of the group, or incentives exist to induce such support (e g., cross-default clauses in financing documents); and
Is reasonably successful at what it does or has realistic medium-term prospects of success relative to the group's specific expectations or group earnings norms.

d) Moderately strategic entities

48. When an entity does not exhibit the characteristics for a higher level of group support, but we expect it to receive extraordinary support in some foreseeable circumstances, it is typically considered moderately strategic. Moderately strategic entities are also typically important to the group's long-term strategy or are (or are expected to become) reasonably successful at what they do.

e) Nonstrategic entities

49. When an entity does not exhibit the characteristics of core, highly strategic, strategically important, or moderately strategic, it is categorized as nonstrategic.

Captive (re)insurer

50. A captive (re)insurer may also be assessed as core if it sources its (re)insurance business from companies within the group and writes no, or an immaterial amount, of third-party business. A captive (re)insurer may also be assessed as highly strategic if third-party business is a modest portion of its overall business operations.

Captive finance

51. When assessing group status for captive finance subsidiaries, the attributes we examine to determine group status should be considered within the context of all the following unique factors that captive finance subsidiaries typically provide to their group's marketing efforts:

The percentage of the group's products sold via the subsidiary (penetration rate). For diversified groups, the percentage of total sales may be less important than the percentage of certain specific product lines. In turn, we consider the importance of these products to the overall performance of the group;
The alternatives available to sell the group's products; and
The costs and challenges in conducting its own financing. For some entities, funding costs may outweigh the benefits--or it may become difficult to gain access to capital.

Branches

52. For financial services entities, a branch is part of a legal entity that is typically at another geographic location. A branch therefore has the same creditworthiness as the legal entity, unless the branch is in another country and the actions of that sovereign could affect the branch's ability to service its obligations. See "Ratings Above The Sovereign--Corporate And Government Ratings (/en_US/web/guest/article/-/view/sourceId/8343660)." With respect to financial institutions, see also "Assessing Bank Branch Creditworthiness (/en_US/web/guest/article/-/view/sourceId/8124237)."

U.S. public finance obligated groups

53. U.S. public finance obligated groups could be considered core if they contain the majority of the organization's primary operating facilities, such as its hospitals or senior living facilities.

Financing subsidiaries

54. A financing subsidiary of a financial institution or corporate group may be assessed as core when it plays an integral role in group financing, its sole activity is to raise debt on behalf of the group, and it is wholly owned Such subsidiaries often share a related corporate name with their parents.

55. A financing subsidiary of an insurance group, while generally not assessed as core, is typically assigned a rating as if it is a holding company.

Credit-substitution guarantee of group entities

56. When all of a group member's present and future financial obligations are guaranteed, and the guarantor is obliged to pay that group member's obligations even if the group member defaults, we assign a rating to the group member that reflects the higher of two outcomes:

A rating reflecting the creditworthiness of the group member absent the benefit of the guarantee; or
A rating reflecting the creditworthiness of the guarantor (see "Guarantee Criteria (/en_US/web/guest/article/-/view/sourceId/9779138)").
57 Our assessment of the terms of any intragroup guarantees determines whether a payment default on the part of a group entity is viewed as a default by the guarantor (see "General Criteria: Guarantee Default: Assessing The Impact On The Guarantor's Issuer Credit Rating (/en_US/web/guest/article/-/view/sourceId/7311179)").

Loan participation notes (LPNs)

58. We rate LPNs and equivalent securities (such as trust preferred) issued by a special-purpose vehicle (SPV) on behalf of a corporate, financial institution, or insurance entity (including their holding companies) at the same level as we would rate an equivalent-ranking debt of its underlying borrower (the LPN sponsor) (and treat the contractual obligations of the SPV as financial obligations of the LPN sponsor) provided that all the following conditions are met:

All of the SPV's debt obligations are backed by equivalent-ranking obligations with equivalent payment terms issued by the LPN sponsor;
The SPV is a strategic financing entity for the LPN sponsor set up solely to raise debt on behalf of the LPN sponsor's group; and

We believe the LPN sponsor is willing and able to support the SPV to ensure full and timely payment of interest and principal when due on the debt issued by the SPV, including payment of any expenses of the SPV.
59. As a consequence, we assign a 'D' or 'SD' ICR to the LPN sponsor if the SPV fails to make payments on the debt when due, as we would typically do in case of default on a similarly ranking debt issuance of the LPN sponsor (see also "Methodology: Timeliness Of Payments: Grace Periods, Guarantees, And Use Of 'D' And 'SD' Ratings (/en_US/web/guest/article/-/view/sourceId/8097062)").

60. For multiple LPN sponsor SPVs, or SPVs that do not meet all the conditions above, the relevant structured finance criteria apply, which may include "Asset Isolation And Special-Purpose Entity Criteria—Structured Finance (/en_US/web/guest/article/-/view/sourceId/7954634)" and "Global Methodology For Rating Repackaged Securities (/en_US/web/guest/article/-/view/sourceId/7590014) "

Dedicated supplier/purchaser relationships

61. Group members are typically owned or controlled by the group parent However, a dedicated supplier/purchaser relationship can create an economic incentive for the supplier to support the purchaser, despite having only a minority ownership interest or none at all. We define the group in this instance as the supplier and the purchaser A supplier may provide support sufficient for the purchaser to be considered moderately strategic to the supplier when the purchaser comprises a meaningful portion of the supplier's sales, cash flow, volume, or other measure. Such relationships typically have all the following characteristics:

The term of the supplier/purchaser agreement is either perpetual or long term;
There is evidence of the supplier's willingness and ability to provide financial support to the purchaser. We determine this by looking at prior loans, capital investments, or marketing support given to the purchaser; and
The purchaser is closely linked to the supplier's reputation, name, or brand.

Entities with interlocking business relations

62. We can apply this methodology to groups of entities with interlocking business relations even in the absence of control, as defined in the criteria Group membership will be based on meeting at least four of the following conditions:

Name affiliation;
Common management;
Common board composition or common board control;
Shared corporate history,
Common business ties;
Common financing of group entities,
Shared corporate support functions; or
Cross ownership holdings.
In such cases, we determine the GCP by considering the group members' SACPs. Members of this type of group can only be assigned a group status of strategically important, moderately strategic, or nonstrategic.

Insulated Entities

63. Financial stress within the group can negatively affect the creditworthiness of group entities. Accordingly, in such cases a potential ICR on an entity is typically limited by the GCP This is notably because:

The group could potentially transfer assets from one group entity to another during financial stress, contributing to credit stress at other group entities;
The distress at the group could trigger business or financial difficulties at the group member. For instance, the group's problems could cause reputational damage of the group member and a loss of business;
The group member might rely on operational support from the group on an ongoing basis, and
In some jurisdictions, a bankruptcy petition by one group entity could include or cause other group entities to go into bankruptcy or similar measures.
64. Some entities (which for the purposes of this section, could also apply to a subgroup) may be insulated, segmented, or ring-fenced from their group, from a credit risk perspective. Such insulation may lead to the rating on the entity being higher than the GCP. The lower the likelihood that the creditworthiness of the entity would be impaired by a credit stress scenario for the group, the greater the potential difference between the potential ICR on the entity and the GCP

65 The potential ICR of an insulated entity is one notch higher than the GCP in cases where the entity is operationally separated from the group and the entity's SACP (or the SACP plus the potential for government support or ALAC) is at least one notch higher than the GCP. Key characteristics of an operationally separated entity would generally include all of the following·

The entity holds itself out as a separate entity, its financial performance and funding are highly independent from the group, it has no significant operational dependence on other group entities, and it maintains its own records and funding arrangements and does not commingle funds, assets, or cash flows with them;
There is a strong economic basis for the group to preserve the entity's credit strength; and
We do not expect a default of other group entities to directly lead to a default of the insulated entity.
66. The potential ICR of an insulated entity is two notches above the GCP if, in addition to being eligible for one notch of insulation, the group's control of the entity is limited by independent parties, and the entity's SACP (or the SACP plus the potential for government support or ALAC) is at least two notches above the GCP. Limited control would generally be characterized by at least one of the following:

There are significant minority shareholders with an active economic interest;
Independent directors have effective influence on decision making, including dividend policy and bankruptcy filings; or
There are strong legislative, regulatory or similar restrictions that would inhibit the entity from supporting the group to an extent that would unduly impair the entity's stand-alone creditworthiness.
67. The potential ICR on an insulated entity is three notches above the GCP if, in addition to the entity being eligible for two notches of insulation, there are material structural safeguards to protect the entity from group influence, and the entity's SACP (or the SACP plus the potential for government support or ALAC) is at least three notches above the GCP. Structural safeguards that protect the entity from group influence would generally include at least one of the following:

The regulator or appropriate legislative body is expected to act, or has acted, to protect the credit quality of the entity, for example to prevent the entity from supporting the group to an extent that would in turn impair its stand-alone creditworthiness;
There are both: protective governance arrangements (such as independent directors with an effective influence on decision making); and either significant minority shareholders or joint venture partners, with an active economic interest;
There is an independent trustee or equivalent governance arrangement that can enforce the rights of third parties, and we expect the trustee (or equivalent) to act upon that right; or
The government or other governmental agency (i) has the authority to change ownership of the entity via existing legislation or other legal powers to separate it from a troubled group; and (ii) we expect it to act upon that right, based, for example, on a statement of intent to do so, or a track record of proactive stress management under similar circumstances
68 The potential ICR of an insulated entity could be de-linked and therefore not constrained by the creditworthiness of the group if the conditions in either (a) or (b) are met:

(a) In addition to being eligible for three notches of insulation as described in the preceding paragraph:

We believe that the parent company doesn't exert control due to substantial creditor protections and as a result is unable to adversely impact the entity's credit quality; and
The entity benefits from governance constraints that severely limit the influence of the parent, preventing it from determining matters such as strategy, material change of business, dividend payments and other material cash flows, and bankruptcy filings. These may arise, for example, due to statutory powers or contractual constraints.
(b) We determine that there is sufficient evidence that significant group credit stress has had minimal impact on the entity's credit profile, and that we do not expect it to have a material negative influence going forward

69. With respect to our assessment of insulation of captive finance subsidiaries, we could view a captive finance entity as operationally separated from the group when it is able to stand on its own by taking over or subcontracting certain functions previously provided by other group entities. Given the nature of a captive finance entity's business model, we would expect it to retain commercial ties with its group

70. The potential ICR of a bank subsidiary is typically not subject to a cap linked to the GCP where either (i) the entity's SACP plus the potential for government support is above the GCP because it is of high systemic or moderate systemic importance (according to "Banks: Rating Methodology and Assumptions (/en_US/web/guest/article/-/view/sourceId/6921376)"), in the country where it is domiciled; or (ii) the entity's SACP plus the potential for ALAC support is above the GCP (see ALAC criteria). However, where we expect the nature and extent of extraordinary negative group intervention could impact the entity's creditworthiness, although to an extent sufficiently limited that a cap linked to the GCP would not apply, we may apply a one-notch negative adjustment when determining the potential ICR. This adjustment is to better capture our holistic view of potential extraordinary negative group intervention.

Holding Companies

71. For holding companies of corporate groups and nonregulated nonbank financial institutions, the ICR is typically the same as the GCP. For intermediate holding companies of corporate groups and nonregulated nonbank financial institutions, the ICR is typically the same as the rating on its core operating entities

Holding companies of prudentially regulated financial services groups

72. Holding companies are typically reliant on dividends and other distributions from operating companies to meet their obligations. The rating of holding companies of prudentially regulated financial services groups reflects the difference in their creditworthiness relative to the group's operating entities. The rating differential is mainly due to the increased credit risk that arises from possible regulatory constraints to upstream resources and potentially different treatment under a default scenario.

73. For holding companies of prudentially regulated financial institution groups, the ICR is generally:

One notch lower than the GCP if the GCP is 'bbb-' or higher, or
At least two notches lower than the GCP if the GCP is 'bb+' or lower.
74. For holding companies of insurance groups, the ICR is generally:

Two notches lower than the GCP if potential regulatory restrictions to payments are considered low in jurisdictions accounting for the majority of distributions (typically as measured by dividends, cash flows, or earnings) from operating entities to the holding company; or
Three notches lower than the GCP if potential regulatory restrictions to payments are considered high in jurisdictions accounting for the majority of distributions (typically as measured by dividends, cash flows, or earnings) from operating entities to the holding company.
75 The notching from the GCP to derive the ICR of a holding company of a financial services group may be narrower than the standard notching in paragraphs 73 or 74, or potentially eliminated, if:

The holding company directly controls multiple material operating units that are sufficiently diverse and independent such that the suspension of cash flows from any of its operating entities would not substantially weaken the holding company's financial position;
The potential for regulatory restrictions to payments is significantly lower than we typically observe for prudentially regulated entities and is not adequately reflected in the standard notching;
The holding company generates sufficient cash flows from its own business activities or from unregulated operating subsidiaries to meet its obligations; or
The potential for regulatory restrictions on distributions from operating entities is mitigated by our expectation that the holding company will regularly maintain significant unencumbered cash or high quality liquid fixed income investments to meet its obligations.
76. The notching from the GCP to derive the ICR on a holding company of a financial services group may be wider than the standard notching in paragraphs 73 or 74 if:

The holding company itself carries significant asset or liability risks that are not fully captured in our standard notching;
There are elevated liquidity risks at the holding company, most notably when it has significant debt maturities and other financial obligations relative to its unencumbered cash and liquid assets held or to which is has ready access. For example, high double leverage for a financial institution can reflect elevated liquidity risks;
There are heightened risks of regulatory constraints or other material restrictions to payments that are not adequately captured in the standard notching; or
The GCP is higher than the group SACP owing to external extraordinary support that is not expected to accrue to the holding company. In this case, we apply the typical notching from the group SACP rather than the GCP.
77. If the GCP is 'b-' or lower, or if notching would otherwise result in a rating of 'CCC+' or lower, the ICR on a holding company is no lower than 'B-' unless the conditions for an ICR of 'CCC+' or lower are met (see "CCC criteria").

