



Date: 2/5/24

SOLVENCY WORKSTREAM OF THE CLIMATE AND RESILIENCY (EX) TASK FORCE

Friday, March 8, 2024

3:00 – 4:00 p.m. ET / 2:00 – 3:00 p.m. CT / 1:00 – 2:00 p.m. MT / 12:00 – 1:00 p.m. PT

ROLL CALL

Kathleen A. Birrane, Vice Chair	Maryland	Danielle Smith	Missouri
Mark Fowler	Alabama	Rajesh Bhandula	New York
George Bradner	Connecticut	Scott A. White	Virginia
Alexis Bakofsky	Florida	Mike Kreidler	Washington
Gary D. Anderson	Massachusetts	Amy Malm	Wisconsin

NAIC Support Staff: Dan Daveline

AGENDA

1. Consider Comments on Exposed Document

Exposed Document	Attachment A
Comments Received	Attachment B
<ul style="list-style-type: none"> • Ceres • Joint PC Trades 	

2. Consider Comments on Exposed Blanks Proposal (Exposed at CAT Risk (E) Working Group)

Exposed Proposal	Attachment C
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3. Any Other Matters

4. Adjournment

MEMORANDUM

To: Catastrophe Risk (E) Subgroup of the Property and Casualty Risk Based Capital (E) Working Group

From: Solvency Workstream of the Climate and Resiliency (EX) Task Force

DATE: December 4, 2023

RE: Direction to NAIC Staff on RBC Blanks Proposal

The Solvency Workstream of the Climate and Resiliency (EX) Task Force was tasked with considering the development of climate scenario analysis in connection with one of the key regulatory priorities of the NAIC. In 2022, the Workstream held three public panels learning more about climate scenario analysis and different perspectives from various speakers. Most noteworthy was the panel involving four other insurance supervisors from four other jurisdictions where members of the Workstream heard an array of approaches with respect to this topic.

In 2023, the workstream held three educational sessions where members learned more from NAIC staff and other parties on the use of climate scenario analysis. One of the most significant understandings gained by Workstream members was that most of the commercial CAT modelers have already developed what are referred to as “Climate Conditioned Catalog” versions of their models that reflect adjusted frequency and severity for certain time horizons (e.g., 2040 or 2050). While such conditioned catalogs are generally only available to companies for Hurricane, Wildfire and Flood, the first two of these perils align with the perils included in the NAIC Property Casualty RBC reporting framework. Workstream members believe that if such data was compared side by side with the data already included within the RCAT (PR027) portion of the Property Casualty RBC formula, the regulator would have an estimate of the impact of climate change and could hold conversations with the company’s management to the extent the state believed such information suggested the risk levels could become problematic for the insurer in the future.

To be clear, the Solvency Workstream has no interest in requiring insurers to hold capital up to the levels suggested through the Climate Conditioned Catalog figures, but rather believes the information would be valuable in the previously mentioned conversation with the company management either through the domestic state examination of the company or the domestic state analysis of the company.

It should be noted that the Solvency Workstream does intend to utilize this confidential RBC data for the industry as a whole to issue a public report that would quantify the estimated impact from climate change on the industry similar to what has been produced by other insurance supervisors, however no specific company information would be included in such a report consistent with the NAIC Model Law and states laws on the same.

To that end, the Solvency Workstream of the Climate and Resiliency (EX) Task Force has directed NAIC staff to develop an RBC Blanks proposal to be submitted to your Working Group for exposure by the end of January 2024 in accordance with your required timeline for consideration of a potential change to RBC for year-end 2024.

If you have any questions regarding the basis for our RBC blanks proposal, please contact NAIC staff (Dan Daveline at ddaveline@naic.org) for further clarification.



To the Members of the Solvency Workstream of the Climate and Resiliency (EX) Task Force:

On behalf of [Ceres](#), I am writing to voice our strong support of the climate scenario analysis proposal put forward by the Solvency Workstream of the Climate and Resiliency (EX) Task Force. As an organization engaging [companies](#) and [investors](#) on sustainability issues, we believe this proposal represents an important advancement in assessing and disclosing climate risks in the insurance sector.

