

# Six Implications of the New Tax Law for Regulated Utilities

PREPARED BY

Bob Mudge

Bente Villadsen

Mike Tolleth

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THE **Brattle** GROUP

# The New Landscape

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## **The new tax law has distinctive implications for regulated utilities:**

- Reduced federal tax rate: 35% to 21% (like other businesses), but
- No bonus depreciation
- Different treatment for holding companies and unregulated affiliates
  - 100% bonus depreciation
  - Limited interest deductions

## **Regulators and consumer advocates are demanding rate reductions.**

## **The net effect of the above will vary by company, but broadly act to:**

1. Reduce customer costs (while holding earnings constant)
2. Stress coverage ratios
3. Increase earnings volatility
4. Defer cash flows
5. Stress credit assessments
6. Discourage the adoption of tax-advantaged assets in rate base



**Question: How much scope to optimize?**

# 1. Reduced Customer Costs (with earnings held constant)

## *First order effect is rooted in the regulatory compact:*

- In theory, a tax cut reduces *customer costs*, while leaving *earnings unchanged*.
  - Costs, including income taxes, are passed through to customers.
  - Regulated companies have the opportunity to earn allowed after-tax ROEs.
- The impact on a \$1 billion utility with 50:50 debt/ equity might look like this:

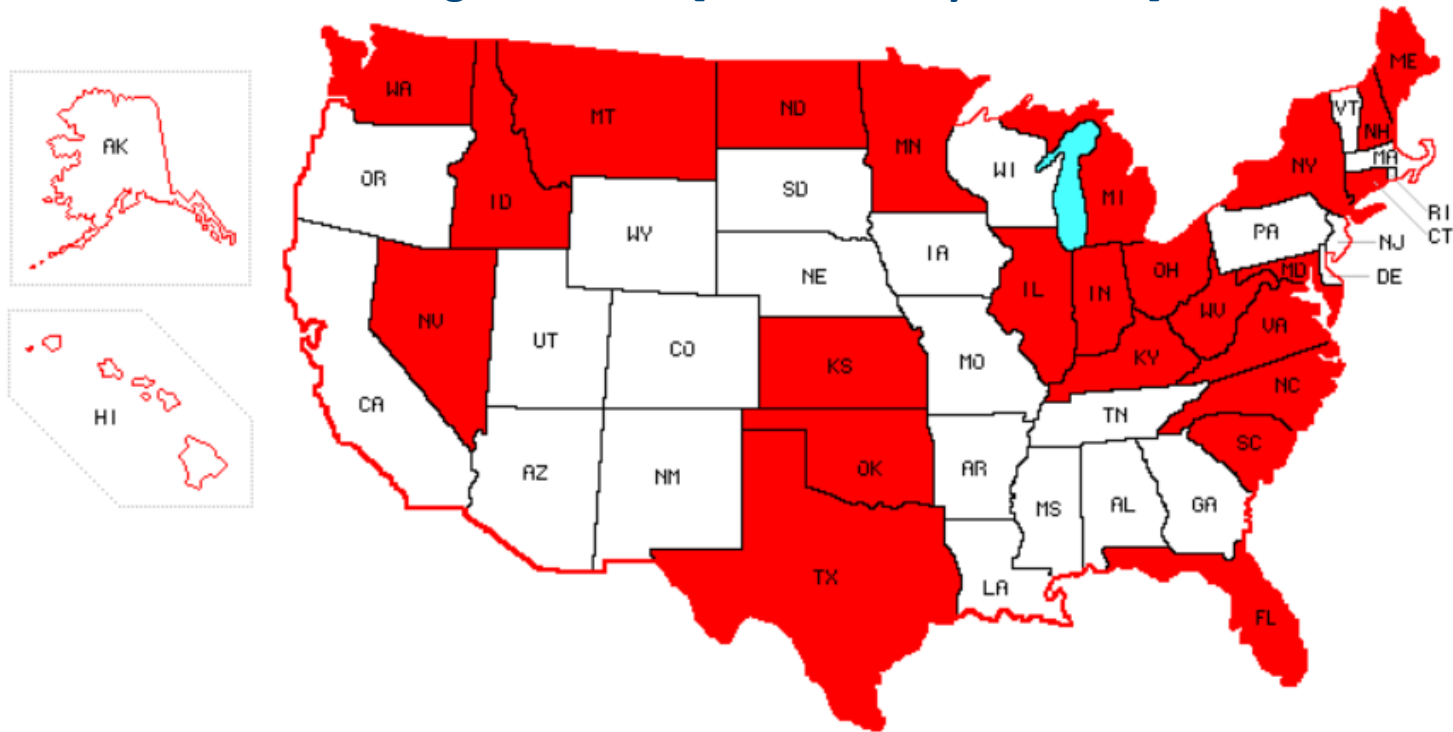
		Tax Rate	35%	21%	Chg	
<b>Revenue Requirement (\$ Millions)</b>						
1	EBITDA	Line 2 + Line 3	135.3	121.6	(13.6)	← Revenue requirement down (O&M expense unaffected)
2	Depreciation	1,000/ 30	33.3	33.3	-	
3	EBIT	Line 4 + Line 5	101.9	88.3	(13.6)	
4	Interest	500 x 5%	25.0	25.0	-	
5	Pre-Tax Income	Line 6 + Line 7	76.9	63.3	(13.6)	
6	Tax Gross-up	Line 7 x (tax rate)/ (1-tax rate))	26.9	13.3	(13.6)	← Tax gross-up reduced
7	Net Income	500 x 10%	50.0	50.0	-	← Net income unchanged

