Agenda

1. Sector Outlook and Key Credit Issues
2. Macro Economic Outlook and Outlook for Oil & Natural Gas Prices
3. Differentiating Among Baa-rated Holding Companies
4. Credit Impact of Event Risk
5. Q&A
1 Ratings Distribution, Outlook and Key Credit Issues
US regulated utility portfolio* ratings distribution has remained relatively stable over the last four years.

*The portfolio includes all of the rated parent companies and regulated utility operating companies.
Source: Moody’s Investors Service
More holding companies fall within the Baa range compared to four years ago

Source: Moody's Investors Service
US regulated utilities - key credit issues

- Environmental, Social and Governance: ESG risks are an increasing focus
- Nuclear projects: GA and SC take different paths
- Positive regulatory developments: FL, GA, IA, MO, NJ, PA
- California wildfires: contingent liabilities
- Tax reform: cash flow risks

Key credit issues
Regulated utilities
Most states remain credit supportive

Credit Positive Regulatory Developments
Credit Negative Regulatory Developments
Uncertain Regulatory Developments
No Material Regulatory Developments

Source: Moody’s Investors Service
Financial metrics will continue to decline into 2019
- Stagnant cash flow amidst growing capex, dividends and debt

Negative free cash flow will grow in 2019

Regulatory responses to tax reform have been mixed
- Some management teams have changed financial policies, while others have not
  - $24 billion of equity in 2018 eased the financial decline, but did not eliminate it
Sector outlooks: regulated utilities are negative

Sluggish cash flow and rising debt will cause financial metrics to remain low in 2019

The metric range indicated by the dashed lines represents the Baa range appropriate for the standard business risk. “Regulated Utilities” series represents selected non-holding company regulated utilities representative of Moody’s portfolio.

Source: Moody’s Investors Service
Moody’s estimate of tax reform impact vs actual year-end 2018

» In January 2018, Moody’s estimated that the changes in tax laws would dilute, on average, a utility’s ratio of cash flow pre-working capital to debt by approximately 150-250 basis

– We assumed roughly 50% loss of deferred taxes

» The chart below compares the initial estimated impact for each sector in our rated universe to the actual year-over-year deterioration at year-end 2018

Factors contributing to the difference include: 2018 capex program size, regulatory and/or financial mitigation, rate cases, weather impacts on demand, and O&M expense reductions

Peer group excludes companies that were affected by events not related to tax reform.
Source: Moody’s Investors Service
January 2018 rating actions: utilities most affected by tax reform

Changes in outlooks focused on companies that had limited cushion in their rating for deterioration in financial performance

<table>
<thead>
<tr>
<th>Company</th>
<th>Before Tax Reform</th>
<th>Tax Reform</th>
<th>After Tax Reform</th>
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*NJNG’s rating is senior secured. Source: Moody’s Investors Service**
Other rating actions driven by nuclear build, wildfires, financial metrics and higher debt

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<th>Event</th>
<th>Companies</th>
<th>Rating Action</th>
<th>Rationale</th>
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<td>Threat to rates being collected under BLRA</td>
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<td>SCE&amp;G</td>
<td>Downgraded to Baa3 (POS)</td>
<td>Contentious political and regulatory environment</td>
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<td>Affirmed at Baa2 (STA)</td>
<td>Stronger balance sheet, supportive regulation</td>
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<td>Georgia Power</td>
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<td>Affirmative Vogtle co-owner vote</td>
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<td>Credit supportive regulation, timely cost recovery</td>
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<td><strong>Wildfires</strong></td>
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<td>Ratings Withdrawn</td>
<td>Inverse condemnation and California wildfire liabilities</td>
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<td>PG&amp;E</td>
<td>Ratings Withdrawn</td>
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<td>Edison International</td>
<td>Downgraded to Baa3 (NEG)</td>
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<td>SDG&amp;E</td>
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<td><strong>Weak metrics, higher debt, high capex, tax reform</strong></td>
<td>Consolidated Edison</td>
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<td>Weaker financial profile, higher debt</td>
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<td>Xcel Energy</td>
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<td>Declining metrics, elevated capital expenditures</td>
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<td>Lower coverage metrics, adverse rate case outcome</td>
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<td>Lower financial metrics, lack of equity financing</td>
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<td>CenterPoint Energy Resources</td>
<td>Upgraded to Baa1 (POS)</td>
<td>Elimination of midstream business risk</td>
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<td>Dayton Power &amp; Light</td>
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<td>Credit supportive regulatory developments</td>
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<td>Enbridge</td>
<td>Upgraded to Baa2 (POS)</td>
<td>Reduced structural subordination and capital structure complexity</td>
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*Source: Moody's Investors Service*
Negative free cash flow in 2019 and 2020 is expected to be financed mostly with debt, while 2018 was more balanced