The multi-year educational process undertaken by the Workstream, including expert panels and discussions with international insurance supervisors, reflects the complexity of the issue and the care with which this proposal was developed. The concept of utilizing existing Climate Conditioned Catalog scenario data is sensible and balanced. Leveraging Climate Conditioned Catalog scenarios from major catastrophe modelers is a pragmatic approach that utilizes insurers' existing analytical capabilities. It provides regulators with valuable information on potential climate impacts, while recognizing the limitations and uncertainties inherent in long-term forecasting.

Specifically, we agree that comparing varied time horizons of hurricane and wildfire loss projections alongside the current RCAT framework provides regulators with important predictive data on potential climate impacts, without being overly prescriptive or requiring additional capital requirements. As the proposal notes, this facilitates important dialogues between regulators and company management on enhancing risk assessment and mitigation strategies proactively. The aggregated industry-level reporting will also increase transparency for policyholders and the public on how climate risk could affect insurer's risk profiles. This aligns with Ceres' goals of mobilizing investor and business leadership to build a just and sustainable global economy.

From our [engagements](#) with insurers that analyzed the TCFD reports that were submitted, we know many companies are already utilizing climate scenario tools, though practices remain uneven. This proposal helps level the playing field and brings more consistency to insurers' climate risk assessment. The pilot approach is sensible as a first step, allowing for iterative enhancements over time as capabilities advance.

We urge the Working Group to expedite the exposure draft process for this proposal, with a view to implementing for year-end 2024 reporting. The U.S. insurance industry has a vital role to play in enabling the net zero transition and building climate resilience. We commend the NAIC's extensive collaborative process and believe this proposal strikes the right balance of enhancing risk assessment while avoiding prescriptiveness. Thank you for your consideration.

Sincerely,

Steven Rothstein
Managing Director
Accelerator at Ceres, Inc.

Jaclyn de Medicci Bruneau
Director, Insurance
Accelerator at Ceres, Inc.

January 18, 2024

Mr. Dan Daveline
Director, Financial Regulatory Services
National Association of Insurance Commissioners 1100 Walnut Street, Suite 1500
Kansas City, MO 64106-2197

Re: December 4, 2023, Memo from Solvency Workstream of Climate and Resiliency (EX) Task Force to Catastrophe Risk (E) Subgroup of the Property Casualty Risk-Based Capital (E) Working Group

Dear Mr. Daveline:

The American Property Casualty Insurance Association (APCIA)¹, the National Association of Mutual Insurance Companies (NAMIC)², and the Reinsurance Association of America (RAA)³ (collectively, “the Associations”) appreciate the opportunity to comment on the Solvency Workstream’s proposal to require property casualty insurers to perform scenario analysis of their hurricane and wildfire exposure through a catastrophe model’s “Climate Conditioned Catalog”. We also appreciate the extended time to respond granted by the Workstream.

The proposal, contained in a December 14, 2023, referral memo to the Catastrophe Risk (E) Subgroup, would require a property casualty insurer to use a catastrophe model’s Climate Conditioned Catalog to perform climate risk scenario analysis through timeframes extending to 2040 or 2050, and report the results in its annual confidential RBC filing. These results would be compared with the company’s current RCAT filing. This is intended to provide regulators the ability to estimate the impact of climate change and “hold conversations with the company’s management to the extent the state believed such information suggested the risk levels could become problematic for the insurer in the future.”

¹ APCIA is the primary national trade association for home, auto, and business insurers. APCIA promotes and protects the viability of private competition for the benefit of consumers and insurers, with a legacy dating back 150 years. APCIA members include companies of all sizes, structures, and regions—protecting families, communities, and businesses in the U.S. and across the globe.

² NAMIC has more than 1,500-member companies representing 40 percent of the total U.S. property/casualty insurance market. NAMIC member companies serve more than 170 million policyholders and write more than \$323 billion in annual premiums. Our members’ direct written premiums account for 67 percent of homeowners’ insurance and 55 percent of automobile insurance. Through NAMIC advocacy programs it promotes public policy solutions that benefit NAMIC member companies and the policyholders they serve and fosters greater understanding and recognition of the unique alignment of interests between management and policyholders of mutual companies

³ The RAA is a national trade association representing reinsurance companies doing business in the United States. RAA membership is diverse, including reinsurance underwriters and intermediaries licensed in the U.S. and those that conduct business on a cross-border basis. The RAA also has life reinsurance affiliates and insurance-linked securities (ILS) fund managers and market participants that are engaged in the assumption of property/casualty risks. The RAA represents its members before state, federal and international bodies.