- For utility with revenue 3 x EBITDA, customer rates would decrease ~ 3.4%.

# 1. Reduced Customer Costs

***Regulators are already seeking customer benefits from tax cut:***

**States with Announced Tax Reform  
Proceedings or Efforts [as of January 17, 2018]**



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Brattle compilation from public sources. Washington, DC also has announced tax reform proceedings.

## 2. Stressed Coverage Ratios

***Even with earnings held constant, reduction in tax gross-up tightens pre-tax credit metrics (all else equal):***

- EBIT and EBITDA go down
- Interest coverage is lower, and
- EBITDA to Debt lower

	Tax Rate	35%	21%	Chg
<b><u>Pre-Tax Cash Flow (\$ Millions)</u></b>				
1 EBITDA		135.3	121.6	(13.6)
2 EBIT		101.9	88.3	(13.6)
3 Interest		25.0	25.0	-
4 Debt		500.0	500.0	-
<b><u>Pre-Tax Credit Metrics</u></b>				
5 EBITDA Interest Coverage	Line 1/ Line 3	5.4x	4.9x	-0.5x
6 EBIT Interest Coverage	Line 2/ Line 3	4.1x	3.5x	-0.5x
7 EBITDA-to-Debt	Line 1/ Line 4	27%	24%	-3%