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<td>Capex</td>
<td>(102,737)</td>
<td>(120,977)</td>
<td>(115,236)</td>
<td>(123,573)</td>
<td>(128,393)</td>
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<td>Dividends</td>
<td>(21,554)</td>
<td>(23,148)</td>
<td>(26,165)</td>
<td>(27,642)</td>
<td>(30,114)</td>
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<td>Acquisitions</td>
<td>(6,952)</td>
<td>(34,310)</td>
<td>(6,032)</td>
<td>(17,833)</td>
<td>(1,533)</td>
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<td>Free Cash Flow</td>
<td>($27,736)</td>
<td>($79,631)</td>
<td>($41,622)</td>
<td>($64,696)</td>
<td>($47,479)</td>
<td>($47,405)</td>
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</table>

Funded:

| Equity Issued   | 5,914 | 12,416 | 6,206 | 23,889 | 15,185 | 9,953 |
| New debt issued | 24,900 | 53,783 | 32,381 | 29,631 | 35,474 | 40,413 |
| Other Financing | (3,078) | 13,431 | 3,035 | 11,176 | (3,180) | (2,960) |

$27,736  $79,631  $41,622  $64,696  $47,479  $47,405

% Funded:

| Equity Issued   | 21.3% | 15.6% | 14.9% | 36.9% | 32.0% | 21.0% |
| New debt issued | 89.8% | 67.5% | 77.8% | 45.8% | 74.7% | 85.2% |
| Other Financing | -11.1% | 16.9% | 7.3% | 17.3% | -6.7% | -6.2% |

100.0%  100.0%  100.0%  100.0%  100.0%  100.0%

Other Financing includes changes in short-term debt

Source: Moody's Financial Metrics, Moody's Estimates, Company Presentations and SEC Filings
Macro Economic Outlook and Outlook for Oil and Natural Gas Prices
Global economy will continue to weaken throughout 2019 and into 2020

The global economy weakened significantly in the fourth quarter of 2018 and will continue to weaken throughout 2019 and into 2020

The pace of monetary policy normalization will slow in 2019

Risks to global growth are tilted to the downside

Latest Global Macroeconomic Outlook for G-20 Countries, 2019-2020 (February 2019 Update)
“Global economy will continue to weaken throughout 2019 and into 2020,” 29 February 2019
Global economy will continue to weaken throughout 2019 and into 2020

Global Macro Outlook (February 2019 Update): Real GDP growth forecast (%) for G20 Economies

- **CANADA**
  - '19 1.7%
  - '20 1.7%

- **USA**
  - '19 2.5%
  - '20 1.7%

- **MEXICO**
  - '19 1.7%
  - '20 2.0%

- **UK**
  - '19 1.4%
  - '20 1.4%

- **GERMANY**
  - '19 1.5%
  - '20 1.5%

- **FRANCE**
  - '19 1.5%
  - '20 1.3%

- **ITALY**
  - '19 0.4%
  - '20 0.8%

- **EURO AREA**
  - '19 1.6%
  - '20 1.5%

- **RUSSIA**
  - '19 1.6%
  - '20 1.5%

- **CHINA**
  - '19 6.0%
  - '20 6.0%

- **JAPAN**
  - '19 0.8%
  - '20 0.4%

- **INDIA**
  - '19 7.3%
  - '20 7.3%

- **SAUDI ARABIA**
  - '19 1.8%
  - '20 2.4%

- **ARGENTINA**
  - '19 -1.5%
  - '20 1.5%

- **SOUTH AFRICA**
  - '19 1.3%
  - '20 1.5%

- **BRAZIL**
  - '19 2.3%
  - '20 2.5%

- **SOUTH KOREA**
  - '19 2.1%
  - '20 2.2%

- **INDONESIA**
  - '19 4.8%
  - '20 4.7%

- **AUSTRALIA**
  - '18 2.8%
  - '19 2.5%

Source: Moody’s Investors Service
# Global Macro Outlook (February 2019 Update)