78. We typically notch down the ICR on an intermediate holding company of a financial services group or subgroup from the rating assigned to its core operating entities by applying the same notching we would to a holding company of the group. We may, however, narrow the notching or potentially eliminate the notching if we expect the group to provide extraordinary support for the subsidiaries of the intermediate holding company by investing in the intermediate holding company. We may widen the notching if there are additional risks relating to cash flows from its operating entities or risk relating to the expected extraordinary support from the group.

Rating Group Entities Above The Sovereign

79 The general criteria for rating a group member above the relevant sovereign rating, which is usually the country of domicile of the group member, are in ratings above the sovereign criteria (see Related Criteria).

80. The ICR on a group member is the lower of the potential ICR derived from these criteria or the relevant foreign currency sovereign rating. This would not be the case, however, in the situations outlined below, where we determine the group member's ICR as the highest of a, b, or c:

(a) If the group member passes the appropriate sovereign stress test (without considering group or government support), the result from the combination of the potential ICR derived from these criteria (excluding uplift for group or government support) and the provisions in our ratings above the sovereign criteria;

(b) For a group member where the relevant foreign currency sovereign rating is lower than 'B-', the ICR is no lower than 'B-' (unless T&C restrictions in Ratings Above the Sovereign criteria are applicable) if the conditions for an ICR of 'CCC+' or lower are not met (see "CCC criteria"), or

(c) If we believe the group is willing and able to sufficiently support the group member during the stress associated with a sovereign default, the highest of (i) to (v) below:

(i) For a group member that has a potential ICR based on a guarantee that meets our credit substitution criteria, the potential ICR;
(ii) For a financial institution or insurance group member that has less than 10% exposure to the jurisdiction of domicile and we consider the risks (e.g. a deposit freeze or monetary-union exit) associated with that jurisdiction are immaterial, the potential ICR;
(iii) For core group members of financial institution groups, the lower of the potential ICR derived from these criteria, or up to two notches above the relevant foreign currency sovereign rating;
(iv) For core group members of insurance or corporate groups, the lower of the potential ICR derived from these criteria, or three notches above the relevant foreign currency sovereign rating; or
(v) For highly strategic group members of insurance or corporate groups, the lower of the potential ICR derived from these criteria, or two notches above the relevant foreign currency sovereign rating.

GLOSSARY

81. ALAC: Additional loss-absorbing capacity. These are securities issued by certain prudentially regulated entities (see Related Criteria) that can absorb losses at or near non-viability--for example, in the event of a bank resolution, in a way that reduces the risk of the bank defaulting, according to our definitions, on its senior unsecured obligations.

82 Captive finance subsidiary: A captive finance subsidiary (as opposed to a financing subsidiary) provides financing for the purchase of the group's products. (For a full definition, see "The Impact of Captive Finance Operations On Nonfinancial Corporate Issuers (/en_US/web/guest/article/-/view/sourceId/9449566)").

83. Captive (re)insurer: A member of an insurance, corporate, or financial institutions (FI) group that mainly insures risks of other group entities. Captive (re)insurers typically show a very high degree of integration with a group's financial and risk management strategy.

84. Double leverage (for financial institutions only): We define double leverage (DL) for FI groups as holding company investment in subsidiaries divided by holding company (unconsolidated) shareholder equity. Holding companies often issue hybrid capital securities that build regulatory capital. They invest the proceeds in operating subsidiaries as equity or as similarly structured hybrid securities. We calculate DL in two ways: (1) with a common equity double-leverage measure that treats hybrid capital as debt, and (2) with a total equity double leverage measure that treats hybrid capital as equity.

85. Equity affiliate: Also defined in our corporate criteria as "unconsolidated equity affiliates." These are entities that are not consolidated in an issuer's financial statements. Therefore, the earnings and cash flows of the affiliate are not typically included in our primary metrics (see "Corporate Methodology (/en_US/web/guest/article/-/view/sourceId/8314109)").

86. Extraordinary negative intervention: Potential extraordinary negative intervention by one or more members of a group. Examples include the extraction of unexpected extraordinary dividends or asset or cash stripping the issuer at the behest of the group to service other obligations of the group.

87. Extraordinary support: We consider support as extraordinary when it is entity specific, nonrecurring, and typically related to financial stress at the entity. Examples include but are not limited to recapitalization with common equity or hybrids, liquidity injections to the group member, or one-off transfers of risk from the group member.

88. Financial institution: Entities that are in-scope for our bank and nonbank FI methodologies.

89. Financial services sector: Consists of financial institutions and insurance companies.

90. Financial sponsor: We define a financial sponsor as an owner that does not have a long-term strategic interest in a company. Rather, the financial sponsor is a financial investment firm primarily motivated to increase the value of its investment by improving its management, capital, or both, typically with the ultimate goal of liquidating the investment. Financial sponsors include, but are not limited to, private-equity firms, hedge funds, and venture capital firms.

91. Holding company (may also be referred to as a group parent): A legal entity that is the owner of at least one group member that conducts business activities, though it may not carry out its own business activities (e.g. a non-operating holding company) A holding company may also provide services to subsidiaries such as investment and treasury management.

92. Insurance company (or insurers): Entities that are in scope for our insurance ratings methodologies.

93. Intermediate holding company: A legal entity that is a group member and legal owner of at least one other group member that conducts business activities, though it may not carry out its own business activities.

94. Parent: An entity with controlling or joint-control interest in another entity or a joint venture.

95. Prudentially regulated: This refers to the regulation of a financial services entity by one or more regulatory authorities who set standards for, among other things, capital adequacy and potential restrictions on distributions. We generally regard banks and insurers as prudentially regulated sectors

IMPACT ON OUTSTANDING RATINGS

96. We are revising our group rating methodology to provide greater clarity and transparency, and enhance cross-sector consistency. While the underlying fundamentals remain the same, the new criteria also increases scope for analytical adjustments.

97. The new criteria includes the following analytical changes:

a greater scope for analytical adjustments in how we determine the group SACP, particularly for cross-sector groups and those with insulated group members;
a greater scope for analytical adjustments in how we determine the group status of group members;
the ability to apply a one-notch adjustment for highly strategic and for strategically important entities for a modest sub-set of issuers where the gap between the GCP and the SACP is at least seven notches;
greater alignment in our treatment of insulated entities across sectors;
a clarifying change to the term "Unsupported GCP" (under the former criteria), which is now broadly equivalent to "group SACP" in the new criteria;
for a group member where the relevant foreign currency sovereign rating is lower than 'B-', we have established that the ICR can be no lower than 'B-' (unless transfer and convertibility restrictions are applicable) if the conditions for an ICR of 'CCC+' or lower are not met;
for insurers, we have changed the reference point for rating above the sovereign (from local currency to foreign currency sovereign rating) and we now allow highly strategic entities to be rated up to two notches above the relevant sovereign rating, to bring greater alignment across sectors;
for insurers, we have removed explicit sovereign limitations for branches and guaranteed entities to enhance cross-sector consistency;
we have provided greater scope for analytical adjustments to widen or narrow notching of holding companies of prudentially regulated financial services groups;
we now allow a one-notch negative adjustment when determining the potential ICR of certain bank subsidiaries that we rate above the GCP; and
we have widened the scope of analytical adjustments to rate a core group member of an FI group up to two notches above the relevant foreign currency sovereign rating based on uplift for group support.

98. The potential rating impact of the new criteria on issuer credit ratings differs by sector.

99. The criteria could lead to modest credit rating actions on no more than about 2% of ratings in the insurance sector, with more upgrades than downgrades The potential rating actions are mostly due to changes relating to rating issuers above the sovereign rating. Other, mostly single-notch rating actions, will mostly result from greater scope for analytical adjustments in the criteria.

100. The criteria could lead to modest issuer credit rating actions in the corporate and infrastructure sector, where we anticipate rating actions for about 1% of the rated universe. We expect a more pronounced rating impact in the infrastructure sector in particular, where we anticipate rating actions for up to about 4% of those entities. The clear majority of anticipated

rating actions in the corporate and infrastructure sectors will be limited to an upgrade of one notch and primarily in the regulated utilities sector, where we have changed how we assess insulation that is sufficient for a potential ICR that is one notch higher than the GCP.

101. The criteria could lead to extremely modest (under 1%), and mostly positive rating actions in the financial institutions sector. Where rating actions will occur, we anticipate that they will be mostly limited to upgrades and downgrades of one notch as a result of greater scope for analytical adjustments in the criteria.

102. We do not expect the criteria to affect the ratings on U.S public finance and international public finance entities.

RELATED PUBLICATIONS

Superseded Criteria

Group Rating Methodology (/en_US/web/guest/article/-/view/sourceId/8336067), Nov 19, 2013.

Related Criteria

Insurers Rating Methodology (/en_US/web/guest/article/-/view/sourceId/11017264), July 1, 2019
Guarantee Criteria (/en_US/web/guest/article/-/view/sourceId/9779138), Oct. 21, 2016
The Impact Of Captive Finance Operations On Nonfinancial Corporate Issuers (/en_US/web/guest/article/-/view/sourceId/9449566), Dec. 14, 2015
Methodology: Investment Holding Companies (/en_US/web/guest/article/-/view/sourceId/9337290), Dec. 1, 2015
Bank Rating Methodology And Assumptions: Additional Loss-Absorbing Capacity (/en_US/web/guest/article/-/view/sourceId/9138480), April 27, 2015
Rating Government-Related Entities: Methodology And Assumptions (/en_US/web/guest/article/-/view/sourceId/9032821), March 25, 2015
Corporate Methodology (/en_US/web/guest/article/-/view/sourceId/8314109), Nov. 19, 2013
Ratings Above The Sovereign--Corporate And Government Ratings: Methodology And Assumptions (/en_US/web/guest/article/-/view/sourceId/8343660), Nov 19, 2013
Methodology: Timeliness Of Payments: Grace Periods, Guarantees, And Use Of 'D' And 'SD' Ratings (/en_US/web/guest/article/-/view/sourceId/8097062), Oct. 24, 2013
Assessing Bank Branch Creditworthiness (/en_US/web/guest/article/-/view/sourceId/8124237), Oct. 14, 2013
Criteria For Assigning 'CCC+', 'CCC', 'CCC-', And 'CC' Ratings (/en_US/web/guest/article/-/view/sourceId/7554329), Oct. 1, 2012
Guarantee Default: Assessing The Impact On The Guarantor's Issuer Credit Rating (/en_US/web/guest/article/-/view/sourceId/7311179), May 11, 2012
Banks: Rating Methodology And Assumptions (/en_US/web/guest/article/-/view/sourceId/6921376), Nov. 9, 2011
Principles Of Credit Ratings (/en_US/web/guest/article/-/view/sourceId/6485398), Feb. 16, 2011
Stand-Alone Credit Profiles. One Component Of A Rating (/en_US/web/guest/article/-/view/sourceId/6219375), Oct. 1, 2010

Related Guidance

Guidance: General Criteria: Group Rating Methodology (/en_US/web/guest/article/-/view/sourceId/11001497), July 1, 2019
This report does not constitute a rating action.

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 S&P Global Ratings 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.

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Key Credit Factors For The Regulated Utilities Industry

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Key Credit Factors For The Regulated Utilities Industry

*(**Editor's Note:** This criteria article supersedes "Key Credit Factors: Business And Financial Risks In The Investor-Owned Utilities Industry," published Nov. 26, 2008, "Assessing U.S. Utility Regulatory Environments," Nov. 7, 2007, and "Revised Methodology For Adjusting Amounts Reported By U.K. GAAP Water Companies For Infrastructure Renewals Accounting," Jan. 27, 2010.)*

Standard & Poor's Ratings Services is refining and adapting its methodology and assumptions for its Key Credit Factors: Criteria For Regulated Utilities. We are publishing these criteria in conjunction with our corporate criteria (see "Corporate Methodology, published Nov. 19, 2013). This article relates to our criteria article, "Principles Of Credit Ratings," Feb. 16, 2011.