← Dollar impact represents

- 10% EBITDA reduction
- 13% EBIT reduction

Reduced credit metrics could invite downgrades, increase borrowing costs

### 3. Increased Earnings Volatility

***A lower tax rate will also increase volatility of realized earnings:***

- This is because the (symmetrical) tax “cushion” to revenue changes is smaller

		At 35% tax rate, net income reflects 65% of revenue changes			At 21% tax rate, net income reflects 79%		
Tax Rate		35%			21%		
Achieved Earnings (\$ millions)		Base Case	Difference	10% Lower EBITDA	Base Case	Difference	10% Lower EBITDA
1	<b>EBITDA</b>	<b>135.3</b>	(13.5)	<b>121.73</b>	<b>121.6</b>	(12.2)	<b>109.46</b>
2	Depreciation	33.3	-	33.3	33.3	-	33.3
3	<b>EBIT</b>	<b>101.9</b>	<b>(13.5)</b>	<b>88.4</b>	<b>88.3</b>	<b>(12.2)</b>	<b>76.1</b>
4	Interest	25.0	-	25.0	25.0	-	25.0
5	Pre-Tax Income	76.9	(13.5)	63.4	63.3	(12.2)	51.1
6	Taxes Incurred	26.9	(4.7)	22.2	13.29	(2.6)	10.74
7	<b>Net Income</b>	<b>50.0</b>	<b>(8.8)</b>	<b>41.2</b>	<b>50.0</b>	<b>(9.6)</b>	<b>40.4</b>
8	ROE	10.0%	-1.8%	8.2%	10.0%	-1.9%	8.1%
9	<b>Earnings Sensitivity to EBITDA Reduction</b>		<b>65%</b>			<b>79%</b>	
10	Percent Change in EBIT		-13%			-14%	
11	Percent Change in Earnings		-18%			-19%	

## 4. Deferred Cash Flow – Depreciation and Deferred Tax

### *A lower tax rate may also defer cash flows:*

- Most utilities use accelerated tax depreciation, accelerating cash flows by deferring tax liability
  - MACRS for eligible assets
  - Bonus depreciation when available
- All else equal, a tax cut mutes the above effects and thus can defer cash flow
- The impact in a year with tax depreciation 2x book might look like this:

<b>Tax Rate</b>		<b>35%</b>	<b>21%</b>	<b>Chg</b>	
<b><u>Cash Flow (\$ Millions)</u></b>					
1	Net Income	500 x 10%	50.0	50.0	← Net income unchanged
2	Depreciation	1,000/ 30	33.3	33.3	
3	Deferred Income Taxes				
4	Accelerated Depreciation	1,000/ 15	66.7	66.7	
5	Book Depreciation	1,000/ 30	<u>33.3</u>	<u>33.3</u>	
6	Temporary Difference	Line 4 - Line 5	33.3	33.3	
7	Deferred Income Taxes	Line 6 x Tax Rate	11.7	7.0	(4.7) ← Tax deferral reduced
8	Funds From Operations	Line 1 + Line 2 + Line 7	95.0	90.3	(4.7) ← FFO down (temporarily)
9	FFO-to-Debt		19.0%	18.1%	-0.9%

## 4. Deferred Cash Flow – Accounting for ADIT

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### ***Adjustment to accumulated deferred income taxes (ADIT) may be material:***

- In the aggregate, ADIT approximates 15% of U.S. electric utility balance sheets
  - Reduced tax rate means that ADIT is written down proportionally
  - Regulators generally require that excess ADIT (“EDIT”) flow back to customers
- Broadly speaking, this is intended by the tax law to occur no faster than the discharge of ADIT:
  - “[T]he excess in the reserve for deferred taxes is reduced over the remaining lives of the property as used in its regulated books of account which gave rise to the reserve for deferred taxes.” -- Public law no. 115-97 (“Tax Cuts and Jobs Act of 2017”)
- This is a maximum limit on (not a prescription for) the rate of EDIT refunding; utilities must comply to qualify for accelerated depreciation in tax filings
- Impact of refunding EDIT to customers is PV neutral, but impact on *timing* of cash flows can vary substantially based on vintage of assets



## 4. Deferred Cash Flow – ADIT Adjustment Methods

### *Method chosen for refunding EDIT may be material for near-term cash flows*

- Tax law specifies the requirements following a primary “Average Rate Assumption Method” (ARAM) or an “Alternative Method”

#### Average Rate Assumption Method

- Excess deferred tax implicitly associated with specific property classes and vintages
- EDIT is reduced “during the time period in which the timing differences for the property reverse.”
- Effectively delays start of EDIT reduction for assets still accruing ADIT

#### Alternative Method

- Excess deferred tax balance computed in aggregate for “all public utility property ... on the basis of the ... composite rate used to compute depreciation for regulatory purposes.”
- EDIT is reduced “ratably over the remaining regulatory life of the property.”

