TEXAS DEPARTMENT OF INSURANCE
333 Guadalupe, Austin, Texas 78701 ★ PO Box 149104, Austin, Texas 78714-9104
(512) 676-6000 | (800) 578-4677 | TDI.texas.gov | @TexasTDI

August 27, 2018

Xiuyu Li, Actuary
Texas Windstorm Insurance Association
5700 South MoPac Expressway, Building A
Austin, Texas 78749

Via Email: xli@twia.org

Dear Ms. Li:

Attached is a copy of a request from Texas Department of Insurance, Regulatory Policy Division staff for additional supporting information on the Texas Windstorm Insurance Association's 2018 annual rate filing (P-0818-09 and P-0818-10). We are sending the request under Insurance Code Section 2210.354.

Insurance Code Section 2210.354 requires TWIA to provide the information to the Commissioner not later than the fifth day after the date TWIA receives the request for additional supporting information. If you need additional time, you must submit a request to the Commissioner for his approval.

Sincerely,

Norma Garcia

Norma Garcia
General Counsel
Texas Department of Insurance

CC: Jerry Fadden, Chief Financial Officer, TWIA jfadden@twia.org
Cindy Johnson, Manager, Legal & Compliance, TWIA cjohnson@twia.org

Victoria Ortega

From:	Brian Ryder
Sent:	Friday, August 24, 2018 6:19 PM
To:	ChiefClerk; Norma Garcia
Cc:	J'ne Byckovski
Subject:	2018 TWIA Annual Rate Filings; TDI Staff Request for Additional Information
Attachments:	TDI Staff Request for Additional Information.pdf

Dear Ms. Garcia and Ms. Ortega,

Attached please find a request from TDI staff for additional supporting information for TWIA's 2018 annual rate filings. TDI staff requests this information under Texas Insurance Code Section 2210.354(a).

Sincerely,

Brian Ryder, FCAS, MAAA
Senior Actuary & Team Lead, Data Services Team
Regulatory Policy Division - Property and Casualty Actuarial Office
(512) 676-6709
brian.ryder@tdi.texas.gov

Texas Department of Insurance
333 Guadalupe Street | Austin, Texas 78701
(800) 578-4677 | tdi.texas.gov | @TexasTDI

Under Texas Insurance Code 2210.354(a), TDI staff requests the following additional information regarding the 2018 annual rate filing submitted by the Texas Windstorm Insurance Association (TDI filing numbers S658011 and S658022).

General (Both Filings)

1. For each filing, please provide the underlying Excel workbooks and data files. These should be like the files named 2017 commercial indication.xls, 2017 residential indication.xls, and 2017 data.xls that TWIA provided with its 2017 annual rate filing.

Information Required by the Texas Administrative Code (Both Filings)

2. Please provide **all** information required by Title 28 Texas Administrative Code §5.4136 (see web link). With respect to the requirements of §5.4136(3), TWIA must provide an exhibit that details the calculation of the 18.6 percent provision for the repayment of the public securities and demonstrates the provision is adequate.
http://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=28&pt=1&ch=5&rl=4136

TWIA Rating Rules Manual ("rating plan") (Both Filings)

3. Please provide the TDI filing number for the December 2016 filing where TWIA filed the "Exhibit E" that TWIA used as the basis for its redlined version. Please either provide the State Tracking Number (SERFF), a commissioner's order number (approving the filing), or the petition number for the filing.

4. If the filing described in number 3 does not exist, please provide a redlined version that compares the clean copy rating rules to TWIA's previously filed "Exhibit E." Please provide the applicable TDI filing number to the previously filed Exhibit E. Please either provide the State Tracking Number (SERFF), a commissioner's order number, or the petition number for the filing.

5. Please provide an itemized listing of **each** change in TWIA's rating rules. For each change contained in the redlined document ("1. TWIA Rating Rules_Redline_Final Version.pdf"), please provide the following:

    a. A description of the change.
    b. The reason for the change.
    c. If a table or rating rule is being moved within the rating rules, provide the page number in the redlined document the table or rating rule is being moved from and page number in the redlined document the table or rating rule is being moved to.
    d. Identify each table or rating rule that is being moved to TWIA's Instructions and Guidelines Manual.
    e. Identify each table or rating rule that is being moved from TWIA's Instructions and Guidelines Manual to the rating rules.
    f. Identify each table or rating rule that is new.
    g. For each change in the rating rules please say whether the change has a **rate or premium impact** on **any** policyholder. If so, for each change please describe the maximum premium impact, the minimum premium impact, and the average premium impact. Rate or premium impacts to an individual policyholder can result from:

i. Changes in TWIA's base rates as described in TWIA's accompanying supporting document ("TWIA_2018_Rate_Rule_Filing.pdf").
ii. Changes in a risk's eligibility for a credit or surcharge.
iii. Changes in how an individual risk is classified, including changes in the base rates or supplementary rating factors that apply to the risk. Supplementary rating factors mean any rating factor, other than the base rate, used to determine a policyholder's premium. This includes such things as territory factors, construction factors, deductible factors, discounts, surcharges, and any other rating factors.
iv. Changes to supplementary rating factors. This includes the introduction of new supplementary rating factors and the elimination of existing supplementary rating factors.

6. Please review Rule I.H (pg. 12, clean copy; page 23, redlined version). This rule appears to be inconsistent with Insurance Code §§2210.259 and 2210.258(c), as follows:
   a. The law (§2210.258(c)(1)) does not require that applicants must have been non-renewed before December 31, 2015. It only requires that they were non-renewed after June 19, 2009.
   b. The law (§2210.258(c)(3)) provides the condition that no construction, alteration, remodeling, enlargement, or repair of, or addition to the structure have occurred after the cancelation or nonrenewal and before the applicant applied for coverage through TWIA. This is not reflected in TWIA's rating rules.
   c. Rule I.H. does not appear to limit its application to residential risks, but §2210.259(a-1) only applies to residential risks.

   Please amend Rule I.H. to be consistent with §§2210.259 and 2210.258(c). Please be advised that notwithstanding TWIA's rating rules, TWIA must still comply with the requirements of §§2210.259 and 2210.258(c).

Modeled Hurricane Losses (Exhibit 7, Both Filings)

7. For each hurricane model, please provide the documentation TWIA relied upon with respect to Actuarial Standard of Practice No. 38 ("Using Models Outside the Actuary's Area of Expertise"), as described on page 2 of TWIA's commercial and residential rate indications (pdf pages 6 and 60, respectively).

8. For each hurricane model (AIR, RMS), please provide the hurricane event set underlying the modeled expected hurricane losses found in Exhibits 7 and 8. These should contain at least the following information:

   AIR Model
   a. The event "year." This is the year the modeled event "occurred" and is a number from 1 to 10,000.
   b. An event ID (a unique number or alphanumeric identifying the event)
   c. TWIA's estimated gross losses from the event. If separate amounts are not available for commercial and residential property, please provide the combined amount. Otherwise please provide separate amounts for commercial and residential property.
   d. Storm intensity at first landfall using the Saffir-Simpson scale.

e. The landfalling state (Texas, Louisiana, etc.) for the event. If only the initial landfalling state is available in cases with multiple landfalling states (e.g., Florida, then Texas), please indicate that landfalling state is the site of the initial landfall.
f. The landfalling county (Galveston, Brazoria, etc.) for the event. If only the initial landfalling county is available in cases with multiple landfalling states or counties, then please indicate that landfalling county is the site of the initial landfall.

RMS Model

a. An event ID (a unique number or alphanumeric identifying the event)
b. The landfalling state (Texas, Louisiana, etc.) for the event. If only the initial landfalling state is available in cases with multiple landfalling states (e.g., Florida, then Texas), please indicate that landfalling state is the site of the initial landfall.
c. The landfalling county (Galveston, Brazoria, etc.) for the event. If only the initial landfalling county is available in cases with multiple landfalling states or counties, then please indicate that landfalling county is the site of the initial landfall.
d. Storm intensity at first landfall using the Saffir-Simpson scale.
e. The historical event rate.
f. TWIA's estimated gross losses from the event. If separate amounts are not available for commercial and residential property, please provide the combined amount. Otherwise please provide separate amounts for commercial and residential property.

Gross losses for both models should include demand surge and exclude storm surge.

9. Do TWIA policies provide coverage for storm surge?

10. If the answer to question 9 is no, then please explain why TWIA is including a provision to cover some storm surge losses in its rates.

11. Separately for commercial property and residential property, and separately for the AIR and RMS hurricane models, please provide TWIA's modeled hurricane losses **without demand surge**. This should be the equivalent to the "total" amounts shown on Exhibits 7 and 8, Sheet 2, column (3), except with demand surge turned **off**.