This criteria article supersedes "Key Credit Factors: Business And Financial Risks In The Investor-Owned Utilities Industry," Nov. 26, 2008, "Criteria: Assessing U.S. Utility Regulatory Environments," Nov. 7, 2007, and "Revised Methodology For Adjusting Amounts Reported By U.K. GAAP Water Companies For Infrastructure Renewals Accounting," Jan. 27, 2010.

SCOPE OF THE CRITERIA

These criteria apply to entities where regulated utilities represent a material part of their business, other than U.S. public power, water, sewer, gas, and electric cooperative utilities that are owned by federal, state, or local governmental bodies or by ratepayers. A regulated utility is defined as a corporation that offers an essential or near-essential infrastructure product, commodity, or service with little or no practical substitute (mainly electricity, water, and gas), a business model that is shielded from competition (naturally, by law, shadow regulation, or by government policies and oversight), and is subject to comprehensive regulation by a regulatory body or implicit oversight of its rates (sometimes referred to as tariffs), service quality, and terms of service. The regulators base the rates that they set on some form of cost recovery, including an economic return on assets, rather than relying on a market price. The regulated operations can range from individual parts of the utility value chain (water, gas, and electricity networks or "grids," electricity generation, retail operations, etc.) to the entire integrated chain, from procurement to sales to the end customer. In some jurisdictions, our view of government support can also affect the final rating outcome, as per our government-related entity criteria (see "General Criteria: Rating Government-Related Entities: Methodology and Assumptions," Dec. 9, 2010).

SUMMARY OF THE CRITERIA

Standard & Poor's is updating its criteria for analyzing regulated utilities, applying its corporate criteria. The criteria for evaluating the competitive position of regulated utilities amend and partially supersede the "Competitive Position" section of the corporate criteria when evaluating these entities. The criteria for determining the cash flow leverage

assessment partially supersede the "Cash Flow/Leverage" section of the corporate criteria for the purpose of evaluating regulated utilities. The section on liquidity for regulated utilities partially amends existing criteria. All other sections of the corporate criteria apply to the analysis of regulated utilities.

IMPACT ON OUTSTANDING RATINGS

These criteria could affect the issuer credit ratings of about 5% of regulated utilities globally due primarily to the introduction of new financial benchmarks in the corporate criteria. Almost all ratings changes are expected to be no more than one notch, and most are expected to be in an upward direction.

EFFECTIVE DATE AND TRANSITION

These criteria are effective immediately on the date of publication.

METHODOLOGY

Part I--Business Risk Analysis

Industry risk

Within the framework of Standard & Poor's general criteria for assessing industry risk, we view regulated utilities as a "very low risk" industry (category '1'). We derive this assessment from our view of the segment's low risk ('2') cyclicality and very low risk ('1') competitive risk and growth assessment.

In our view, demand for regulated utility services typically exhibits low cyclicality, being a function of such key drivers as employment growth, household formation, and general economic trends. Pricing is non-cyclical, since it is usually based in some form on the cost of providing service.

Cyclicality

We assess cyclicality for regulated utilities as low risk ('2'). Utilities typically offer products and services that are essential and not easily replaceable. Based on our analysis of global Compustat data, utilities had an average peak-to-trough (PTT) decline in revenues of about 6% during recessionary periods since 1952. Over the same period, utilities had an average PTT decline in EBITDA margin of about 5% during recessionary periods, with PTT EBITDA margin declines less severe in more recent periods. The PTT drop in profitability that occurred in the most recent recession (2007-2009) was less than the long-term average.

With an average drop in revenues of 6% and an average profitability decline of 5%, utilities' cyclicality assessment calibrates to low risk ('2'). We generally consider that the higher the level of profitability cyclicality in an industry, the higher the credit risk of entities operating in that industry. However, the overall effect of cyclicality on an industry's risk profile may be mitigated or exacerbated by an industry's competitive and growth environment.

Competitive risk and growth

We view regulated utilities as warranting a very low risk ('1') competitive risk and growth assessment. For competitive risk and growth, we assess four sub-factors as low, medium, or high risk. These sub-factors are:

- Effectiveness of industry barriers to entry;
- Level and trend of industry profit margins;
- Risk of secular change and substitution by products, services, and technologies; and
- Risk in growth trends.

Effectiveness of barriers to entry--low risk

Barriers to entry are high. Utilities are normally shielded from direct competition. Utility services are commonly naturally monopolistic (they are not efficiently delivered through competitive channels and often require access to public thoroughfares for distribution), and so regulated utilities are granted an exclusive franchise, license, or concession to serve a specified territory in exchange for accepting an obligation to serve all customers in that area and the regulation of its rates and operations.

Level and trend of industry profit margins--low risk

Demand is sometimes and in some places subject to a moderate degree of seasonality, and weather conditions can significantly affect sales levels at times over the short term. However, those factors even out over time, and there is little pressure on margins if a utility can pass higher costs along to customers via higher rates.

Risk of secular change and substitution of products, services, and technologies--low risk

Utility products and services are not overly subject to substitution. Where substitution is possible, as in the case of natural gas, consumer behavior is usually stable and there is not a lot of switching to other fuels. Where switching does occur, cost allocation and rate design practices in the regulatory process can often mitigate this risk so that utility profitability is relatively indifferent to the substitutions.

Risk in industry growth trends--low risk

As noted above, regulated utilities are not highly cyclical. However, the industry is often well established and, in our view, long-range demographic trends support steady demand for essential utility services over the long term. As a result, we would expect revenue growth to generally match GDP when economic growth is positive.

B. Country risk

In assessing "country risk" for a regulated utility, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology").

C. Competitive position

In the corporate criteria, competitive position is assessed as ('1') excellent, ('2') strong, ('3') satisfactory, ('4') fair, ('5') weak, or ('6') vulnerable.

The analysis of competitive position includes a review of:

- Competitive advantage,
- Scale, scope, and diversity,
- Operating efficiency, and
- Profitability.

In the corporate criteria we assess the strength of each of the first three components. Each component is assessed as either: (1) strong, (2) strong/adequate, (3) adequate, (4) adequate/weak, or (5) weak. After assessing these components, we determine the preliminary competitive position assessment by ascribing a specific weight to each component. The applicable weightings will depend on the company's Competitive Position Group Profile. The group profile for regulated utilities is "National Industries & Utilities," with a weighting of the three components as follows: competitive advantage (60%), scale, scope, and diversity (20%), and operating efficiency (20%). Profitability is assessed by combining two sub-components: level of profitability and the volatility of profitability.

"Competitive advantage" cannot be measured with the same sub-factors as competitive firms because utilities are not primarily subject to influence of market forces. Therefore, these criteria supersede the "competitive advantage" section of the corporate criteria. We analyze instead a utility's "regulatory advantage" (section 1 below).

Assessing regulatory advantage

The regulatory framework/regime's influence is of critical importance when assessing regulated utilities' credit risk because it defines the environment in which a utility operates and has a significant bearing on a utility's financial performance.

We base our assessment of the regulatory framework's relative credit supportiveness on our view of how regulatory stability, efficiency of tariff setting procedures, financial stability, and regulatory independence protect a utility's credit quality and its ability to recover its costs and earn a timely return. Our view of these four pillars is the foundation of a utility's regulatory support. We then assess the utility's business strategy, in particular its regulatory strategy and its ability to manage the tariff-setting process, to arrive at a final regulatory advantage assessment.

When assessing regulatory advantage, we first consider four pillars and sub-factors that we believe are key for a utility to recover all its costs, on time and in full, and earn a return on its capital employed:

Regulatory stability:

- Transparency of the key components of the rate setting and how these are assessed
- Predictability that lowers uncertainty for the utility and its stakeholders
- Consistency in the regulatory framework over time

Tariff-setting procedures and design:

- Recoverability of all operating and capital costs in full
- Balance of the interests and concerns of all stakeholders affected
- Incentives that are achievable and contained

Financial stability:

- Timeliness of cost recovery to avoid cash flow volatility
- Flexibility to allow for recovery of unexpected costs if they arise
- Attractiveness of the framework to attract long-term capital
- Capital support during construction to alleviate funding and cash flow pressure during periods of heavy investments

Regulatory independence and insulation:

- Market framework and energy policies that support long-term financeability of the utilities and that is clearly enshrined in law and separates the regulator's powers
- Risks of political intervention is absent so that the regulator can efficiently protect the utility's credit profile even during a stressful event

We have summarized the key characteristics of the assessments for regulatory advantage in table 1.

Table 1

Preliminary Regulatory Advantage Assessment

Qualifier	What it means	Guidance
Strong	The utility has a major regulatory advantage due to one or a combination of factors that support cost recovery and a return on capital combined with lower than average volatility of earnings and cash flows.	The utility operates in a regulatory climate that is transparent, predictable, and consistent from a credit perspective.
	There are strong prospects that the utility can sustain this advantage over the long term.	The utility can fully and timely recover all its fixed and variable operating costs, investments and capital costs (depreciation and a reasonable return on the asset base).
	This should enable the utility to withstand economic downturns and political risks better than other utilities.	The tariff set may include a pass-through mechanism for major expenses such as commodity costs, or a higher return on new assets, effectively shielding the utility from volume and input cost risks.
		Any incentives in the regulatory scheme are contained and symmetrical.
		The tariff set includes mechanisms allowing for a tariff adjustment for the timely recovery of volatile or unexpected operating and capital costs.
		There is a track record of earning a stable, compensatory rate of return in cash through various economic and political cycles and a projected ability to maintain that record.
		There is support of cash flows during construction of large projects, and pre-approval of capital investment programs and large projects lowers the risk of subsequent disallowances of capital costs.
		The utility operates under a regulatory system that is sufficiently insulated from political intervention to efficiently protect the utility's credit risk profile even during stressful events.
Adequate	The utility has some regulatory advantages and protection, but not to the extent that it leads to a superior business model or durable benefit.	It operates in a regulatory environment that is less transparent, less predictable, and less consistent from a credit perspective.
	The utility has some but not all drivers of well-managed regulatory risk. Certain regulatory factors support the business's long-term stability and viability but could result in periods of below-average levels of profitability and greater profit volatility However, overall these regulatory drivers are partially offset by the utility's disadvantages or lack of sustainability of other factors.	The utility is exposed to delays or is not, with sufficient certainty, able to recover all of its fixed and variable operating costs, investments. and capital costs (depreciation and a reasonable return on the asset base) within a reasonable time.
		Incentive ratemaking practices are asymmetrical and material, and could detract from credit quality.
		The utility is exposed to the risk that it doesn't recover unexpected or volatile costs in a full or less than timely manner due to lack of flexible reopeners or annual revenue adjustments.
		There is an uneven track record of earning a compensatory rate of return in cash through various economic and political cycles and a projected ability to maintain that record.

Table 1

Preliminary Regulatory Advantage Assessment (cont.)		
		There is little or no support of cash flows during construction, and investment decisions on large projects (and therefore the risk of subsequent disallowances of capital costs) rest mostly with the utility.
		The utility operates under a regulatory system that is not sufficiently insulated from political intervention and is sometimes subject to overt political influence.
Weak	The utility suffers from a complete breakdown of regulatory protection that places the utility at a significant disadvantage.	The utility operates in an opaque regulatory climate that lacks transparency, predictability, and consistency.
	The utility's regulatory risk is such that the long-term cost recovery and investment return is highly uncertain and materially delayed, leading to volatile or weak cash flows. There is the potential for material stranded assets with no prospect of recovery.	The utility cannot fully and/or timely recover its fixed and variable operating costs, investments, and capital costs (depreciation and a reasonable return on the asset base).
		There is a track record of earning minimal or negative rates of return in cash through various economic and political cycles and a projected inability to improve that record sustainably.
		The utility must make significant capital commitments with no solid legal basis for the full recovery of capital costs.
		Ratemaking practices actively harm credit quality.
		The utility is regularly subject to overt political influence.

After determining the preliminary regulatory advantage assessment, we then assess the utility's business strategy. Most importantly, this factor addresses the effectiveness of a utility's management of the regulatory risk in the jurisdiction(s) where it operates. In certain jurisdictions, a utility's regulatory strategy and its ability to manage the tariff-setting process effectively so that revenues change with costs can be a compelling regulatory risk factor. A utility's approach and strategies surrounding regulatory matters can create a durable "competitive advantage" that differentiates it from peers, especially if the risk of political intervention is high. The assessment of a utility's business strategy is informed by historical performance and its forward-looking business objectives. We evaluate these objectives in the context of industry dynamics and the regulatory climate in which the utility operates, as evaluated through the factors cited in paragraphs 24-27.

We modify the preliminary regulatory advantage assessment to reflect this influence positively or negatively. Where business strategy has limited effect relative to peers, we view the implications as neutral and make no adjustment. A positive assessment improves the preliminary regulatory advantage assessment by one category and indicates that management's business strategy is expected to bolster its regulatory advantage through favorable commission rulings beyond what is typical for a utility in that jurisdiction. Conversely, where management's strategy or businesses decisions result in adverse regulatory outcomes relative to peers, such as failure to achieve typical cost recovery or allowed returns, we adjust the preliminary regulatory advantage assessment one category worse. In extreme cases of poor strategic execution, the preliminary regulatory advantage assessment is adjusted by two categories worse (when possible; see table 2) to reflect management decisions that are likely to result in a significantly adverse regulatory outcome relative to peers.