- ARAM temporarily “shields” excess deferred tax balances on newer assets from being refunded to customers; no such provision under Alternative Method.
- For fully-tax depreciated assets, the two methods are equivalent and have no impact on cash flows (relative to 35% tax rate continuing)
- Tax law specifies that the Alternative Method may be applied if composite depreciation is required by utility regulator for ratemaking AND the utility lacks “vintage account data necessary to apply [ARAM].”

## 4. Deferred Cash Flow – ADIT Adjustment

### *For assets still accruing ADIT, tax cut would defer cash flows:*

- Example at right is based on conference report accompanying tax bill (p. 345)
- Applied to \$1 billion asset, with illustrative Return on Capital = 7%
- Tax cut reduces benefit in early year of asset life, with high tax depreciation
- Approximately \$17 million would be deferred from 2018 – 2020 to last 5 years
- This would be PV-neutral, accounting for incremental return (line 10)

### *Conference report example assumptions:*

- In-service at year end 2015
- 10-year life: 2016 - 2025
- 5-year tax depreciation:
  - 200% declining bal.
  - Half year convention

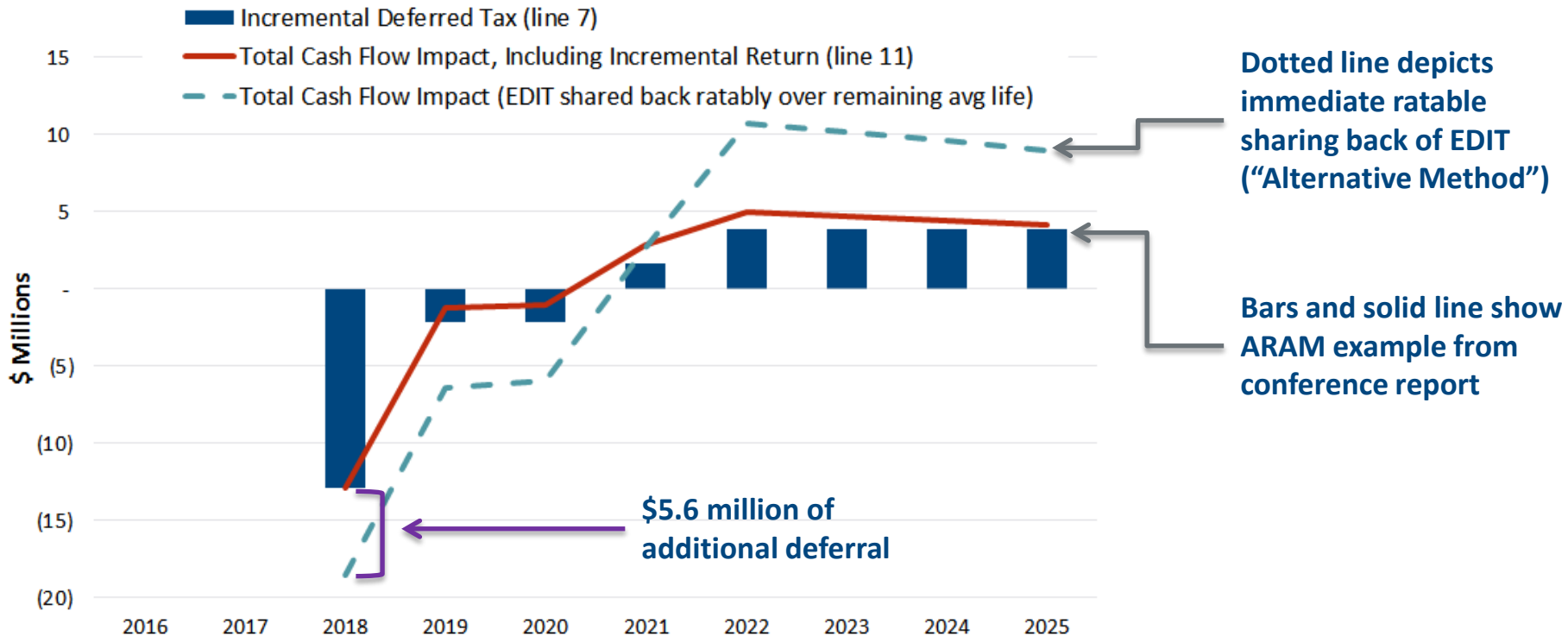
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
1 <b>Change in Deferred Tax</b>										
2 35% Tax Rate after 2017	35.0	77.0	32.2	5.3	5.3	(14.8)	(35.0)	(35.0)	(35.0)	(35.0)
3 21% Tax Rate after 2017										
4 ADIT	35.0	32.2	19.3	3.2	3.2	(8.9)	(21.0)	(21.0)	(21.0)	(21.0)
5 EDIT	-	44.8	-	-	-	(4.3)	(10.1)	(10.1)	(10.1)	(10.1)
6 Total	35.0	77.0	19.3	3.2	3.2	(13.2)	(31.1)	(31.1)	(31.1)	(31.1)
7 Incremental Deferred Tax	-	-	(12.9)	(2.1)	(2.1)	1.6	3.9	3.9	3.9	3.9
8 <b>Cumulative Change in Rate Base</b>	-	-	12.9	15.0	17.1	15.5	11.6	7.7	3.9	0.0
9 <b>ROC</b>	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
10 <b>Incremental Return on Rate Base</b>			-	0.9	1.1	1.2	1.1	0.8	0.5	0.3
11 <b>Total (Including Incremental Return)</b>			(12.9)	(1.2)	(1.1)	2.8	5.0	4.7	4.4	4.1