We appreciate that the Workstream has performed considerable research and proceeded in an appropriately deliberate manner to consider the issues surrounding climate scenario analysis for the insurance industry. Before a proposal such as this moves forward, however, the Associations believe that several important considerations must first be resolved, and therefore that the proposal is not ready for adoption in the 2024 RBC blank:


- Complexity – Performing the analysis proposed here is not a simple matter. A company would have to choose a Representative Concentration Pathways (RCP) Emission Scenario that it believes is appropriate. Use of multiple scenarios would be quite costly (as discussed below) and staff intensive.
- Migration, Construction Costs & Standards – Factors with greater impact on catastrophe risk than climate change over time include the continued migration of Americans to areas of higher catastrophe risk. According to industry experts, construction cost inflation will also have a significantly higher impact than climate change over time. Conversely, improvements in building code standards such as those led by the Insurance Institute for Building & Home Safety may offset increased risks. All of these aspects must be considered in evaluating future catastrophe risk potential.
- Limited Benefit – It is unclear what benefit company managements or regulators would derive from the comparison of catalog projections 20-30 years into the future with the current data sets used to calculate RCAT. The underlying insurance contracts that assume weather and climate risk are underwritten annually, and these projections would not take into account the changes to pricing, terms, and conditions that occur as the policies are written/renewed or the actions taken by insurers in response to changing weather patterns over time, e.g., managing exposures to avoid concentrations of risk in areas historically more prone to storms.
- Cost – It is our understanding that the catastrophe modeling companies charge separately for use of their climate catalogs, and the cost is extensive in terms of monetary expenditure, IT infrastructure, and staff resources. The significant costs associated with this proposal could be especially problematic for smaller insurers. The cost becomes even more concerning in light of the limited benefit of comparing catalog projections 20-30 years into the future with the current data sets used to calculate RCAT as discussed above. Ultimately, all these costs must be passed along to the consumer.
- Lack of Clarity – It is unclear what regulators would consider to be a “problematic” risk level, or how that would be determined. The “regulatory outcomes” from discussions with management are also unspecified. The focus of any such discussion should include how to ensure the viability of the insurance market in the future and not just to highlight pockets of risk concentration, which might have unintended consequences.
- Aggregation – The memo also states that this information would be used on an aggregate basis to develop a public report on the estimated impact of climate change on the insurance industry. Attempting to aggregate the cat model return period loss results across multiple companies will not provide reliable or useful information. For example, a 1-in-100-year hurricane loss for one company cannot simply be added to a 1-in-100-year hurricane loss for another company. Instead, the aggregation must be done using more granular event simulation details to produce an accurate 1-in-100-year combined company loss estimate.
- Lack of Flexibility -- The proposal only looks at hazard changes on a constant exposure base and makes no allowances for any future changes in exposure or vulnerability.
- Third-Party Model Issues – If the proposal is to move forward, companies should not be limited to the use of third-party models if they have their own models subject to appropriate verification (such as the current “own model” guidance for use in calculating RCAT).

The Associations would be happy to discuss these concerns with the Workstream and the Subgroup. However, we do not believe this proposal is ready to move ahead in the expedited timeframe that the memo seems to contemplate (i.e., adoption for the 2024 RBC blank).

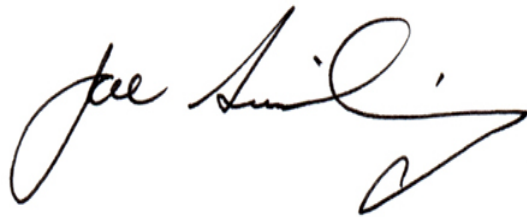
Sincerely,



Stephen W. Broadie
Vice President, Financial & Counsel
American Property Casualty Insurance Association



Colleen W. Scheele
Public Policy Counsel and Director of Financial and
Tax Policy
National Association of Mutual Insurance
Companies



Joseph Sieverling
Senior Vice President and Director of Financial
Services
Reinsurance Association of America