Table 2

Determining The Final Regulatory Advantage Assessment

	--Strategy modifier--			
Preliminary regulatory advantage score	**Positive**	**Neutral**	**Negative**	**Very negative**
Strong	Strong	Strong	Strong/Adequate	Adequate
Strong/Adequate	Strong	Strong/Adequate	Adequate	Adequate/Weak
Adequate	Strong/Adequate	Adequate	Adequate/Weak	Weak
Adequate/Weak	Adequate	Adequate/Weak	Weak	Weak
Weak	Adequate/Weak	Weak	Weak	Weak

Scale, scope, and diversity

We consider the key factors for this component of competitive position to be primarily operational scale and diversity of the geographic, economic, and regulatory foot prints. We focus on a utility's markets, service territories, and diversity and the extent that these attributes can contribute to cash flow stability while dampening the effect of economic and market threats.

A utility that warrants a Strong or Strong/Adequate assessment has scale, scope, and diversity that support the stability of its revenues and profits by limiting its vulnerability to most combinations of adverse factors, events, or trends. The utility's significant advantages enable it to withstand economic, regional, competitive, and technological threats better than its peers. It typically is characterized by a combination of the following factors:

- A large and diverse customer base with no meaningful customer concentration risk, where residential and small to medium commercial customers typically provide most operating income.
- The utility's range of service territories and regulatory jurisdictions is better than others in the sector.
- Exposure to multiple regulatory authorities where we assess preliminary regulatory advantage to be at least Adequate. In the case of exposure to a single regulatory regime, the regulatory advantage assessment is either Strong or Strong/Adequate.
- No meaningful exposure to a single or few assets or suppliers that could hurt operations or could not easily be replaced.

A utility that warrants a Weak or Weak/Adequate assessment lacks scale, scope, and diversity such that it compromises the stability and sustainability of its revenues and profits. The utility's vulnerability to, or reliance on, various elements of this sub-factor is such that it is less likely than its peers to withstand economic, competitive, or technological threats. It typically is characterized by a combination of the following factors:

- A small customer base, especially if burdened by customer and/or industry concentration combined with little economic diversity and average to below-average economic prospects;
- Exposure to a single service territory and a regulatory authority with a preliminary regulatory advantage assessment of Adequate or Adequate/Weak; or
- Dependence on a single supplier or asset that cannot easily be replaced and which hurts the utility's operations.

We generally believe a larger service territory with a diverse customer base and average to above-average economic growth prospects provides a utility with cushion and flexibility in the recovery of operating costs and ongoing investment (including replacement and growth capital spending), as well as lessening the effect of external shocks (i.e.,

extreme local weather) since the incremental effect on each customer declines as the scale increases.

We consider residential and small commercial customers as having more stable usage patterns and being less exposed to periodic economic weakness, even after accounting for some weather-driven usage variability. Significant industrial exposure along with a local economy that largely depends on one or few cyclical industries potentially contributes to the cyclicality of a utility's load and financial performance, magnifying the effect of an economic downturn.

A utility's cash flow generation and stability can benefit from operating in multiple geographic regions that exhibit average to better than average levels of wealth, employment, and growth that underpin the local economy and support long-term growth. Where operations are in a single geographic region, the risk can be ameliorated if the region is sufficiently large, demonstrates economic diversity, and has at least average demographic characteristics.

The detriment of operating in a single large geographic area is subject to the strength of regulatory assessment. Where a utility operates in a single large geographic area and has a strong regulatory assessment, the benefit of diversity can be incremental.

Operating efficiency

We consider the key factors for this component of competitive position to be:

- Compliance with the terms of its operating license, including safety, reliability, and environmental standards;
- Cost management; and
- Capital spending: scale, scope, and management.

Relative to peers, we analyze how successful a utility management achieves the above factors within the levels allowed by the regulator in a manner that promotes cash flow stability. We consider how management of these factors reduces the prospect of penalties for noncompliance, operating costs being greater than allowed, and capital projects running over budget and time, which could hurt full cost recovery.

The relative importance of the above three factors, particularly cost and capital spending management, is determined by the type of regulation under which the utility operates. Utilities operating under robust "cost plus" regimes tend to be more insulated given the high degree of confidence costs will invariably be passed through to customers. Utilities operating under incentive-based regimes are likely to be more sensitive to achieving regulatory standards. This is particularly so in the regulatory regimes that involve active consultation between regulator and utility and market testing as opposed to just handing down an outcome on a more arbitrary basis.

In some jurisdictions, the absolute performance standards are less relevant than how the utility performs against the regulator's performance benchmarks. It is this performance that will drive any penalties or incentive payments and can be a determinant of the utilities' credibility on operating and asset-management plans with its regulator.

Therefore, we consider that utilities that perform these functions well are more likely to consistently achieve determinations that maximize the likelihood of cost recovery and full inclusion of capital spending in their asset bases. Where regulatory resets are more at the discretion of the utility, effective cost management, including of labor, may allow for more control over the timing and magnitude of rate filings to maximize the chances of a constructive outcome such as full operational and capital cost recovery while protecting against reputational risks.

A regulated utility that warrants a Strong or Strong/Adequate assessment for operating efficiency relative to peers generates revenues and profits through minimizing costs, increasing efficiencies, and asset utilization. It typically is characterized by a combination of the following:

- High safety record;
- Service reliability is strong, with a track record of meeting operating performance requirements of stakeholders, including those of regulators. Moreover, the utility's asset profile (including age and technology) is such that we have confidence that it could sustain favorable performance against targets;
- Where applicable, the utility is well-placed to meet current and potential future environmental standards;
- Management maintains very good cost control. Utilities with the highest assessment for operating efficiency have shown an ability to manage both their fixed and variable costs in line with regulatory expectations (including labor and working capital management being in line with regulator's allowed collection cycles); or
- There is a history of a high level of project management execution in capital spending programs, including large one-time projects, almost invariably within regulatory allowances for timing and budget.

A regulated utility that warrants an Adequate assessment for operating efficiency relative to peers has a combination of cost position and efficiency factors that support profit sustainability combined with average volatility. Its cost structure is similar to its peers. It typically is characterized by a combination of the following factors:

- High safety performance;
- Service reliability is satisfactory with a track record of mostly meeting operating performance requirements of stakeholders, including those of regulators. We have confidence that a favorable performance against targets can be mostly sustained;
- Where applicable, the utility may be challenged to comply with current and future environmental standards that could increase in the medium term;
- Management maintains adequate cost control. Utilities that we assess as having adequate operating efficiency mostly manage their fixed and variable costs in line with regulatory expectations (including labor and working capital management being mostly in line with regulator's allowed collection cycles); or
- There is a history of adequate project management skills in capital spending programs within regulatory allowances for timing and budget.

A regulated utility that warrants a weak or weak/adequate assessment for operating efficiency relative to peers has a combination of cost position and efficiency factors that fail to support profit sustainability combined with below-average volatility. Its cost structure is worse than its peers. It typically is characterized by a combination of the following:

- Poor safety performance;
- Service reliability has been sporadic or non-existent with a track record of not meeting operating performance requirements of stakeholders, including those of regulators. We do not believe the utility can consistently meet performance targets without additional capital spending;
- Where applicable, the utility is challenged to comply with current environmental standards and is highly vulnerable to more onerous standards;
- Management typically exceeds operating costs authorized by regulators;
- Inconsistent project management skills as evidenced by cost overruns and delays including for maintenance capital spending; or
- The capital spending program is large and complex and falls into the weak or weak/adequate assessment, even if

operating efficiency is generally otherwise considered adequate.

Profitability

40. A utility with above-average profitability would, relative to its peers, generally earn a rate of return at or above what regulators authorize and have minimal exposure to earnings volatility from affiliated unregulated business activities or market-sensitive regulated operations. Conversely, a utility with below-average profitability would generally earn rates of return well below the authorized return relative to its peers or have significant exposure to earnings volatility from affiliated unregulated business activities or market-sensitive regulated operations.

47. The profitability assessment consists of "level of profitability" and "volatility of profitability."

Level of profitability

50. Key measures of general profitability for regulated utilities commonly include ratios, which we compare both with those of peers and those of companies in other industries to reflect different countries' regulatory frameworks and business environments:

- EBITDA margin,
- Return on capital (ROC), and
- Return on equity (ROE).

53. In many cases, EBITDA as a percentage of sales (i.e., EBITDA margin) is a key indicator of profitability. This is because the book value of capital does not always reflect true earning potential, for example when governments privatize or restructure incumbent state-owned utilities. Regulatory capital values can vary with those of reported capital because regulatory capital values are not inflation-indexed and could be subject to different assumptions concerning depreciation. In general, a country's inflation rate or required rate of return on equity investment is closely linked to a utility company's profitability. We do not adjust our analysis for these factors, because we can make our assessment through a peer comparison.

For regulated utilities subject to full cost-of-service regulation and return-on-investment requirements, we normally measure profitability using ROE, the ratio of net income available for common stockholders to average common equity. When setting rates, the regulator ultimately bases its decision on an authorized ROE. However, different factors such as variances in costs and usage may influence the return a utility is actually able to earn, and consequently our analysis of profitability for cost-of-service-based utilities centers on the utility's ability to consistently earn the authorized ROE.

61. We will use return on capital when pass-through costs distort profit margins--for instance congestion revenues or collection of third-party revenues. This is also the case when the utility uses accelerated depreciation of assets, which in our view might not be sustainable in the long run.

Volatility of profitability

64. We may observe a clear difference between the volatility of actual profitability and the volatility of underlying regulatory profitability. In these cases, we could use the regulatory accounts as a proxy to judge the stability of earnings.

67. We use actual returns to calculate the standard error of regression for regulated utility issuers (only if there are at least

seven years of historical annual data to ensure meaningful results). If we believe recurring mergers and acquisitions or currency fluctuations affect the results, we may make adjustments.

Part II--Financial Risk Analysis

D. Accounting

Our analysis of a company's financial statements begins with a review of the accounting to determine whether the statements accurately measure a company's performance and position relative to its peers and the larger universe of corporate entities. To allow for globally consistent and comparable financial analyses, our rating analysis may include quantitative adjustments to a company's reported results. These adjustments also align a company's reported figures with our view of underlying economic conditions and give us a more accurate portrayal of a company's ongoing business. We discuss adjustments that pertain broadly to all corporate sectors, including this sector, in "Corporate Methodology: Ratios And Adjustments." Accounting characteristics and analytical adjustments unique to this sector are discussed below.

Accounting characteristics

Some important accounting practices for utilities include:

- For integrated electric utilities that meet native load obligations in part with third-party power contracts, we use our purchased power methodology to adjust measures for the debt-like obligation such contracts represent (see below).
- Due to distortions in leverage measures from the substantial seasonal working-capital requirements of natural gas distribution utilities, we adjust inventory and debt balances by netting the value of inventory against outstanding short-term borrowings. This adjustment provides an accurate view of the company's balance sheet by reducing seasonal debt balances when we see a very high certainty of near-term cost recovery (see below).
- We deconsolidate securitized debt (and associated revenues and expenses) that has been accorded specialized recovery provisions (see below).
- For water utilities that report under U.K. GAAP, we adjust ratios for infrastructure renewals accounting, which permits water companies to capitalize the maintenance spending on their infrastructure assets (see below). The adjustments aim to make those water companies that report under U.K. GAAP more comparable to those that report under accounting regimes that do not permit infrastructure renewals accounting.

In the U.S. and selectively in other regions, utilities employ "regulatory accounting," which permits a rate-regulated company to defer some revenues and expenses to match the timing of the recognition of those items in rates as determined by regulators. A utility subject to regulatory accounting will therefore have assets and liabilities on its books that an unregulated corporation, or even regulated utilities in many other global regions, cannot record. We do not adjust GAAP earnings or balance-sheet figures to remove the effects of regulatory accounting. However, as more countries adopt International Financial Reporting Standards (IFRS), the use of regulatory accounting will become more scarce. IFRS does not currently provide for any recognition of the effects of rate regulation for financial reporting purposes, but it is considering the use of regulatory accounting. We do not anticipate altering our fundamental financial analysis of utilities because of the use or non-use of regulatory accounting. We will continue to analyze the effects of regulatory actions on a utility's financial health.

Purchased power adjustment

We view long-term purchased power agreements (PPA) as creating fixed, debt-like financial obligations that represent substitutes for debt-financed capital investments in generation capacity. By adjusting financial measures to incorporate PPA fixed obligations, we achieve greater comparability of utilities that finance and build generation capacity and those that purchase capacity to satisfy new load. PPAs do benefit utilities by shifting various risks to the electricity generators, such as construction risk and most of the operating risk. The principal risk borne by a utility that relies on PPAs is recovering the costs of the financial obligation in rates. (See "Standard & Poor's Methodology For Imputing Debt for U.S. Utilities' Power Purchase Agreements," May 7, 2007, for more background and information on the adjustment.)