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<th>Real GDP Growth 18E</th>
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**Growth Forecast Adjustment from the previous outlook**
- An upward adjustment ≥ 0.3 pp
- A downward adjustment ≥ 0.3 pp

**Monetary Policy Directions**
- Accommodative
- Tightening
- Maintain current policy

*Source: Moody’s Investors Service*
Natural Gas Going Global

Rising demand, nimble supply, energy transition risk

» US natural gas demand is rising, especially for power generation, along with rising exports and supportive industrial demand
   – Gas-fired capacity will increasingly replace coal-fired power due to competitive natural gas prices and stricter environmental regulations
   – Chemical manufacturing renaissance along the Gulf Coast

» Natural gas will still struggle to resemble the global oil marketplace
   – Rapid LNG development will make natural gas increasingly global
   – Transportation costs and complex logistics will keep natural gas flows and prices from truly optimizing similar to oil
Natural Gas Going Global

» North American natural gas industry faces transition
  – Abundant supply is seeking new global markets through LNG
  – Stricter environmental regulations initially favor natural gas before renewable energy gradually becomes increasingly competitive

US natural gas production continues to rise…

…and US gas liquefaction capacity is picking up dramatically
Oil Prices

Key credit themes

» WTI will remain in the $50-$70 ($55-$75 Brent) range through 2020, with volatility
  – We see the price of the marginal barrel around $55-$60/bbl, which anchors our price range
  – Prices have risen sharply from Q4 lows as Saudi production cuts have been maintained and significant production declines in Venezuela and export disruptions in Libya have offset continuing growth in US production and higher than expected YTD Iranian exports

» We reflect differentials and premiums where appropriate, and sensitize within the band
Oil Prices

Key credit themes

» Key issues for the remainder of 2019
  – Impact of non-waiver of Iranian sanctions
    › Will Saudi Arabia increase supply to backstop Iranian export declines?
    › Russia has already expressed reluctance to maintain production discipline and is highly unlikely to do so if Saudi increases production
  – Continuing growth in US shale production
  – Slowing global demand growth tied to generally weaker economic growth, and, in emerging markets in particular, the strong US dollar
  – Will the US and China come to a tariff agreement?
  – Significant Permian differentials have abated in response to new pipeline capacity coming into service
  – Canadian differentials have recovered from extremely wide levels in Q4 following government mandated production cuts, but more permanent improvement awaits additional pipeline egress
Oil Prices

WTI crude prices likely to remain in $50-$70 range through 2020 (Brent $55-$75)

Price stability reliant on OPEC + discipline

Note: Medium-term expectations are most relevant prices we use to estimate financial performance and determine ratings. We focus on a range of outcomes within the price bands to better understand a given entity’s resilience to price volatility to help keep our ratings durable across a range of outcomes.

Source: US Energy Information Administration (daily average prices); Moody’s Investors Service (price estimates and stress prices)

Note: Shaded area indicates estimate.
Source: US Energy Information Administration
Natural Gas Prices

Key credit themes

» Natural gas prices to stay largely within the $2.50-$3.50/MMBtu (HH) range through 2020 on strong supplies
  – Enormous reserves provide economic returns for many producers at $3.00/MMBtu, and below
  – Very significant volumes of associated gas from shale drilling adding to supply
  – Storage levels above prior year average but well below 5-year average
  – US liquefied natural gas (LNG) exports, growth in gas-fired power generation and Gulf Coast petrochemical plants aid demand
Natural Gas Prices

Key credit themes

» Key issues for the remainder of 2019
  – Storage levels
  – Basis narrowing as new pipeline capacity helps Marcellus/Utica; however, growth in Permian associated gas pressures basis
  – Natural gas liquids (NGLs) prices will move with crude prices, but will spike on infrastructure bottlenecks
  – Companies still overproducing NGLs but demand rising with increased exports
  – Ethane rejection continues, with production still exceeding demand, exacerbated by pipeline and fractionation limitations
  – Strong propane export demand has helped underpin NGL composite prices
Natural Gas Prices

Natural gas prices to stay largely within $2.50-$3.50/MMBtu band through 2020

Note: Medium-term expectations are most relevant prices we use to estimate financial performance and determine ratings. We focus on a range of outcomes within the price bands to better understand a given entity’s resilience to price volatility to help keep our ratings durable across a range of outcomes.