Capital Adequacy (E) Task Force

RBC Proposal Form

- | | | |
|---|--|---|
| <input type="checkbox"/> Capital Adequacy (E) Task Force | <input type="checkbox"/> Health RBC (E) Working Group | <input type="checkbox"/> Life RBC (E) Working Group |
| <input checked="" type="checkbox"/> Catastrophe Risk (E) Subgroup | <input type="checkbox"/> P/C RBC (E) Working Group | <input type="checkbox"/> Longevity Risk (A/E) Subgroup |
| <input type="checkbox"/> Variable Annuities Capital. & Reserve (E/A) Subgroup | <input type="checkbox"/> Economic Scenarios (E/A) Subgroup | <input type="checkbox"/> RBC Investment Risk & Evaluation (E) Working Group |

<p style="text-align: right;">DATE: <u>1/23/24</u></p> <p>CONTACT PERSON: <u>Dan Daveline</u></p> <p>TELEPHONE: _____</p> <p>EMAIL ADDRESS: <u>ddaveline@naic.org</u></p> <p>ON BEHALF OF: <u>Solvency Workstream of the Climate & Resiliency (EX) Task Force</u></p> <p>NAME: _____</p> <p>TITLE: _____</p> <p>AFFILIATION: _____</p> <p>ADDRESS: _____</p>	<p style="text-align: center;">FOR NAIC USE ONLY</p> <p>Agenda Item # <u>2023-17-CR</u></p> <p>Year <u>2024</u></p> <hr/> <p style="text-align: center;">DISPOSITION</p> <p>ADOPTED:</p> <p><input type="checkbox"/> TASK FORCE (TF) _____</p> <p><input type="checkbox"/> WORKING GROUP (WG) _____</p> <p><input type="checkbox"/> SUBGROUP (SG) _____</p> <p>EXPOSED:</p> <p><input type="checkbox"/> TASK FORCE (TF) _____</p> <p><input type="checkbox"/> WORKING GROUP (WG) _____</p> <p><input type="checkbox"/> SUBGROUP (SG) _____</p> <p>REJECTED:</p> <p><input type="checkbox"/> TF <input type="checkbox"/> WG <input type="checkbox"/> SG _____</p> <p>OTHER:</p> <p><input type="checkbox"/> DEFERRED TO _____</p> <p><input type="checkbox"/> REFERRED TO OTHER NAIC GROUP _____</p> <p><input type="checkbox"/> (SPECIFY) _____</p>
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IDENTIFICATION OF SOURCE AND FORM(S)/INSTRUCTIONS TO BE CHANGED

- | | | |
|--|--|--|
| <input type="checkbox"/> Health RBC Blanks | <input checked="" type="checkbox"/> Property/Casualty RBC Blanks | <input type="checkbox"/> Life and Fraternal RBC Blanks |
| <input type="checkbox"/> Health RBC Instructions | <input checked="" type="checkbox"/> Property/Casualty RBC Instructions | <input type="checkbox"/> Life and Fraternal RBC Instructions |
| <input type="checkbox"/> Health RBC Formula | <input checked="" type="checkbox"/> Property/Casualty RBC Formula | <input type="checkbox"/> Life and Fraternal RBC Formula |
| <input type="checkbox"/> OTHER _____ | | |

DESCRIPTION/REASON OR JUSTIFICATION OF CHANGE(S)

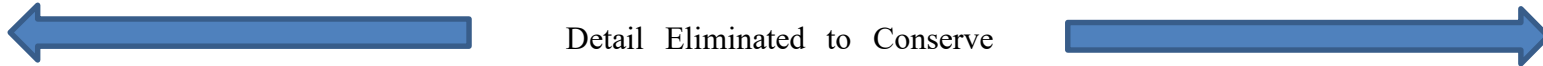
The Solvency Workstream of the Climate & Resiliency (EX) Task Force was tasked with considering the development of climate scenario analysis. The workstream held three public panels on the topic in 2022 and in 2023 learned that commercial CAT modelers have products known as "Climate Conditioned Catalogs" that reflect adjusted frequency and severity for certain time horizons (e.g. 2040 or 2050) that if compared side by side with existing RBC data in PR027 would provide an estimate of climate change for hurricane and wildfire. The information is intended to be useful for domestic regulators holding conversations with insurers that may have a greater degree of risk levels for these perils.