We calculate the present value (PV) of the future stream of capacity payments under the contracts as reported in the financial statement footnotes or as supplied directly by the company. The discount rate used is the same as the one used in the operating lease adjustment, i.e., 7%. For U.S. companies, notes to the financial statements enumerate capacity payments for the coming five years, and a thereafter period. Company forecasts show the detail underlying the thereafter amount, or we divide the amount reported as thereafter by the average of the capacity payments in the preceding five years to get an approximation of annual payments after year five.

We also consider new contracts that will start during the forecast period. The company provides us the information regarding these contracts. If these contracts represent extensions of existing PPAs, they are immediately included in the PV calculation. However, a contract sometimes is executed in anticipation of incremental future needs, so the energy will not flow until some later period and there are no interim payments. In these instances, we incorporate that contract in our projections, starting in the year that energy deliveries begin under the contract. The projected PPA debt is included in projected ratios as a current rating factor, even though it is not included in the current-year ratio calculations.

The PV is adjusted to reflect regulatory or legislative cost-recovery mechanisms when present. Where there is no explicit regulatory or legislative recovery of PPA costs, as in most European countries, the PV may be adjusted for other mitigating factors that reduce the risk of the PPAs to the utility, such as a limited economic importance of the PPAs to the utility's overall portfolio.The adjustment reduces the debt-equivalent amount by multiplying the PV by a specific risk factor.

Risk factors based on regulatory or legislative cost recovery typically range between 0% and 50%, but can be as high as 100%. A 100% risk factor would signify that substantially all risk related to contractual obligations rests on the company, with no regulatory or legislative support. A 0% risk factor indicates that the burden of the contractual payments rests solely with ratepayers, as when the utility merely acts as a conduit for the delivery of a third party's electricity. These utilities are barred from developing new generation assets, and the power supplied to their customers is sourced through a state auction or third parties that act as intermediaries between retail customers and electricity suppliers. We employ a 50% risk factor in cases where regulators use base rates for the recovery of the fixed PPA costs. If a regulator has established a separate adjustment mechanism for recovery of all prudent PPA costs, a risk factor of 25% is employed. In certain jurisdictions, true-up mechanisms are more favorable and frequent than the review of base rates, but still do not amount to pure fuel adjustment clauses. Such mechanisms may be triggered by financial thresholds or passage of prescribed periods of time. In these instances, a risk factor between 25% and 50% is

employed. Specialized, legislatively created cost-recovery mechanisms may lead to risk factors between 0% and 15%, depending on the legislative provisions for cost recovery and the supply function borne by the utility. Legislative guarantees of complete and timely recovery of costs are particularly important to achieving the lowest risk factors. We also exclude short-term PPAs where they serve merely as gap fillers, pending either the construction of new capacity or the execution of long-term PPAs.

- Where there is no explicit regulatory or legislative recovery of PPA costs, the risk factor is generally 100%. We may use a lower risk factor if mitigating factors reduce the risk of the PPAs on the utility. Mitigating factors include a long position in owned generation capacity relative to the utility's customer supply needs that limits the importance of the PPAs to the utility or the ability to resell power in a highly liquid market at minimal loss. A utility with surplus owned generation capacity would be assigned a risk factor of less than 100%, generally 50% or lower, because we would assess its reliance on PPAs as limited. For fixed capacity payments under PPAs related to renewable power, we use a risk factor of less than 100% if the utility benefits from government subsidies. The risk factor reflects the degree of regulatory recovery through the government subsidy.

- Given the long-term mandate of electric utilities to meet their customers' demand for electricity, and also to enable comparison of companies with different contract lengths, we may use an evergreening methodology. Evergreen treatment extends the duration of short- and intermediate-term contracts to a common length of about 12 years. To quantify the cost of the extended capacity, we use empirical data regarding the cost of developing new peaking capacity, incorporating regional differences. The cost of new capacity is translated into a dollars-per-kilowatt-year figure using a proxy weighted-average cost of capital and a proxy capital recovery period.

- Some PPAs are treated as operating leases for accounting purposes--based on the tenor of the PPA or the residual value of the asset on the PPA's expiration. We accord PPA treatment to those obligations, in lieu of lease treatment; rather, the PV of the stream of capacity payments associated with these PPAs is reduced to reflect the applicable risk factor.

- Long-term transmission contracts can also substitute for new generation, and, accordingly, may fall under our PPA methodology. We sometimes view these types of transmission arrangements as extensions of the power plants to which they are connected or the markets that they serve. Accordingly, we impute debt for the fixed costs associated with such transmission contracts.

- Adjustment procedures:

  - Data requirements:
  - Future capacity payments obtained from the financial statement footnotes or from management.
  - Discount rate: 7%.
  - Analytically determined risk factor.

  - Calculations:
  - Balance sheet debt is increased by the PV of the stream of capacity payments multiplied by the risk factor.
  - Equity is not adjusted because the recharacterization of the PPA implies the creation of an asset, which offsets the debt.
  - Property, plant, and equipment and total assets are increased for the implied creation of an asset equivalent to the

debt.

- An implied interest expense for the imputed debt is determined by multiplying the discount rate by the amount of imputed debt (or average PPA imputed debt, if there is fluctuation of the level), and is added to interest expense.
- We impute a depreciation component to PPAs. The depreciation component is determined by multiplying the relevant year's capacity payment by the risk factor and then subtracting the implied PPA-related interest for that year. Accordingly, the impact of PPAs on cash flow measures is tempered.
- The cost amount attributed to depreciation is reclassified as capital spending, thereby increasing operating cash flow and funds from operations (FFO).
- Some PPA contracts refer only to a single, all-in energy price. We identify an implied capacity price within such an all-in energy price, to determine an implied capacity payment associated with the PPA. This implied capacity payment is expressed in dollars per kilowatt-year, multiplied by the number of kilowatts under contract. (In cases that exhibit markedly different capacity factors, such as wind power, the relation of capacity payment to the all-in charge is adjusted accordingly.)
- Operating income before depreciation and amortization (D&A) and EBITDA are increased for the imputed interest expense and imputed depreciation component, the total of which equals the entire amount paid for PPA (subject to the risk factor).
- Operating income after D&A and EBIT are increased for interest expense.

Natural gas inventory adjustment

In jurisdictions where a pass-through mechanism is used to recover purchased natural gas costs of gas distribution utilities within one year, we adjust for seasonal changes in short-debt tied to building inventories of natural gas in non-peak periods for later use to meet peak loads in peak months. Such short-term debt is not considered to be part of the utility's permanent capital. Any history of non-trivial disallowances of purchased gas costs would preclude the use of this adjustment. The accounting of natural gas inventories and associated short-term debt used to finance the purchases must be segregated from other trading activities.

Adjustment procedures:

- Data requirements:
- Short-term debt amount associated with seasonal purchases of natural gas devoted to meeting peak-load needs of captive utility customers (obtained from the company).

- Calculations:
- Adjustment to debt--we subtract the identified short-term debt from total debt.

Securitized debt adjustment

For regulated utilities, we deconsolidate debt (and associated revenues and expenses) that the utility issues as part of a securitization of costs that have been segregated for specialized recovery by the government entity constitutionally authorized to mandate such recovery if the securitization structure contains a number of protective features:

- An irrevocable, non-bypassable charge and an absolute transfer and first-priority security interest in transition property;
- Periodic adjustments ("true-up") of the charge to remediate over- or under-collections compared with the debt service obligation. The true-up ensures collections match debt service over time and do not diverge significantly in the short run; and,
- Reserve accounts to cover any temporary short-term shortfall in collections.

Full cost recovery is in most instances mandated by statute. Examples of securitized costs include "stranded costs" (above-market utility costs that are deemed unrecoverable when a transition from regulation to competition occurs) and unusually large restoration costs following a major weather event such as a hurricane. If the defined features are present, the securitization effectively makes all consumers responsible for principal and interest payments, and the utility is simply a pass-through entity for servicing the debt. We therefore remove the debt and related revenues and expenses from our measures. (See "Securitizing Stranded Costs," Jan. 18, 2001, for background information.)

Adjustment procedures:

- Data requirements:
- Amount of securitized debt on the utility's balance sheet at period end;
- Interest expense related to securitized debt for the period; and
- Principal payments on securitized debt during the period.

- Calculations:
- Adjustment to debt: We subtract the securitized debt from total debt.
- Adjustment to revenues: We reduce revenue allocated to securitized debt principal and interest. The adjustment is the sum of interest and principal payments made during the year.
- Adjustment to operating income after depreciation and amortization (D&A) and EBIT: We reduce D&A related to the securitized debt, which is assumed to equal the principal payments during the period. As a result, the reduction to operating income after D&A is only for the interest portion.
- Adjustment to interest expense: We remove the interest expense of the securitized debt from total interest expense.

- Operating cash flows:
- We reduce operating cash flows for revenues and increase for the assumed interest amount related to the securitized debt. This results in a net decrease to operating cash flows equal to the principal repayment amount.

Infrastructure renewals expenditure

In England and Wales, water utilities can report under either IFRS or U.K. GAAP. Those that report under U.K. GAAP are allowed to adopt infrastructure renewals accounting, which enables the companies to capitalize the maintenance spending on their underground assets, called infrastructure renewals expenditure (IRE). Under IFRS, infrastructure renewals accounting is not permitted and maintenance expenditure is charged to earnings in the year incurred. This difference typically results in lower adjusted operating cash flows for those companies that report maintenance expenditure as an operating cash flow under IFRS, than for those that report it as capital expenditure under U.K. GAAP. We therefore make financial adjustments to amounts reported by water issuers that apply U.K. GAAP, with the aim of making ratios more comparable with those issuers that report under IFRS and U.S. GAAP. For example, we deduct IRE from EBITDA and FFO.

IRE does not always consist entirely of maintenance expenditure that would be expensed under IFRS. A portion of IRE can relate to costs that would be eligible for capitalization as they meet the recognition criteria for a new fixed asset set out in International Accounting Standard 16 that addresses property, plant, and equipment. In such cases, we may refine our adjustment to U.K. GAAP companies so that we only deduct from FFO the portion of IRE that would not be capitalized under IFRS. However, the information to make such a refinement would need to be of high quality, reliable, and ideally independently verified by a third party, such as the company's auditor. In the absence of this, we assume

that the entire amount of IRE would have been expensed under IFRS and we accordingly deduct the full expenditure from FFO.

Adjustment procedures:

- Data requirements:
- U.K. GAAP accounts typically provide little information on the portion of capital spending that relates to renewals accounting, or the related depreciation, which is referred to as the infrastructure renewals charge. The information we use for our adjustments is, however, found in the regulatory cost accounts submitted annually by the water companies to the Water Services Regulation Authority, which regulates all water companies in England and Wales.

- Calculations:
- EBITDA: Reduced by the value of IRE that was capitalized in the period.
- EBIT: Adjusted for the difference between the adjustment to EBITDA and the reduction in the depreciation expense, depending on the degree to which the actual cash spending in the current year matches the planned spending over the five-year regulatory review period.
- Cash flow from operations and FFO: Reduced by the value of IRE that was capitalized in the period.
- Capital spending: Reduced by the value of infrastructure renewals spending that we reclassify to cash flow from operations.
- Free operating cash flow: No impact, as the reduction in operating cash flows is exactly offset by the reduction in capital spending.

E. Cash flow/leverage analysis

In assessing the cash flow adequacy of a regulated utility, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology"). We assess cash flow/leverage on a six-point scale ranging from ('1') minimal to ('6') highly leveraged. These scores are determined by aggregating the assessments of a range of credit ratios, predominantly cash flow-based, which complement each other by focusing attention on the different levels of a company's cash flow waterfall in relation to its obligations.

The corporate methodology provides benchmark ranges for various cash flow ratios we associate with different cash flow leverage assessments for standard volatility, medial volatility, and low volatility industries. The tables of benchmark ratios differ for a given ratio and cash flow leverage assessment along two dimensions: the starting point for the ratio range and the width of the ratio range.

If an industry's volatility levels are low, the threshold levels for the applicable ratios to achieve a given cash flow leverage assessment are less stringent, although the width of the ratio range is narrower. Conversely, if an industry has standard levels of volatility, the threshold levels for the applicable ratios to achieve a given cash flow leverage assessment may be elevated, but with a wider range of values.

We apply the "low-volatility" table to regulated utilities that qualify under the corporate criteria and with all of the following characteristics:

- A vast majority of operating cash flows come from regulated operations that are predominantly at the low end of the utility risk spectrum (e.g., a "network," or distribution/transmission business unexposed to commodity risk and with very low operating risk);
- A "strong" regulatory advantage assessment;

- An established track record of normally stable credit measures that is expected to continue;
- A demonstrated long-term track record of low funding costs (credit spread) for long-term debt that is expected to continue; and
- Non-utility activities that are in a separate part of the group (as defined in our group rating methodology) that we consider to have "nonstrategic" group status and are not deemed high risk and/or volatile.