Net Cost of Reinsurance (Exhibit 11, Sheet 2, Both Filings)

12. Are there any provisions in TWIA's reinsurance contracts that adjust the premium up or down for changes in TWIA's exposures after the effective date of the contract? For example, if TWIA's exposures dropped 25 percent on July 1 (one month after the contract) is there an adjustment to the reinsurance premium? If the answer differs by reinsurance layer (for example, traditional reinsurance vs. Alamo Re Series 2018-1 Notes vs. Alamo Re Series 2017-1 Notes) please provide separate answers for each layer.

13. If there is such a provision, please explain how the provision works. If the answer differs by reinsurance layer (for example, traditional reinsurance vs. Alamo Re Series 2018-1 Notes vs. Alamo Re Series 2017-1 Notes) please provide separate answers for each layer.

14. If there is such a provision, how did TWIA consider this when determining the reinsurance premium on Exhibit 11, Sheet 2, line (1)?

Questions 15 – 17 relate to line (1). The note for line (1) states "From TWIA reinsurance contract effective June 1, 2018, through May 31, 2019."

15. Is this the premium amount stated in the reinsurance contract?

16. Is this amount net or gross of broker's discount? If gross, what is the amount of broker's discount?

17. If this is not the amount stated in the contract, please provide actuarial support for line (1). The support must begin with the premium stated in the contract and show the calculations step-by-step how TWIA arrived at line (1) and describe all material assumptions used.

18. The note for line (4) states the formula is (2c) x $[(1 + (3))^{1.000}]$. This implies a one-year trend period. Please provide an explanation of how TWIA determined a one-year trend period was the most appropriate when the average exposure date is November 30, 2017, and the mid-point of the hurricane season is September 1, 2018. Please provide all material assumptions used.

19. Line (5) appears to contain an arithmetic error. If so, please correct. If not, please provide the correct formula.

Commercial Premium Trend (Exhibit 3, Sheet 2, Commercial Rate Filing)

20. For each quarter 2Q 2009 through 4Q 2017, please provide the corresponding **written policies** for the written premiums contained in Exhibit 3, Do not provide policies in force.

21. Exhibit 3, Sheet 2 indicates TWIA based its premium trend on the average written premium (at current rate level) per $1,000 of coverage. How did TWIA account for changes in the average amount of coverage per policy?

Residential Non-Hurricane Loss Development (Exhibit 3, Sheet 1, Residential Rate Filing)

22. Please provide loss development triangles that contain TWIA-specific residential paid loss data using similar accident years-ending and similar evaluation points.

23. Please explain why TWIA used industry loss development rather than TWIA-specific loss development, especially considering there are TWIA-specific laws with respect to claims-handing (Chapter 2210, Subchapter L-1).

Residential Premium Trend (Exhibit 3, Sheet 2, Residential Rate Filing)

24. Please provide the corresponding **written policies** for the written premiums contained on sheet 2. Provide this for each of the quarters 2Q 2008 through 4Q 2017. Do not provide policies in force.

25. Sheet 2 indicates TWIA based its premium trend on the average written premium (at current rate level) per $1,000 of coverage. How did TWIA account for changes in the average amount of coverage per policy?

Xiuyu Li, ACAS, MAAA
Actuary

September 4, 2018

Norma Garcia
General Counsel
Texas Department of Insurance
333 Guadalupe Street
Austin, TX 78714-9104

RE: Request on Texas Windstorm Insurance Association Annual Rate Filing

Dear Mrs. Garcia

Attached is a copy of TWIA's responses to the request from the Office of Public Insurance Counsel for additional supporting information on the Texas Windstorm Insurance Association's 2018 annual rate filing (P-0818-09 and P—08l8-10). We are providing information under Insurance Code Section 2210.354.

If you or your staff have any questions, or any further action is required on my part, please contact Jerry Fadden or me.

Respectfully,

Xiuyu Li

CC: Micah Mireles, Office of the General Counsel/Chief Clerk Micah.Mireles@tdi.texas.gov

Elisabeth Ret Elisabeth.Ret@tdi.texas.gov

General (Both Filings)

1. For each filing, please provide the underlying Excel workbooks and data files. These should be like the files named 2017 commercial indication.xls, 2017 residential indication.xls, and 2017 data.xls that TWIA provided with its 2017 annual rate filing.