Additional Staff Comments:

** This section must be completed on all forms.

Revised 2-2023

**CALCULATION OF CATASTROPHE RISK CHARGE RCAT
PR027A, PR027B, PR027C, PR027, PR027B2, PR027C2 AND PR027INT**



**DISCLOSURE OF CLIMATE CONDITIONED CAT EXPOSURE
PR027B2, PR027C2**

These disclosures aim at collecting the impact of climate related risks on the modeled losses for the perils of hurricane and wildfire that have been used in PR027B and PR027C respectively. The intent of these disclosures is for informational purposes only and not to determine a new RCAT charge. The impact should be estimated using the following specific instructions:

- Representative Concentration Pathway (RCP) represents a set of projections that are meant to serve as an input for climate modeling, pattern scaling and atmospheric chemistry modeling. For purposes of these instructions, companies should utilize an RCP of 4.5 (or equivalent SSP).
- The impact should be assessed separately under two-time horizons 2040 and 2050.
- Assume a static in-force book of business at year end (no changes to book of business, to reinsurance strategy or to total insured value (TIV) inflation over the projected time horizon).
- The impact can be modeled using either a Climate Conditioned Catalog developed by a commercial CAT model vendor or equivalent view of climate risk internally developed by the insurer or that is the result of adjustments made by the insurer to vendor provided catalogs to represent the own view of climate risk.

The same basic information is required to be completed for this PR027B2 and PR027C2 as the previous pages PR027B and PR027C, including specifically as follows:

Column (1) – Direct and Assumed Modeled Losses

These are the direct and assumed modeled losses per the first footnote. Include losses only; no loss adjustment expenses. For companies that are part of an inter-company pooling arrangement, the losses in this column should be consistent with those reported in Schedule P, i.e. losses reported in this column should be the gross losses for the pool multiplied by the company's share of the pool.

Column (2) – Net Modeled Losses

These are the net modeled losses per the footnote. Include losses only; no loss adjustment expenses.

Column (3) - Ceded Amounts Recoverable

These are the modeled losses ceded under any reinsurance contract. Include losses only, no loss adjustment expenses, and should be associated with the Net Modeled Losses.

In addition, the insurer should provide the following information about the view of climate risk used to determine the climate conditioned modeled losses under each time horizon:

- If a Climate Conditioned Catalog developed by a commercial CAT model vendor is used, provide name and version of the catalog.
- If it is internally developed by the company, provide a brief description of assumptions/adjustments made.

CALCULATION OF CATASTROPHE RISK CHARGE FOR HURRICANE PR027B

Hurricane	Reference	Modeled Losses			
		(1) Direct and Assumed	(2) Net	3† Ceded Amounts Recoverable	(4)†† Ceded Amounts Recoverable with zero Credit Risk Charge
(1) Worst Year in 50	Company Records				
(2) Worst Year in 100	Company Records				
(3) Worst Year in 250	Company Records				
(4) Worst Year in 500	Company Records				
(5) Worst Year in 1000	Company Records				
				(5) Y/N	
(6) Has the company reported above, its modeled hurricane losses using an occurrence exceedance probability (OEP) basis?					
		(6) Amount	Factor	(7) RBC Requirement (C(6) * Factor)	
(7) Net Hurricane Risk	L(2) C(2)		0 1.000	0	
(8) Contingent Credit Risk for Hurricane Risk	L(2) C(3) - C(4)		0 0.018	0	
(9) Total Hurricane Catastrophe Risk (AEP Basis)	If L(6) C(5) = "N", L(9) C(6) = L(7) C(7)+ L(8) C(7), otherwise "0"		0 1.000	0	
(10) Total Hurricane Catastrophe Risk (OEP Basis)	If L(6) C(5) = "Y", L(10) C(6) = L(7) C(7)+ L(8) C(7), otherwise "0"		0 1.000	0	
(11) Total Hurricane Catastrophe Risk	L(9) C(7) + L(10) C(7)			0	

Lines (1)-(5): Modeled losses to be entered on these lines are to be calculated using one of the following NAIC approved third party commercial vendor catastrophe models - AIR, CoreLogic, RMS, KCC, the ARA HurLoss Model, or the Florida Public Model for hurricane; or a catastrophe model that is internally developed by the insurer and has received permission of use by the lead or domestic state. The insurance company's own insured property exposure information should be used as inputs to the model(s). The insurance company may elect to use the modeled results from any one of the models, or any combination of the results of two or more of the models. Each insurer will not be required to utilize any prescribed set of modeling assumptions, but will be expected to use the same data, modeling, and assumptions that the insurer uses in its own internal catastrophe risk management process. An attestation to this effect and an explanation of the company's key assumptions and model selection may be required, and the company's catastrophe data, assumptions, model and results may be subject to examination.