Source: US Energy Information Administration (daily average prices); Moody’s Investors Service (price estimates and stress prices)

Natural gas supply will continue to outpace demand

Note: Shaded area indicates estimate.
Source: US Energy Information Administration
Holding Companies Converge at the Baa Rating Level, but Exhibit Key Differences
Summary

» Majority of North American utility holding companies are rated Baa, even though they exhibit material differences in several key areas

» Six Key Criteria:
  – Business Risk Profile
  – Regulatory Supportiveness
  – Financial Profile
  – Holding Company Debt
  – Carbon Transition Risk
  – Diversity
Business Risk Profile

- The more regulated, the lower the business risk profile
- LDCs and T&D utilities have the lowest risk
- Substantial exposure to unregulated businesses such as merchant generation increases risk

Source: Moody’s Investors Service
An over-arching credit consideration for holdcos and their regulated utility subsidiaries

Majority of utility subsidiaries operate in relatively credit supportive regulatory jurisdictions in North America

New Mexico is viewed as relatively less credit supportive
Financial Profile

Financial metrics vary considerably - attributed to several factors:

- Regulatory supportiveness
- Exposure to unregulated businesses
- Increased use of parent company leverage

The ratio of CFO pre-W/C to debt vary from a low of around 11% (Emera, Fortis - rated Baa3) to a high of 23% (PG&E, Otter Tail)

Higher Ratio of CFO pre-W/C to Debt

Otter Tail Corporation - 23.0%
PG&E Corporation - 23.0%
Ameren Corporation - 21.5%
Avangrid, Inc. - 21.5%
NextEra Energy, Inc. - 21.5%
OGE Energy Corp. - 21.0%
Edison International - 20.0%
Southwest Gas Holdings, Inc. - 20.0%
Exelon Corporation - 19.5%
IDACORP, Inc. - 18.0%
Public Service Enterprise Group Incorporated - 18.0%
Unitil Corporation - 18.0%
PNM Resources, Inc. - 17.5%
DTE Energy Company - 17.0%
WEC Energy Group, Inc. - 17.0%
CenterPoint Energy, Inc. - 16.0%
CMS Energy Corporation - 16.0%
Eversource Energy - 16.0%
American Electric Power Company, Inc. - 15.5%
Black Hills Corporation - 15.5%
Eversy, Inc. - 15.5%
Consolidated Edison, Inc. - 15.0%
Dominion Energy, Inc. - 15.0%
Duke Energy Corporation - 15.0%
Spire Inc. - 15.0%
Alliant Energy Corporation - 14.5%
Southern Company (The) - 14.5%
Sempra Energy - 14.0%
NiSource Inc. - 13.5%
Entergy Corporation - 13.0%
FirstEnergy Corporation - 13.0%
PPL Corporation - 13.0%
Emera Inc. - 11.0%
Fortis Inc. - 11.0%

Lower Ratio of CFO pre-W/C to Debt

Note: (12-18 month forward view)
Source: Moody’s Investors Service
Holding Company Debt

Higher holding company debt can widen the gap between parent and utility credit strength

Leverage at the parent has often had negative implications for the parent itself

Very high leverage at the parent can affect the credit quality of the whole family, including the operating utilities

Some holdcos have minimal or no parent company debt (IDACORP, PG&E) while others have more than 40% of their consolidated debt at the holding company level (Emera, Fortis, NextEra, Dominion)

NiSource Inc. issues the majority of its consolidated debt at its financing arm, NiSource Finance Corporation (Baa2 stable)
While all regulated utilities face risk from carbon transition, those that own generation are significantly more exposed than those without, however fuel mix is an important mitigant.

Holdcos that only own electric T&D utilities and gas LDCs have the lowest carbon transition risk, while holdcos that typically own integrated utilities with substantial generation from coal have the highest carbon transition risk.