2018 Data.xls

2018 Commercial Indications

2018 Residential Indications

Information Required by the Texas Administrative Code (Both Filings)

2. Please provide **all** information required by Title 28 Texas Administrative Code §5.4136 (see web link). With respect to the requirements of §5.4136(3), TWIA must provide an exhibit that details the calculation of the 18.6 percent provision for the repayment of the public securities and **demonstrates the provision is adequate**.

http://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=28&pt=1&ch=5&rl=4136

Title 28 Texas Administrative Code §5.4136

While there are outstanding public securities payable under Insurance Code §§2210.612, 2210.613, or 2210.6131, or outstanding class 1 public securities issued before June 1, 2015, the association:

(1) must consider its obligations for the payment of public securities payable under Insurance Code §§2210.612, 2210.613, or 2210.6131, and class 1 public securities issued before June 1, 2015, including the additional amount of any debt service coverage that the association determines is required for the issuance of marketable public securities in developing its rates;

The only outstanding public securities payable under insurance code §§2210.612, 2210.613, or 2210.6131, or outstanding class 1 public securities issued before June 1, 2015 are class I bond issued in 2014 (the "Series 2014 Notes").

Exhibit 11.1 line (8) Outstanding Class 1 Public Security Repayment ~18.6 percent provision is applied to incorporate debt service (mandatory interest and principal payments) of this bond.

In addition to the annual principle and interest payments, TWIA also incurs annual bond issuance expense. TWIA incurred $302,769 and $171,536 of bond issuance expenses in 2016, 2017, respectively, which are included in General Expense provision in Exhibit 11.1 line (5)

(2) must include in a rate filing submitted to the department an analysis that demonstrates that the filed rates produce premium sufficient to provide for at least:

(A) the expected operating costs of the association, including expected nonhurricane wind and hail losses and loss adjustment expenses; and

(B) the expected payment of public security obligations payable under Insurance Code §§2210.612, 2210.613, or 2210.6131, and class 1 public securities issued before June 1, 2015, including any contractual coverage amount the association determines is required for the issuance of marketable public securities, during the period in which the rates will be in effect; and

TWIA 2018 rate filing for commercial – Exhibit I adjusted to assume 0% hurricane loss and LAE provision

Exhibit 1

Texas Windstorm Insurance Association

Commercial Property - Wind & Hail

Rate Level Review

Summary of Indicated Rate Change

By Method for Projecting Hurricane Loss & LAE

Hurricane Projection Method	Indicated Loss & LAE Ratio Hurricane	Non-Hurricane	Fixed Expenses	Total	Permissible LLAE Ratio	Indicated Rate Change	Proposed Rate Change
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Using Experience and Models	0.0%	9.1%	40.3%	49.4%	77.0%	-36%	+10.0%
Using Actual Industry Experience	0.0%	9.1%	40.3%	49.4%	77.0%	-36%	
Using Hurricane Models	0.0%	9.1%	40.3%	49.4%	77.0%	-36%	

Notes:

(2) Exhibit 5

(3) Exhibit 2, Sheet 1

(4) Exhibit 11

(5) = (2) + (3) + (4)

(6) Exhibit 11

(7) = (5) / (6) - 1

(8) Selected

The indicated commercial rate change is -36%, assuming 0 hurricane provision, while the filed rate change is 10%. Therefore the filed rates produce premium sufficient to provide for at least (A) and (B)

TWIA 2018 rate filing for residential – Exhibit I assuming 0 hurricane provision

Exhibit 1

Texas Windstorm Insurance Association

Residential Property - Wind & Hail

Rate Level Review
Summary of Indicated Rate Change
By Method for Projecting Hurricane Loss & LAE

Hurricane Projection Method	Indicated Loss & LAE Ratio Hurricane	Non-Hurricane	Fixed Expenses	Total	Permissible LLAE Ratio	Indicated Rate Change	Filed Rate Change
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Using Experience and Models	0.0%	15.6%	40.3%	55.9%	77.0%	-27%	+10.0%
Using Actual Industry Experience	0.0%	15.6%	40.3%	55.9%	77.0%	-27%	
Using Hurricane Models	0.0%	15.6%	40.3%	55.9%	77.0%	-27%	

Notes:
- (2) Exhibit 5
- (3) Exhibit 2, Sheet 1
- (4) Exhibit 11, Sheet 1
- (5) = (2) + (3) + (4)
- (6) Exhibit 11, Sheet 1
- (7) = (5) / (6) - 1
- (8) Selected

The indicated commercial rate change is -27%, assuming a 0% hurricane provision, while the filed rate change is 10%. Therefore the filed rates produce premium sufficient to provide for at least (A) and (B)

(3) must include a cost component in the rates sufficient to at least provide for the expected payment of public security obligations for public securities payable under Insurance Code §§2210.612, 2210.613, or 2210.6131, and class 1 public securities issued before June 1, 2015, during the period in which the rates will be in effect.