† Column (3) is modeled catastrophe losses that would be ceded under reinsurance contracts. This should be associated with the Net Modeled Losses shown in Column (2).

††Column (4) is modeled catastrophe losses that would be ceded to the categories of reinsurers that are not subject to the RBC credit risk charge (i.e., U.S. affiliates and mandatory pools, whether authorized, unauthorized, or certified).

 Denotes items that must be manually entered on the filing software.

**CALCULATION OF CATASTROPHE RISK CHARGE FOR WILDFIRE PR027C
(For Informational Purposes Only)**

Wildfire	Reference	Modeled Losses			
		(1) Direct and Assumed	(2) Net	3† Ceded Amounts Recoverable	(4)†† Ceded Amounts Recoverable with zero Credit Risk Charge
(1) Worst Year in 50	Company Records				
(2) Worst Year in 100	Company Records				
(3) Worst Year in 250	Company Records				
(4) Worst Year in 500	Company Records				
(5) Worst Year in 1000	Company Records				
				(5) Y/N	
(6) Has the company reported above, its modeled wildfire losses using an occurrence exceedance probability (OEP) basis?					
		(6) Amount	Factor	(7) RBC Requirement (C(6) * Factor)	
(7) Net Wildfire Risk	L(2) C(2)		0 1.000	0	
(8) Contingent Credit Risk for Wildfire Risk	L(2) C(3) - C(4)		0 0.018	0	
(9) Total Wildfire Catastrophe Risk (AEP Basis)	If L(6) C(5) = "N", L(9) C(6) = L(7) C(7)+ L(8) C(7), otherwise "0"		0 1.000	0	
(10) Total Wildfire Catastrophe Risk (OEP Basis)	If L(6) C(5) = "Y", L(10) C(6) = L(7) C(7)+ L(8) C(7), otherwise "0"		0 1.000	0	
(11) Total Wildfire Catastrophe Risk	L(9) C(7) + L(10) C(7)			0	
<u>Disclosure in lieu of model-based reporting:</u>				(8) Direct and Assumed	(9) Net
(12) For a company qualifying for the exemption under PR027INT C (10), complete 11a through 11c below:					
a. Provide the company's gross and net 1-in-100-year wildfire losses on a best estimate basis in lieu of model-based reporting.					
b. Provide details on how the company estimated the amounts shown in 11a.					
c. Provide a narrative disclosure about how the company manages its wildfire risk.					

Lines (1)-(5): Modeled losses to be entered on these lines are to be calculated using one of the following NAIC approved third party commercial vendor catastrophe models - AIR, RMS, or KCC; or a catastrophe model that is internally developed by the insurer and has received permission of use by the lead or domestic state. The insurance company's own insured property exposure information should be used as inputs to the model(s). The insurance company may elect to use the modeled results from any one of the models, or any combination of the results of two or more of the models. Each insurer will not be required to utilize any prescribed set of modeling assumptions, but will be expected to use the same data, modeling, and assumptions that the insurer uses in its own internal catastrophe risk management process. An attestation to this effect and an explanation of the company's key assumptions and model selection may be required, and the company's catastrophe data, assumptions, model and results may be subject to examination.

† Column (3) is modeled catastrophe losses that would be ceded under reinsurance contracts. This should be associated with the Net Modeled Losses shown in Column (2).

††Column (4) is modeled catastrophe losses that would be ceded to the categories of reinsurers that are not subject to the RBC credit risk charge (i.e., U.S. affiliates and mandatory pools, whether authorized, unauthorized, or certified).

Denotes items that must be manually entered on the filing software.