79 We apply the "medial volatility" table to companies that do not qualify under paragraph 78 with:

- A majority of operating cash flows from regulated activities with an "adequate" or better regulatory advantage assessment; or
- About one-third or more of consolidated operating cash flow comes from regulated utility activities with a "strong" regulatory advantage and where the average of its remaining activities have a competitive position assessment of '3' or better.

80 We apply the "standard-volatility" table to companies that do not qualify under paragraph 79 and with either:

- About one-third or less of its operating cash flow comes from regulated utility activities, regardless of its regulatory advantage assessment; or
- A regulatory advantage assessment of "adequate/weak" or "weak."

Part III--Rating Modifiers

F. Diversification/portfolio effect

81. In assessing the diversification/portfolio effect on a regulated utility, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology").

G. Capital structure

82 In assessing the quality of the capital structure of a regulated utility, we use the same methodology as with other corporate issuers (see "Corporate Methodology").

H. Liquidity

83 In assessing a utility's liquidity/short-term factors, our analysis is consistent with the methodology that applies to corporate issuers (See "Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers," Nov. 19, 2013) except for the standards for "adequate" liquidity set out in paragraph 84 below.

84 The relative certainty of financial performance by utilities operating under relatively predictable regulatory monopoly frameworks make these utilities attractive to investors even in times of economic stress and market turbulence compared to conventional industrials. For this reason, utilities with business risk profiles of at least "satisfactory" meet our definition of "adequate" liquidity based on a slightly lower ratio of sources to uses of funds of 1.1x compared with the standard 1.2x. Also, recognizing the cash flow stability of regulated utilities we allow more discretion when calculating covenant headroom. We consider that utilities have adequate liquidity if they generate positive sources over uses, even if forecast EBITDA declines by 10% (compared with the 15% benchmark for corporate issuers) before covenants are breached.

I. Financial policy

In assessing financial policy on a regulated utility, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology").

J. Management and governance

In assessing management and governance on a regulated utility, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology").

K. Comparable ratings analysis

In assessing the comparable ratings analysis on a regulated utility, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology").

Appendix--Frequently Asked Questions

Does Standard & Poor's expect that the business strategy modifier to the preliminary regulatory advantage will be used extensively?

Globally, we expect management's influence will be neutral in most jurisdictions. Where the regulatory assessment is "strong," it is less likely that a negative business strategy modifier would be used due to the nature of the regulatory regime that led to the "strong" assessment in the first place. Utilities in "adequate/weak" and "weak" regulatory regimes are challenged to outperform due to the uncertainty of such regulatory regimes. For a positive use of the business strategy modifier, there would need to be a track record of the utility consistently outperforming the parameters laid down under a regulatory regime, and we would need to believe this could be sustained. The business strategy modifier is most likely to be used when the preliminary regulatory advantage assessment is "strong/adequate" because the starting point in the assessment is reasonably supportive, and a utility has shown it manages regulatory risk better or worse than its peers in that regulatory environment and we expect that advantage or disadvantage will persist. An example would be a utility that can consistently earn or exceed its authorized return in a jurisdiction where most other utilities struggle to do so. If a utility is treated differently by a regulator due to perceptions of poor customer service or reliability and the "operating efficiency" component of the competitive position assessment does not fully capture the effect on the business risk profile, a negative business strategy modifier could be used to accurately incorporate it into our analysis. We expect very few utilities will be assigned a "very negative" business strategy modifier.

Does a relatively strong or poor relationship between the utility and its regulator compared with its peers in the same jurisdiction necessarily result in a positive or negative adjustment to the preliminary regulatory advantage assessment?

No. The business strategy modifier is used to differentiate a company's regulatory advantage within a jurisdiction where we believe management's business strategy has and will positively or negatively affect regulatory outcomes beyond what is typical for other utilities in that jurisdiction. For instance, in a regulatory jurisdiction where allowed returns are negotiated rather than set by formula, a utility that is consistently authorized higher returns (and is able to earn that return) could warrant a positive adjustment. A management team that cannot negotiate an approved capital spending program to improve its operating performance could be assessed negatively if its performance lags behind peers in the same regulatory jurisdiction.

What is your definition of regulatory jurisdiction?

A regulatory jurisdiction is defined as the area over which the regulator has oversight and could include single or multiple subsectors (water, gas, and power). A geographic region may have several regulatory jurisdictions. For example, the Office of Gas and Electricity Markets and the Water Services Regulation Authority in the U.K. are considered separate regulatory jurisdictions. In Ontario, Canada, the Ontario Energy Board represents a single jurisdiction with regulatory oversight for power and gas. Also, in Australia, the Australian Energy Regulator would be considered a single jurisdiction given that it is responsible for both electricity and gas transmission and distribution networks in the entire country, with the exception of Western Australia.

Are there examples of different preliminary regulatory advantage assessments in the same country or jurisdiction?

Yes. In Israel we rate a regulated integrated power utility and a regulated gas transmission system operator (TSO). The power utility's relationship with its regulator is extremely poor in our view, which led to significant cash flow volatility in a stress scenario (when terrorists blew up the gas pipeline that was then Israel's main source of natural gas, the utility was unable to negotiate compensation for expensive alternatives in its regulated tariffs). We view the gas TSO's relationship with its regulator as very supportive and stable. Because we already reflected this in very different preliminary regulatory advantage assessments, we did not modify the preliminary assessments because the two regulatory environments in Israel differ and were not the result of the companies' respective business strategies.

How is regulatory advantage assessed for utilities that are a natural monopoly but are not regulated by a regulator or a specific regulatory framework, and do you use the regulatory modifier if they achieve favorable treatment from the government as an owner?

The four regulatory pillars remain the same. On regulatory stability we look at the stability of the setup, with more emphasis on the historical track record and our expectations regarding future changes. In tariff-setting procedures and design we look at the utility's ability to fully recover operating costs, investments requirements, and debt-service obligations. In financial stability we look at the degree of flexibility in tariffs to counter volume risk or commodity risk. The flexibility can also relate to the level of indirect competition the utility faces. For example, while Nordic district heating companies operate under a natural monopoly, their tariff flexibility is partly restricted by customers' option to change to a different heating source if tariffs are significantly increased. Regulatory independence and insulation is mainly based on the perceived risk of political intervention to change the setup that could affect the utility's credit profile. Although political intervention tends to be mostly negative, in certain cases political ties due to state ownership might positively influence tariff determination. We believe that the four pillars effectively capture the benefits from the close relationship between the utility and the state as an owner; therefore, we do not foresee the use of the regulatory modifier.

In table 1, when describing a "strong" regulatory advantage assessment, you mention that there is support of cash flows during construction of large projects, and preapproval of capital investment programs and large projects lowers the risk of subsequent disallowances of capital costs. Would this preclude a "strong" regulatory advantage assessment in jurisdictions where those practices are absent?

No. The table is guidance as to what we would typically expect from a regulatory framework that we would assess as "strong." We would expect some frameworks with no capital support during construction to receive a "strong" regulatory advantage assessment if in aggregate the other factors we analyze support that conclusion.

RELATED CRITERIA AND RESEARCH

- Corporate Methodology, Nov. 19, 2013
- Group Rating Methodology, Nov. 19, 2013
- Methodology: Industry Risk, Nov. 19, 2013
- Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- Ratings Above The Sovereign--Corporate And Government Ratings: Methodology And Assumptions, Nov. 19, 2013
- Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Nov. 19, 2013
- Collateral Coverage And Issue Notching Rules For '1+' And '1' Recovery Ratings On Senior Bonds Secured By Utility Real Property, Feb. 14, 2013
- Methodology: Management And Governance Credit Factors For Corporate Entities and Insurers, Nov. 13, 2012
- General Criteria: Principles Of Credit Ratings, Feb. 16, 2011
- General Criteria: Rating Government-Related Entities: Methodology And Assumptions, Dec. 9, 2010

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.

SOAH DOCKET NO. 473-19-6862
PUC DOCKET NO. 49737

SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO TEXAS INDUSTRIAL ENERGY CONSUMERS' FIFTEENTH REQUEST FOR INFORMATION

Question No. TIEC 15-2:

Referring to the Rebuttal Testimony of John F. Torpey at 7, please confirm that the year-by-year breakeven power prices shown on Errata Testimony Exhibit 1 do not reflect the year-by-year differences in costs and benefits of the Wind Facilities (e.g., it does not account for PTCs only being generated in the first ten years, or the revenue requirement declining over time). If confirmed, please provide the year-by-year breakeven power prices that do reflect the year-by-year differences in costs and benefits of the Wind Facilities.

Response No. TIEC 15-2:

Confirmed. The Company has not prepared the requested information. The breakeven power prices represent a 31-year curve of prices which would result in a zero 31-year NPV to customers, not a breakeven price in each individual year. The price curve was modeled by adjusting each year's price from the Low No Carbon price curve downward by the same percentage (21.08%), resulting in a curve with the same slope as the Low No Carbon curve with 21.08% lower prices along the entire curve.

Prepared By: Jon R. Maclean	Title: Resource Planning Mgr
Prepared By: James F. Martin	Title: Regulatory Case Mgr
Sponsored By: John F. Torpey	Title: Mng Dir Res Plnning&Op Anlysis

SOAH DOCKET NO. 473-19-6862
PUC DOCKET NO. 49737

SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO TEXAS INDUSTRIAL ENERGY CONSUMERS' FIFTEENTH REQUEST FOR INFORMATION

Question No. TIEC 15-3:

Please provide Mr. Bletzacker's understanding of how the CME Group derives its "system-generated price" as referenced on page 4 of his rebuttal testimony.

Response No. TIEC 15-3:

Please refer to (https://www.cmegroup.com/confluence/display/EPICSANDBOX/Settlement+Prices). Specifically, the CME Group (the owner of NYMEX) documents the following:

The settlement price can be actual or theoretical.

Actual All preliminary settlement prices calculated by CME Group or Hosted Exchange staff using CME Group settlement methodology as defined for each asset/product are disseminated as actual.

Theoretical Any settlement price that is not an actual settlement, often a system-generated price not derived from any fundamental market information, is disseminated as theoretical.

Prepared By: Connie S. Trecazzi — Title: Economic Forecast Anlyst Staff

Sponsored By: Karl R. Bletzacker — Title: Dir Fundamental Analysis

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SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO TEXAS INDUSTRIAL ENERGY CONSUMERS' FIFTEENTH REQUEST FOR INFORMATION

Question No. TIEC 15-4:

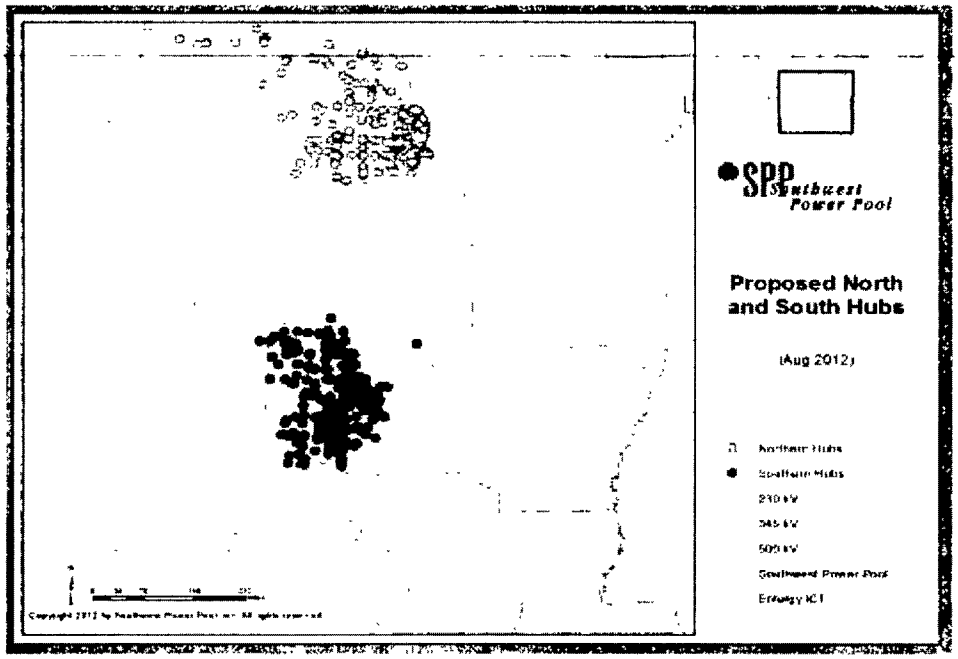
Referring to page 11 of Mr. Bletzacker's rebuttal testimony, please identify the area represented by the ICE SPP South Hub and the area represented by the Company's referenced SPP Central Zone. Please provide any analysis SWEPCO or AEP has conducted comparing the locational marginal prices in these areas.