- Evergy and OGE Energy have higher carbon transition risk because the majority of their generation capacity is from fossil fuels (over 40% of their energy generation from coal).
Diversity

- Diversification can support credit quality unless it adds risk
  - Mitigates the impact of economic cyclicality
  - Limits exposure to unfavorable regulatory decisions
  - Diminishes the credit impact of individual subsidiaries on the holdco
- Diversifying into unregulated businesses can increase risk

Source: Moody's Investors Service
4 Credit Impact of Event Risk: Lessons Learned and What it Could Mean in the Future
Three Broad Categories of Event Risks for Non-Financial Corporates

Well known
- Major storms
- LDC pipeline explosions

Evolving
- Climate change-related risk (CA wildfires)

Emerging
- Cybersecurity breaches

Credit impact
- Typically credit negative, but rating change not inevitable
- When possible, reflected in credit rating
The economic impact of natural disasters – United States

Over the last 25 years a large number of US states have faced catastrophic financial losses as a direct result of natural disasters. Initial estimates from the modeling firms suggest that insured catastrophe losses in the third quarter of 2017 will be among the highest in recent history - potentially above $100 billion, as they were in 2005 and 2011.

The Range of Economic Costs of Harvey and Irma (US bil)

<table>
<thead>
<tr>
<th>Hurricane Irma</th>
<th>Hurricane Harvey</th>
</tr>
</thead>
<tbody>
<tr>
<td>58</td>
<td>86</td>
</tr>
<tr>
<td>70.5</td>
<td>97</td>
</tr>
<tr>
<td>83</td>
<td>108</td>
</tr>
</tbody>
</table>

Notes: All estimates are preliminary and subject to revision as further information becomes available. Hurricane Irma figures account for cost to U.S. states and territories only. Source: Moody’s Analytics.
Credit Impact of Event Risk
Major Storms

Relative to Scale, Entergy New Orleans Was Hit Hardest by Storm-Related Costs

<table>
<thead>
<tr>
<th>Source</th>
<th>Number of customer outages (MM)</th>
<th>Total storm cost ($MM)</th>
<th>Rate base for year before storm ($MM)</th>
<th>Total storm cost / rate base</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Island Power Authority</td>
<td>1.0+</td>
<td>775</td>
<td>7,296*</td>
<td>11%</td>
</tr>
<tr>
<td>Jersey Central Power &amp; Light</td>
<td>1</td>
<td>603</td>
<td>2,000</td>
<td>30%</td>
</tr>
<tr>
<td>Public Service Electric and Gas Co.</td>
<td>2.1</td>
<td>295</td>
<td>5,000</td>
<td>6%</td>
</tr>
<tr>
<td>CECONY, Orange and Rockland</td>
<td>1.4</td>
<td>575</td>
<td>21,311</td>
<td>3%</td>
</tr>
<tr>
<td>Connecticut Light &amp; Power</td>
<td>0.9</td>
<td>160</td>
<td>4703</td>
<td>3%</td>
</tr>
<tr>
<td>Hurricane Sandy Total</td>
<td>6.0+</td>
<td>2,407</td>
<td>40,310</td>
<td>6%</td>
</tr>
<tr>
<td>Entergy New Orleans</td>
<td>0.4</td>
<td>630</td>
<td>400</td>
<td>158%</td>
</tr>
</tbody>
</table>

* Long Island Power Authority's rate base is estimated by summing its total capital assets (net of depreciation) and its net working capital.
Source: Company specific sources
Hurricane Sandy affected Northeast US

Source: AccuWeather
Financial ratios of utilities impacted by Hurricane Sandy

Financial ratios remain near historical levels in the year of and subsequent to event

Utility OpCo and HoldCo CFO pre-W/C to Debt (1 year average)

Utility OpCo and HoldCo CFO pre-W/C to Debt (3 year average)

Source: Moody’s Investors Service
Credit Impact of Event Risk - LDC Pipeline Explosions

In most cases, damages are covered by insurance and penalties are very manageable