DISCLOSURE OF CLIMATE CONDITIONED CAT EXPOSURE FOR HURRICANE PR027BI
(For Informational Purposes Only)

Climate Conditioned Modeled Losses for 2040

Hurricane	Reference	(1) Direct and Assumed	(2) Net	3† Ceded Amounts Recoverable
(1) Worst Year in 50	Company Records			
(2) Worst Year in 100	Company Records			
(3) Worst Year in 250	Company Records			
(4) Worst Year in 500	Company Records			
(5) Worst Year in 1000	Company Records			

View of climate risk used

(6) If a Climate Conditioned Catalog developed by a commercial CAT model vendor is used, provide name and version of the catalog

[Redacted]

(7) If it is internally developed by the company, provide a brief description of assumptions/adjustments made

[Redacted]

Lines (1)-(5): Modeled losses to be entered on these lines are to be calculated using the same commercial vendor-catastrophe model, or combination of models used to calculate the CAT Risk Charge.

† Column (3) is modeled catastrophe losses that would be ceded under reinsurance contracts. This should be associated with the Net Modeled Losses shown in Column (2).

[Redacted] Denotes items that must be manually entered on the filing software.

DISCLOSURE OF CLIMATE CONDITIONED CAT EXPOSURE FOR HURRICANE PR027BII
(For Informational Purposes Only)

Climate Conditioned Modeled Losses for 2050

Hurricane	Reference	(1) Direct and Assumed	(2) Net	3† Ceded Amounts Recoverable
(1) Worst Year in 50	Company Records			
(2) Worst Year in 100	Company Records			
(3) Worst Year in 250	Company Records			
(4) Worst Year in 500	Company Records			
(5) Worst Year in 1000	Company Records			

View of climate risk used

(6) If a Climate Conditioned Catalog developed by a commercial CAT model vendor is used, provide name and version of the catalog

(7) If it is internally developed by the company, provide a brief description of assumptions/adjustments made

Lines (1)-(5): Modeled losses to be entered on these lines are to be calculated using the same commercial vendor-catastrophe model, or combination of models used to calculate the CAT Risk Charge.

† Column (3) is modeled catastrophe losses that would be ceded under reinsurance contracts. This should be associated with the Net Modeled Losses shown in Column (2).

 Denotes items that must be manually entered on the filing software.

DISCLOSURE OF CLIMATE CONDITIONED CAT EXPOSURE FOR WILDFIRE PR027CI
(For Informational Purposes Only)

Climate Conditioned Modeled Losses for 2040

Wildfire	Reference	(1) <u>Direct and Assumed</u>	(2) <u>Net</u>	3† <u>Ceded Amounts Recoverable</u>
(1) Worst Year in 50	Company Records			
(2) Worst Year in 100	Company Records			
(3) Worst Year in 250	Company Records			
(4) Worst Year in 500	Company Records			
(5) Worst Year in 1000	Company Records			

View of climate risk used

(6) If a Climate Conditioned Catalog developed by a commercial CAT model vendor is used, provide name and version of the catalog

(7) If it is internally developed by the company, provide a brief description of assumptions/adjustments made

Lines (1)-(5): Modeled losses to be entered on these lines are to be calculated using the same commercial vendor catastrophe model, or combination of models used to calculate the CAT Risk Charge.

† Column (3) is modeled catastrophe losses that would be ceded under reinsurance contracts. This should be associated with the Net Modeled Losses shown in Column (2).

Denotes items that must be manually entered on the filing software.

DISCLOSURE OF CLIMATE CONDITIONED CAT EXPOSURE FOR WILDFIRE PR027CII
(For Informational Purposes Only)

Wildfire	Reference	Climate Conditioned Modeled Losses for 2050		
		(1) Direct and Assumed	(2) Net	3† Ceded Amounts Recoverable
(1) Worst Year in 50	Company Records			
(2) Worst Year in 100	Company Records			
(3) Worst Year in 250	Company Records			
(4) Worst Year in 500	Company Records			
(5) Worst Year in 1000	Company Records			

View of climate risk used

(6) If a Climate Conditioned Catalog developed by a commercial CAT model vendor is used, provide name and version of the catalog

(7) If it is internally developed by the company, provide a brief description of assumptions/adjustments made

Lines (1)-(5): Modeled losses to be entered on these lines are to be calculated using the same commercial vendor catastrophe model, or combination of models used to calculate the CAT Risk Charge.

† Column (3) is modeled catastrophe losses that would be ceded under reinsurance contracts. This should be associated with the Net Modeled Losses shown in Column (2).

Denotes items that must be manually entered on the filing software.