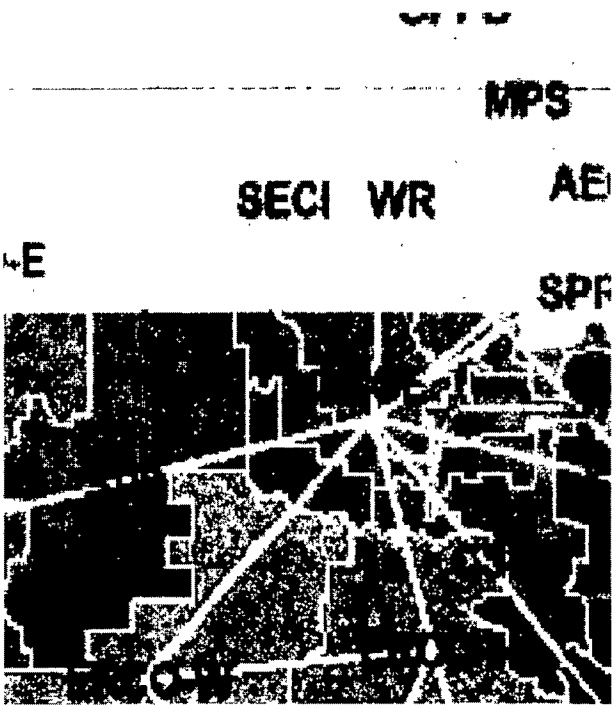
Response No. TIEC 15-4:

Please see TIEC_15_04_Attachment_1 for the area designated as "SPP South" in a document created by Southwest Power Pool in August 2012. Also represented is the Aurora-modeled zone, "SPP Central". Company witness Bletzacker has not prepared an analysis of the differences in electric power prices, but due to the considerable difference in the size of each area's footprint, price differences are inescapable.

Prepared By: Connie S. Trecazzi — Title: Economic Forecast Anlyst Staff

Sponsored By: Karl R. Bletzacker — Title: Dir Fundamental Analysis


SPP Southwest Power Pool
Proposed North and South Hubs
(Aug 2012)


MPS
SECI WR
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SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO TEXAS INDUSTRIAL ENERGY CONSUMERS' FIFTEENTH REQUEST FOR INFORMATION

Question No. TIEC 15-5:

Referring to page 15 of Mr. Bletzacker's rebuttal testimony, please explain how the Aurora model is "back-tested to benchmark its accuracy against history." Please provide all such analyses back-testing the referenced model conducted over the last five years.

Response No. TIEC 15-5:

The Aurora energy market simulation model is back-tested regularly by its developer, Energy Exemplar LLC. As presented in Energy Exemplar's presentation materials for Aurora users (titled "Benchmarking Against History"): i) all fundamental input data is gathered, including hourly demand and daily fuel prices, and; ii) Aurora results with actual observations including installed capacity, demand, generation by fuel, and power prices are evaluated by Energy Exemplar. SWEPCO is not currently in possession of the requested back-testing. SWEPCO has requested this back-testing from Energy Exemplar LLC. To this point in time, Energy Exemplar has not provided the results of back-testing for all of the last five years. However, they have provided two recent examples, one for the Eastern Interconnect and one for WECC. Please see TIEC_15_5_Highly_Sensitive_Attachment_1 and TIEC_15_5_Highly_Sensitive_Attachment_2 to review the results of the back-testing procedure.

The attachments responsive to this request are HIGHLY SENSITIVE under the terms of the Protective Order. The Confidential information is available for review at the Austin offices of American Electric Power Company (AEP), 400 West 15th Street, Suite 1520, Austin, Texas, 78701, (512) 481-4562, during normal business hours.

Prepared By: Connie S. Trecazzi — Title: Economic Forecast Anlyst Staff

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SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO TEXAS INDUSTRIAL ENERGY CONSUMERS' FIFTEENTH REQUEST FOR INFORMATION

Question No. TIEC 15-6:

Referring to the chart on page 21 of Mr. Bletzacker's rebuttal testimony, please provide the forecaster's description of each third-party forecast listed (other than EIA), including any assumptions that the forecaster provides with each forecast.

Response No. TIEC 15-6:

Please see TIEC_5_02_Highly_Sensitive_Attachment_1_Upd121919 for a listing of each third-party forecast. TIEC_5_02_Highly_Sensitive_Supplemental_Attachment_4 contains descriptive information and assumptions.

Prepared By: Connie S. Trecazzi — Title: Economic Forecast Anlyst Staff

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SOAH DOCKET NO. 473-19-6862
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SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO TEXAS INDUSTRIAL ENERGY CONSUMERS' FIFTEENTH REQUEST FOR INFORMATION

Question No. TIEC 15-7:

Referring to figure 9 on page 20 of Mr. Bletzacker's rebuttal testimony:

a. Please explain as to each of the third-party forecasts referenced in this analysis whether the forecasts is a base case, low case, or high case.

b. For each of the third-party forecasts used in this analysis, please provide all assumptions and narrative descriptions provided by each of the third-party forecasters.

c. Please provide a calculation of the levelized price of each of the third-party forecasts over the 2021-2051 period using the same methodology that Mr. Bletzacker used to calculate the levelized breakeven price of $3.67/MMBtu. If a third-party forecast's gas prices need to be trended beyond the last year provided by the forecast, please state what methodology was used to trend the forecast's gas prices.

Response No. TIEC 15-7:

The information responsive to this request is HIGHLY SENSITIVE under the terms of the Protective Order. The Highly Sensitive information is available for review at the Austin offices of American Electric Power Company (AEP), 400 West 15th Street, Suite 1520, Austin, Texas, 78701, (512) 481-4562, during normal business hours.

a. The third-party forecasts in this analysis are the most recent forecasts published by each of the third-parties, and is referred to as a "reference" case or "base" case.

b. TIEC_5_02_Highly_Sensitive_Supplemental_Attachment_4 contains descriptive information and assumptions.

c. The levelized prices for each third-party vendor over the 2021-2051 period are provided in TIEC 15-7 HIGHLY SENSITIVE Attachment 1.

When a third-party forecast needed to be trended beyond the end of the published forecast, for illustrative purposes it was extended by calculating a linear forecast of the constant dollar values of each forecast using the last five years of the forecasted values and extending the forecast for the required number of years.

Prepared By: Connie S. Trecazzi Title: Economic Forecast Anlyst Staff

Sponsored By: Karl R. Bletzacker Title: Dir Fundamental Analysis

SOAH DOCKET NO. 473-19-6862
PUC DOCKET NO. 49737

SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO TEXAS INDUSTRIAL ENERGY CONSUMERS' FIFTEENTH REQUEST FOR INFORMATION

Question No. TIEC 15-8:

Please confirm that the year-by-year breakeven gas prices shown on Exhibits 9 and 10 do not reflect the year-by-year differences in costs and benefits of the Wind Facilities (e.g., it does not account for PTCs only being generated in the first ten years, or the revenue requirement declining over time). If confirmed, please provide the year-by-year breakeven gas prices that do reflect the year-by-year differences in costs and benefits of the Wind Facilities.

Response No. TIEC 15-8:

Confirmed. The breakeven gas calculation was derived from Company witness Torpey's breakeven power price calculation. See the Company's response to TIEC 15-2. The requested year-by-year breakeven information has not been prepared.

Prepared By: James F. Martin	Title: Regulatory Case Mgr
Prepared By: Connie S. Trecazzi	Title: Economic Forecast Anlyst Staff
Sponsored By: Karl R. Bletzacker	Title: Dir Fundamental Analysis

SOAH DOCKET NO. 473-19-6862
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SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO TEXAS INDUSTRIAL ENERGY CONSUMERS' FIFTEENTH REQUEST FOR INFORMATION

Question No. TIEC 15-9:

Referring to page 24-25 of Mr. Bletzacker's rebuttal testimony, please provide the full documents of the referenced earnings call transcripts and a copy of the referenced S&P Global Market Intelligence publication.

Response No. TIEC 15-9:

Chesapeake:
http://app.quotemedia.com/data/downloadFiling?webmasterId=101533&ref=114603354&type=PDF&symbol=CHK&companyName=Chesapeake+Energy+Corporation&formType=10-Q&dateFiled=2019-11-05&CK=895126

Southwestern Energy: Please see TIEC_15_9_Attachment_1

Apache: https://www.fool.com/earnings/call-transcripts/2019/11/01/apache-apa-q3-2019-earnings-call-transcript.aspx

S&P Global Market Intelligence publication: Please see TIEC_15_9_Attachment_2

Prepared By: Connie S. Trecazzi — Title: Economic Forecast Anlyst Staff

Sponsored By: Karl R. Bletzacker — Title: Dir Fundamental Analysis

Southwestern may stop drilling completely if gas prices keep falling

Monday, October 28, 2019 3:06 PM ET

By Bill Holland
Market Intelligence

Southwestern Energy Co. beat Wall Street expectations for third-quarter earnings but is still burning cash and is ready to trim its operations in Appalachia if natural gas and liquids prices continue to stay low, executives told analysts on the company's earnings conference call.

The company may halt all drilling when it looks at commodity futures prices in 2020, President and CEO William Way said on the Oct. 25 call. "Is there a price where you'll stop drilling?" Way asked rhetorically. "The answer to that question is ... when the price of the commodities reaches a point where we cannot meet the company's rigorous economic threshold, we will reduce or stop activity. We did it in 2016 — for the same reason — and we'll do it again."

Without presenting specific guidance for 2020, Southwestern executives said their current plan is to monitor gas and liquids prices weekly and add or subtract drilling projects to keep the company within cash flows plus an extra $300 million leftover from the sale of its Arkansas Fayetteville Shale operations in 2018.

Southwestern joins two other Appalachian shale gas drillers, Range Resources Corp. and Cabot Oil & Gas Corp., in announcing 2020's spending plans will be trimmed back to no-growth maintenance levels if gas stays cheap. Confronted with "free" gas associated with Permian Basin shale oil wells and no patience in the investment community for outspending cash flows, Appalachia's shale gas producers are being forced to curtail their robust production plans for 2020 as the gas market continues to be oversupplied.

"We hope to hear whether [Southwestern] would go to maintenance mode next year or invest the proceeds from the Fayetteville sale," Guggenheim Securities LLC shale oil and gas analyst Subash Chandra told his clients Oct. 24. "We believe the market would prefer the former and would react negatively to deficit spending at strip prices."

The plan to keep spending in line with cash flows earned Southwestern stock a 7% bump to $2.12 per share Oct. 25, which the equity hung on to on an average volume of trades Oct. 28.

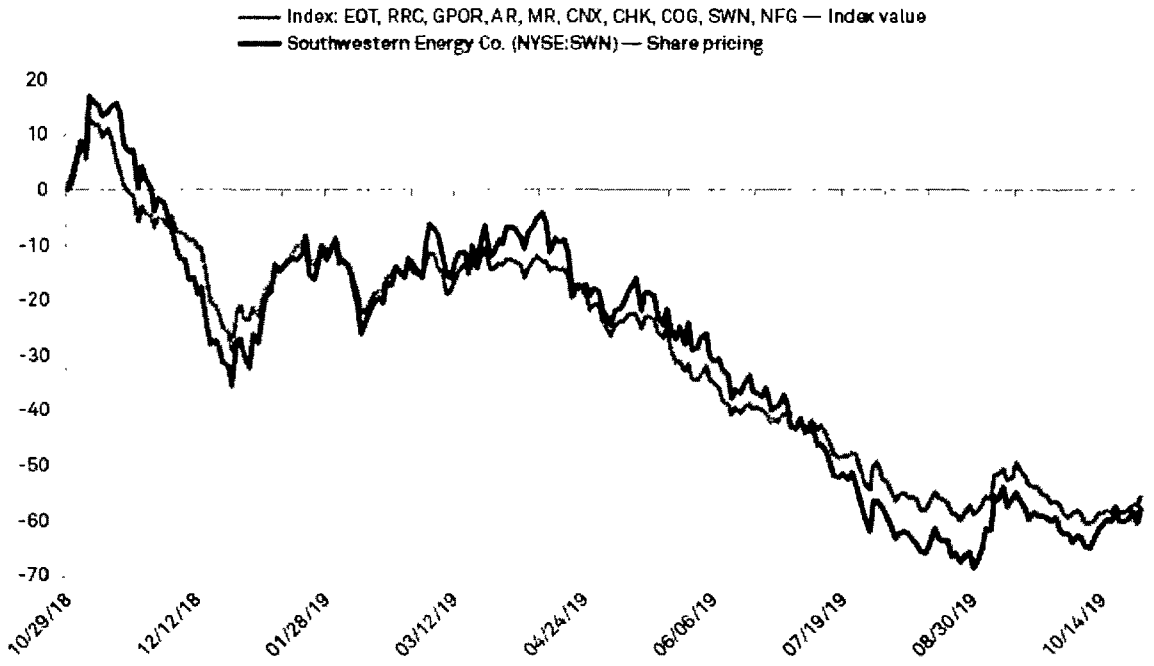
Southwestern said its 2.2 Bcfe/day of total production was 8% more than the third quarter of 2018, excluding Fayetteville results, with realizations from gas, NGLs and condensate oil off 13% to $2.16/Mcfe in the quarter.