<table>
<thead>
<tr>
<th>Date</th>
<th>Pacific Gas &amp; Electric</th>
<th>UGI Utilities</th>
<th>Consolidated Edison Company of NY</th>
<th>Puget Sound Energy</th>
<th>Washington Gas Light</th>
<th>Bay State Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>San Bruno, CA</td>
<td>Allentown, PA</td>
<td>New York, NY</td>
<td>Seattle, WA</td>
<td>Silver Spring, MD</td>
<td>Boston, MA</td>
</tr>
<tr>
<td>Investigation completed</td>
<td>Jul-13</td>
<td>Jun-12</td>
<td>Jun-15</td>
<td>Sep-16</td>
<td>Pending</td>
<td>Pending</td>
</tr>
<tr>
<td>Reason</td>
<td>Weld failure caused high-pressure gas transmission line explosion</td>
<td>Crackled cast iron gas main exploded</td>
<td>Failed plastic fusion on gas pipe and pressure from a nearby water pipe bursting resulted in a gas leak</td>
<td>Improperly abandoned gas service line exploded</td>
<td>Meter room explosion in apartment complex</td>
<td>Gas distribution system was over-pressured</td>
</tr>
<tr>
<td>Injuries</td>
<td>8 people killed, 58 people injured, 38 homes destroyed, 70 homes damaged</td>
<td>5 people killed, buildings damaged</td>
<td>2</td>
<td>8 people killed, 50 people injured, five-story buildings destroyed</td>
<td>Several buildings destroyed and damaged</td>
<td>7 people killed, dozens injured, 1 building destroyed</td>
</tr>
<tr>
<td>Penalties and unrecoverable costs</td>
<td>$4.8 billion (Apr-15)</td>
<td>$500 thousand (Jan-13)</td>
<td>$153 million (Feb-17)</td>
<td>$2.75 million (Jun-17)</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Rate base (at time of event)</td>
<td>$21 billion</td>
<td>$700 million</td>
<td>$22 billion</td>
<td>$7 billion</td>
<td>$2 billion</td>
<td>$800 million</td>
</tr>
<tr>
<td>Penalty to rate base</td>
<td>23%</td>
<td>0.1%</td>
<td>0.7%</td>
<td>0.04%</td>
<td>TBD</td>
<td>TBD</td>
</tr>
</tbody>
</table>

Source: Moody’s and company press release
Financial impact of pipeline explosions on LDC financial ratios

Financial ratios remain near historical levels in the year of and subsequent to event

OpCo CFO pre-W/C to Debt

HoldCo CFO pre-W/C to Debt

Source: Moody's Investors Service
California wildfires are increasing in number and severity
California investor owned utility service territories

Edison Electric Institute
Credit Impact of Event Risk - Climate Change/Wildfires

Exhibit A: California Insurance Commission 2017 and 2018 wildfire liability estimates relative to rate base

Exhibit B: Downgrade of all California utilities triggered by liability exposure related to state wildfires

<table>
<thead>
<tr>
<th>Issuer</th>
<th>Senior Unsec. Rating</th>
<th>Outlook</th>
<th>Rating Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pacific Gas &amp; Electric</td>
<td>WR</td>
<td>N/A</td>
<td>Multiple</td>
</tr>
<tr>
<td>PG&amp;E Corp</td>
<td>WR</td>
<td>N/A</td>
<td>Multiple</td>
</tr>
<tr>
<td>SCE</td>
<td>Baa2</td>
<td>Negative</td>
<td>- 3 notches</td>
</tr>
<tr>
<td>Edison International</td>
<td>Baa3</td>
<td>Negative</td>
<td>- 3 notches</td>
</tr>
<tr>
<td>SDG&amp;E</td>
<td>A2</td>
<td>Negative</td>
<td>- 3 notches</td>
</tr>
</tbody>
</table>

Source: California Insurance Commission and Companies
Source: Moody’s Investors Service
California Wildfire Risk

» Response to Strike Force report
  – Cost recovery reform and liquidity important to credit (option 1 & 3)
  – Fixing inverse condemnation (option 2) not adequate on its own
  – Option 3: wildfire fund is the most comprehensive and most challenging

» Wildfire risk is more than a matter of cost allocation
  – The current level of wildfire damages in California is unsustainable
  – Utilities and ratepayers can only absorb so much
  – Will prevention measures be enough to offset climate change?
  – Credit will be driven by both wildfire risk level and cost allocation
Credit Impact of Event Risk – Cybersecurity

» Unknown, no examples to reference….yet.

» The risk is not directly captured in our issuer credit ratings.

» Similar to storm response, governments and regulators will likely provide extraordinary assistance or intervention.

» Utilities with strong balance sheets, jurisdictional diversity, compliance with federal cyber standards, and access to a larger corporate family are better able to protect themselves and recover from a cyber event.

» Cybersecurity is an enterprise risk, and C-suite executives and board of directors must be at the center of managing issuer’s cyber risk.

» Utility state regulators also play a crucial role since they can support, encourage, and even force a utility to focus more on addressing cyber risk.
Lessons Learned

Regardless of the Event Risk, the following can help mitigate the credit impact of these unpredictable risks:

1. Scale
2. Diversity
3. Strength of regulatory relationship
4. How companies finance the loss
5. Parent company financial wherewithal and support
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