Outstanding class I bond amortization schedule:

TEXAS WINDSTORM INSURANCE ASSOCIATION

PRELIMINARY AMORTIZATION SCHEDULE- PRE EVENT CLASS 1 BONDS

	TOTAL ALL TRANCHES				
		Principal Borrowed	$500,000,000		
		Payments			
Date	Total	Principal	Interest	Balance	Eff Rate
09/30/14				500,000,000	
01/01/15	9,779,467	0	9,779,467	500,000,000	7.738%
07/01/15	19,344,000	0	19,344,000	500,000,000	7.738%
01/01/16	19,344,000	0	19,344,000	500,000,000	7.738%
07/01/16	60,944,000	41,600,000	19,344,000	458,400,000	7.738%
01/01/17	18,252,000	0	18,252,000	458,400,000	7.963%
07/01/17	62,052,000	43,800,000	18,252,000	414,600,000	7.963%
01/01/18	17,102,250	0	17,102,250	414,600,000	8.250%
07/01/18	63,202,250	46,100,000	17,102,250	368,500,000	8.250%
01/01/19	15,200,625	0	15,200,625	368,500,000	8.250%
07/01/19	65,100,625	49,900,000	15,200,625	318,600,000	8.250%
01/01/20	13,142,250	0	13,142,250	318,600,000	8.250%
07/01/20	67,142,250	54,000,000	13,142,250	264,600,000	8.250%
01/01/21	10,914,750	0	10,914,750	264,600,000	8.250%
07/01/21	69,414,750	58,500,000	10,914,750	206,100,000	8.250%
01/01/22	8,501,625	0	8,501,625	206,100,000	8.250%
07/01/22	71,801,625	63,300,000	8,501,625	142,800,000	8.250%
01/01/23	5,890,500	0	5,890,500	142,800,000	8.250%
07/01/23	74,490,500	68,600,000	5,890,500	74,200,000	8.250%
01/01/24	3,060,750	0	3,060,750	74,200,000	8.250%
07/01/24	77,260,750	74,200,000	3,060,750	0	8.250%
	751,940,967	500,000,000	251,940,967		

Exhibit 11.1 line (8) Outstanding Class 1 Public Security Repayment -18.6 percent provision is applied in the rate indications to address interest and principal payment of the Series 2014 Notes, only outstanding bond issued by TWIA.

Class I Public Security Annual Debt Service is $80,304,500. The calculated 2019 prospective earned premium at present rate is $431,390,335. 18.6% is derived as the ratio of $80,304,500 to $431,390,335.

Annual principle and Interest payment

= sum of highlighted parts in the above amortization schedule

= 0 + 17,102,250 + 46,100,000 + 17,102,250

= 80,304,500

2019 prospective earned premium at present rate ($431,390,335) comes from Exhibit 11.2 line (7)

TWIA Rating Rules Manual ("rating plan") (Both Filings)

For responses to question 3, 4, 5, 6, please refer to the attached below.

Response to 08.27.18 TDI Staff Request

3. Please provide the TDI filing number for the December 2016 filing where TWIA filed the "Exhibit E" that TWIA used as the basis for its redlined version. Please either provide the State Tracking Number (SERFF), a commissioner's order number (approving the filing), or the petition number for the filing.

4. If the filing described in number 3 does not exist, please provide a redlined version that compares the clean copy rating rules to TWIA's previously filed "Exhibit E." Please provide the applicable TDI filing number to the previously filed Exhibit E. Please either provide the State Tracking Number (SERFF), a commissioner's order number, or the petition number for the filing.

5. Please provide an itemized listing of **each** change in TWIA's rating rules. For each change contained in the redlined document ("1. TWIA Rating Rules_Redline_Final Version.pdf"), please provide the following:
a. A description of the change.
b. The reason for the change.
c. If a table or rating rule is being moved within the rating rules, provide the page number in the redlined document the table or rating rule is being moved from and page number in the redlined document the table or rating rule is being moved to.
d. Identify each table or rating rule that is being moved to TWIA's Instructions and Guidelines Manual.
e. Identify each table or rating rule that is being moved from TWIA's Instructions and Guidelines Manual to the rating rules.
f. Identify each table or rating rule that is new.