## 4. Deferred Cash Flow – ADIT Adjustment Methods

### *Cash flow deferral could be worse if flowed back faster than envisioned by ARAM*

- For assets still accruing ADIT, refunding excess balances to customers starting immediately (vs. delaying per ARAM) exacerbates cash flow deferral impacts.

Impact of 2018 Tax Rate Change on Cash Flow



## 5. Stressed Credit Assessments

### ***Responding to the tax cut, Moody's lowered outlook on 24 regulated utilities to "Negative" on January 19, 2018***

- A mix of operating and holding companies, electric and gas
- Shows case-specific nature of tax impact
  - Reflecting “incremental cash flow shortfall caused by tax reform on projected financial metrics that were already weak”
  - “Moody's will continue to monitor the financial impact of tax reform on each company, including its regulatory approach to rate treatment and any changes to corporate finance strategies.”
  - “This will include balance sheet changes due to the reclassification of excess deferred tax liabilities as a regulatory liability and the magnitude of any amounts to be refunded to customers.”

- 1 Avista Corp.
- 2 Avista Corp. Capital II
- 3 Duke Energy Corporation
- 4 Entergy Corporation
- 5 New Jersey Natural Gas Company
- 6 Northwest Natural Gas Company
- 7 ONE Gas, Inc
- 8 Piedmont Natural Gas Company, Inc.
- 9 Public Service Company of Oklahoma
- 10 Questar Gas Company
- 11 South Jersey Gas Company
- 12 Alabama Power Capital Trust V
- 13 Alabama Power Company
- 14 Southern Company (The)
- 15 Southern Elect Generating Co
- 16 Southwestern Public Service Company
- 17 Wisconsin Gas LLC
- 18 American Water Capital Corp.
- 19 American Water Works Company, Inc.
- 20 Consolidated Edison Company of New York, Inc.
- 21 Consolidated Edison, Inc.
- 22 Orange and Rockland Utilities, Inc.
- 23 Brooklyn Union Gas Company, The
- 24 KeySpan Gas East Corporation

## 5. Stressed Credit Assessments

***For context, the table at right shows cash flow-to-debt guidelines recently published by Moody's:\****

- January 19 outlook reflected tax-driven reduction in ratio of cash flow to debt of “approximately 150 - 250 basis points *on average...*” (emphasis added)
- Tax cuts affect some utilities more than others, with potential to threaten ratings.