The shale driller did not receive much cooperation from the oil and liquids prices it had banked its hopes on in southwest Appalachia. Realized NGL prices were down 39% to $11.93 per barrel in the third quarter as production increased 22% year-over-year to 64,130 barrels a day. Oil production jumped 42% to 15,217 bbl/d but the price dropped 17% to $49.67 per barrel.

Southwestern said it produced 1.7 Bcf/d of gas, all in Appalachia, for a realized price of $1.87/Mcf, a 13% drop year-over-year.

Southwestern Energy's performance parallels Appalachian gas slide

Stock performance LTM (%)



As of Oct. 24, 2019, market close.
Note: The Appalachian Index consists of equally weighted shares of EQT Corp., Range Resources Corp., CNX Resources Corp., Antero Resources Corp., Gulfport Energy Corp., Montage Resources Corp., National Fuel Gas Co., Southwestern Energy Co., Cabot Oil & Gas Corp. and Chesapeake Energy Corp.
Source: S&P Global Market Intelligence

This article was published by S&P Global Market Intelligence and not by S&P Global Ratings, which is a separately managed division of S&P Global.

S&P downgrades 6 shale gas producers; outlook 'negative' on sector

Tuesday, February 4, 2020 4:29 PM ET

By Bill Holland
Market Intelligence

S&P Global Ratings cut the credit ratings of six pure-play shale gas producers late Feb. 3, based on worries that they will not be able to refinance billions of dollars in bonds because of expected low gas prices and chronic overspending to drill for gas the market does not want.

Ratings also moved the credit outlook for eight of nine pure-play gas producers under its review to negative, with only tiny Marcellus and Utica shale producer Montage Resources Corp. getting an affirmation of its B- rating with a stable outlook.

S&P Global Ratings sours on Appalachian pure-play shale gas drillers

Rating agency worried about low gas prices and refinancing debt

Company	S&P rating	Rating change	Outlook	Date
EQT Corp.	BB+	Downgrade	Negative	Feb. 3
Range Resources Corp.	BB-	Downgrade	Negative	Feb. 3
Antero Resources Corp.	B+	Downgrade	Negative	Feb. 3
Ascent Resources Utica Holdings LLC	B	Downgrade	Negative	Feb. 3
CNX Resources Corp.	B+	Downgrade	Negative	Feb. 3
Gulfport Energy Corp.	B	Downgrade	Negative	Feb. 3
Montage Resources Corp.	B-	None	Stable	Feb. 3
Comstock Resources Inc.	B	None	Negative	Feb. 3
Southwestern Energy Co.	BB	None	Negative	Feb. 3
Chesapeake Energy Corp.	CCC	Upgrade	Negative	Jan. 17
Cabot Oil & Gas Corp.	NR	NA	NA	NA

As of Feb. 3, 2020.
NR = not rated
NA= not applicable
Source: S&P Global Ratings

The downgrades and deteriorating outlook came in an environment where natural gas prices are forecast to stay below $3/MMBtu for the next two years, with break-even prices for producers estimated to be $1.80/MMBtu in the Marcellus Shale and $1.94/MMBtu in the Utica Shale, according to S&P Global Platts Analytics. The less-than-$1/MMBtu margin will leave little wiggle room for bad wells, warm winter weather and payments to lenders, much less cash back to shareholders.

"We are particularly concerned about some of the issuers' ability to access the capital markets given investor aversion to the space and their current bond trading yields," Ratings said in the note accompanying the ratings cuts.

"The market is trying to force a pullback in activity," Tudor Pickering Holt & Co. oil and gas analyst Sameer Panjwani said.

Panjwani noted that while producers have hedges to protect production this year, those hedges are not in place for 2021. The analyst thinks that producers need to cut spending far more than their drilling plans in order to balance both their books and an oversupplied gas market.

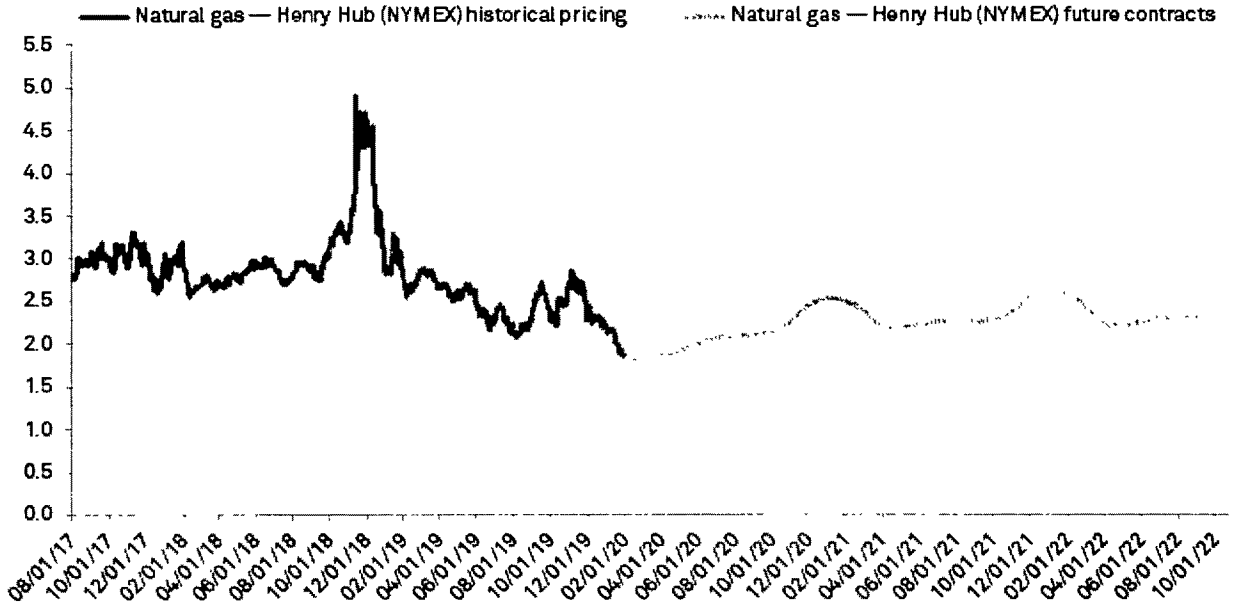
The ratings cut will have an immediate impact on America's largest natural gas producer, EQT Corp. According to the prospectus for a $1.75 billion bond offering that EQT closed Jan. 21, the S&P Global Ratings downgrade, combined with an earlier downgrade by Moody's Investors Service, could add up to 0.50% to EQT's 6.125% and 7% coupon rates for the new bonds due in 2025 and 2030.

Further, the credit downgrade will affect how much cash collateral EQT needs to post for its midstream service and pipeline obligations. "Although we believe we have sufficient letter of credit capacity or other liquidity options to deal with such a scenario, we cannot predict the impact these posting requirements may have on our business," EQT said in the bond prospectus.

EQT did not reply to an email asking for details on the impact of the downgrade.

Not affected by the latest rating action were shale oil and gas producer Chesapeake Energy Corp. and Marcellus producer Cabot Oil & Gas Corp. Cabot's debt is privately placed and not rated by any agency, while S&P Global Ratings upgraded Chesapeake to CCC on Jan. 17 after a selective default following a series of bond refinancings.

NYMEX gas futures predict prices will be lower for longer ($/MMBtu)



As of Feb. 3, 2020, market close.
Source: S&P Global Market Intelligence

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Article amended at 5:20 p.m. ET on Feb. 4, 2020, to remove a misleading statement about the number of notches by which S&P Global Ratings downgraded the companies.

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PUC Docket No. 49737
TIEC's 15th, Q. # TIEC 15-9
Attachment 2
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SOAH DOCKET NO. 473-19-6862
PUC DOCKET NO. 49737

SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO TEXAS INDUSTRIAL ENERGY CONSUMERS' FIFTEENTH REQUEST FOR INFORMATION

Question No. TIEC 15-10:

Referring to page 27 of the Direct Testimony of Karl R. Bletzacker, please provide a detailed explanation, including providing what the specific assumptions are in each of the cases, of how the assumptions differ between the Company's High, Low, and Base case scenarios. In responding, please reconcile the response with the explanation Mr. Bletzacker provided in response to TIEC 1-4 regarding the methodology for calculating the High and Low case.

Response No. TIEC 15-10:

The Direct Testimony of Company witness Bletzacker does not have a page 27. Page 27 of Company witness Bletzacker's Rebuttal Testimony consists of elements previously presented in Bletzacker Direct Testimony: page 4, lines 3-12; page 9, lines 13-23, and; page 13, lines 1-5.

The Company's stand-alone High, Base and Low Cases result from Company modeling which considers higher and lower demand for U.S. electric generation and fuels and, consequently, higher and lower fuels prices, respectively. The differences in each case's assumptions on a month-to-month basis can be seen in the workpapers of Company witness Bletzacker provided with his direct testimony. Worksheets labeled "Forecast-Peak_OffPeak-Nominal" and "Forecast-Night_Wkend-Nominal" provide forecasted prices for ten qualities of coal and forecasted natural gas prices for various U.S. locations, which are all distinctly different and represent the underlying assumptions for each case.

Prepared By: Connie S. Trecazzi — Title: Economic Forecast Anlyst Staff

Sponsored By: Karl R. Bletzacker — Title: Dir Fundamental Analysis

SOAH DOCKET NO. 473-19-6862
PUC DOCKET NO. 49737

SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO TEXAS INDUSTRIAL ENERGY CONSUMERS' FIFTEENTH REQUEST FOR INFORMATION

Question No. TIEC 15-11:

Referring to page 27 of the Direct Testimony of Karl R. Bletzacker, please provide the amount of electric generation demand assumed for each year in the High, Low, and Base cases.

Response No. TIEC 15-11:

The Direct Testimony of Company witness Bletzacker does not have a page 27. However, please refer to TIEC_15_11_Attachment_1 for U.S. Lower 48 Base, High, and Low energy sales in MWh.

Prepared By: Connie S. Trecazzi — Title: Economic Forecast Anlyst Staff

Sponsored By: Karl R. Bletzacker — Title: Dir Fundamental Analysis

Energy Sales - MWh

	Base	High	Low
2019	3,709,048,155	3,744,019,944	3,641,868,922
2020	3,709,239,637	3,764,254,840	3,612,342,768
2021	3,723,187,756	3,800,868,296	3,607,416,891
2022	3,746,655,490	3,833,897,960	3,607,788,933
2023	3,766,435,719	3,863,019,921	3,607,876,332
2024	3,788,289,311	3,892,245,483	3,612,892,091
2025	3,808,331,262	3,920,106,183	3,616,434,669
2026	3,829,412,024	3,951,040,123	3,624,246,878
2027	3,853,554,213	3,984,414,790	3,634,865,363
2028	3,828,520,341	3,971,228,422	3,603,954,559
2029	3,853,731,581	4,005,373,724	3,617,187,247
2030	3,872,249,671	4,038,989,472	3,624,318,882
2031	3,891,858,125	4,065,993,630	3,629,452,492
2032	3,912,871,328	4,098,056,754	3,640,065,426
2033	3,936,389,623	4,135,701,397	3,652,080,675
2034	3,959,846,466	4,167,852,922	3,658,569,779
2035	3,985,158,140	4,207,630,619	3,665,687,616
2036	4,009,565,457	4,247,221,222	3,674,766,493
2037	4,034,236,937	4,287,241,793	3,687,193,514
2038	4,059,159,321	4,334,174,893	3,705,286,482
2039	4,083,541,437	4,377,869,068	3,721,596,281
2040	4,108,065,722	4,423,067,809	3,736,285,359
2041	4,132,547,895	4,469,618,490	3,751,424,652
2042	4,157,953,794	4,520,538,570	3,765,677,639
2043	4,184,905,226	4,575,845,566	3,778,682,507
2044	4,210,357,510	4,627,235,653	3,786,396,423
2045	4,236,331,384	4,680,223,306	3,791,741,016
2046	4,262,544,356	4,734,734,021	3,799,259,703
2047	4,288,502,578	4,790,654,555	3,803,135,187
2048	4,314,104,232	4,843,599,767	3,808,659,269

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SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO TEXAS INDUSTRIAL ENERGY CONSUMERS' FIFTEENTH REQUEST FOR INFORMATION

Question No. TIEC 15-12:

Has AEP conducted a study or analysis to analyze the impact of weather on the accuracy of its Fundamentals Forecasts? If so, please provide any such studies or analyses.

Response No. TIEC 15-12:

Please see Section V of the rebuttal testimony of Company witness Bletzacker, as well as page 6, lines 1 through 12 of his direct testimony, for an analysis of the impact of warmer- or colder-than-normal weather on natural gas prices and discussion of the fact that the Company's Fundamentals Forecast is weather-normalized. Further, the stark contrast in natural gas prices at the benchmark Henry Hub between last winter's "normal" weather (62nd of 125 years) and this winter's record-setting warmest December and January (1st of 125 years) provides a relevant and proximate indicator.

Prepared By: Connie S. Trecazzi — Title: Economic Forecast Anlyst Staff

Sponsored By: Karl R. Bletzacker — Title: Dir Fundamental Analysis