### Moody's Indicative Ratings and Metrics

Indicative Ratings	FFO-to Debt
Aaa	40%
Aa	30%
A	22%
Baa	13%
Ba	5%
B	1%
Caa	< 1%

\* Moody's Investor Service, Rating Methodology – Regulated Electric and Gas Utilities, June 23, 2017. Moody's defines the referenced cash flow metric as “cash flow from operations before changes in working capital.”

## 6. Possibly Weakened Rationales to Build (rather than buy)

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*On balance, the tax law appears to tip the buy/ build question toward buy, especially for tax-advantaged assets like renewables:*

- However, the conclusion is not always obvious, and there are offsetting drivers
  - E.g. the imputed cost of debt from “buy” (assuming a PPA)
- Different factors dominate, depending on technology
- Industry is still sifting through implications

## 6. Possibly Weakened Rationales to Build (rather than buy)

*Implications of tax law for renewables are summarized below:*

Tax Law Change	Description	Impact on Unregulated Assets		Impact on Regulated (Rate Based)		Utility Buy vs. Build Implications
		Effect	LCO Impact	Effect	Rev. Req. Impact	
Corporate tax rate	35% to 21%	Reduces value of all deductions; may shrink dollar appetite for tax credits.	Mixed	Same as unregulated, with additional issue of handling excess ADIT.	TBD	Build
Tax credits	Unchanged	See above	TBD	Tax gross up on sharing of credits with customers is reduced by reduction in tax rate above.	Up	Buy
Limited interest deductions	Capped at 30% of adjusted taxable income (except regulated utilities)	Could make borrowing marginally more expensive (but likely to be small factor).	Up	NA	NA	Build
Accelerated depreciation	100% expensing (except regulated utilities)	Marginally beneficial to investors with large tax appetite.	Down/Neutral	NA	NA	Buy
BEAT	Leaves 20% of tax credits potentially exposed.	Mostly constrains appetite of 3rd party tax equity investors.	Up	Same as unregulated, but probably less relevant.	TBD	Build

## 6. Possibly Weakened Rationales to Build (rather than buy)

***A generic solar project might be relatively more advantaged by tax law outside of regulated entity, as shown in tax scenarios below:\****

- This is because utilities can't use bonus depreciation anymore
- Unregulated advantage could depend on tax equity conditions and imputed debt implications
- Scenario B assumes 75% bonus depreciation, in addition to all-in tax rate of 30%

<b>Scenario</b>		A		B
<u>Assumptions</u>				
ITC	%	30%	0%	30%
5-Year MACRs**		Y		Y
All-in Tax Rate	%	40%	-10%	30%
Bonus Depreciation	%	0%	75%	75%
<u>Impact</u>				
Utility Revenue Requirement	\$/MWh	35.0	(1.1)	33.9
Unregulated LCOE	\$/MWh	35.0	(2.0)	33.0

\* Assumes utility scale solar costing \$1.1/ watt (dc) and 30% capacity factor (ac). Scenario A, assuming old tax rate, sets utility revenue requirement and unregulated LCOE equal, for illustration.

\*\* On remainder after ITC and bonus depreciation.



# Potential Mitigants

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## ■ **Adjusted capitalization**

- It may be necessary to enhance cash flow and credit metrics by adding equity to capital structures
- An explicit conversation in regulatory proceedings already underway

## ■ **Increased ROEs**

- A similar outcome may be achievable by increasing allowed returns on equity
- Interactive with capitalization question

## ■ **Alternative allocation of excess deferred income taxes**

- It may be advantageous to divert EDIT to accelerated recovery of regulatory assets or other capex
- Duke Florida has already negotiated such an arrangement

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The Brattle Group provides consulting and expert testimony in economics, finance, and regulation to corporations, law firms, and governments around the world. We aim for the highest level of client service and quality in our industry.

We are distinguished by our credibility and the clarity of our insights, which arise from the stature of our experts, affiliations with leading international academics and industry specialists, and thoughtful, timely, and transparent work. Our clients value our commitment to providing clear, independent results that withstand critical review.

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