g. For each change in the rating rules please say whether the change has a **rate or premium impact** on **any** policyholder. If so, for each change please describe the maximum premium impact, the minimum premium impact, and the average premium impact. Rate or premium impacts to an individual policyholder can result from:
2/4

i. Changes in TWIA's base rates as described in TWIA's accompanying supporting document ("TWIA_2018_Rate_Rule_Filing.pdf").
ii. Changes in a risk's eligibility for a credit or surcharge.

iii. Changes in how an individual risk is classified, including changes in the base rates or supplementary rating factors that apply to the risk. Supplementary rating factors mean any rating factor, other than the base rate, used to determine a policyholder's premium. This includes such things as territory factors, construction factors, deductible factors, discounts, surcharges, and any other rating factors.
iv. Changes to supplementary rating factors. This includes the introduction of new supplementary rating factors and the elimination of existing supplementary rating factors.

6. Please review Rule I.H (pg. 12, clean copy; page 23, redlined version). This rule appears to be inconsistent with Insurance Code §§2210.259 and 2210.258(c), as follows:

a. The law (§2210.258(c)(1)) does not require that applicants must have been non-renewed before December 31, 2015. It only requires that they were non-renewed after June 19, 2009.

b. The law (§2210.258(c)(3)) provides the condition that no construction, alteration, remodeling, enlargement, or repair of, or addition to the structure have occurred after the cancelation or nonrenewal and before the applicant applied for coverage through TWIA.
This is not reflected in TWIA's rating rules.

c. Rule I.H. does not appear to limit its application to residential risks, but §2210.259(a-1) only applies to residential risks.

Please amend Rule I.H. to be consistent with §§2210.259 and 2210.258(c). Please be advised that notwithstanding TWIA's rating rules, TWIA must still comply with the requirements of §§2210.259 and 2210.258(c).

<u>Modeled Hurricane Losses (Exhibit 7, Both Filings)</u>
7. For each hurricane model, please provide the documentation TWIA relied upon with respect to Actuarial Standard of Practice No. 38 ("Using Models Outside the Actuary's Area of Expertise"), as described on page 2 of TWIA's commercial and residential rate indications (pdf pages 6 and 60, respectively).

ASOP_Resources_Rel
ative_to_AIR_Catastrop

RMS_ASOP_38_HU_PUBLIC_RL17_1701.pdf

Texas Windstorm Insurance Association
5700 South MoPac Expressway, Building A, Austin, Texas 78749 ● P.O. Box 99090, Austin, Texas 78709-9090
512-899-4900 / Fax 512-899-4950

8. For each hurricane model (AIR, RMS), please provide the hurricane event set underlying the modeled expected hurricane losses found in Exhibits 7 and 8. These should contain at least the following information:

AIR Model

a. The event “year.” This is the year the modeled event “occurred” and is a number from 1 to 10,000.

b. An event ID (a unique number or alphanumeric identifying the event)

c. TWIA’s estimated gross losses from the event. If separate amounts are not available for commercial and residential property, please provide the combined amount. Otherwise please provide separate amounts for commercial and residential property.

d. Storm intensity at first landfall using the Saffir-Simpson scale.

e. The landfalling state (Texas, Louisiana, etc.) for the event. If only the initial landfalling state is available in cases with multiple landfalling states (e.g., Florida, then Texas), please indicate that landfalling state is the site of the initial landfall.

f. The landfalling county (Galveston, Brazoria, etc.) for the event. If only the initial landfalling county is available in cases with multiple landfalling states or counties, then please indicate that landfalling county is the site of the initial landfall.

Please refer to the attached Excel file

TWIA_20171130_Even
tLosses_HULTNT_wDS

RMS Model

a. An event ID (a unique number or alphanumeric identifying the event)

b. The landfalling state (Texas, Louisiana, etc.) for the event. If only the initial landfalling state is available in cases with multiple landfalling states (e.g., Florida, then Texas), please indicate that landfalling state is the site of the initial landfall.

c. The landfalling county (Galveston, Brazoria, etc.) for the event. If only the initial landfalling county is available in cases with multiple landfalling states or counties, then please indicate that landfalling county is the site of the initial landfall.

d. Storm intensity at first landfall using the Saffir-Simpson scale.

e. The historical event rate.

f. TWIA's estimated gross losses from the event. If separate amounts are not available for commercial and residential property, please provide the combined amount. Otherwise please provide separate amounts for commercial and residential property.

Please refer to the attached Excel file

TWIA_20171130_EventLosses_HULTNT_wDS

9. Do TWIA policies provide coverage for storm surge?

TWIA policies cover windstorm and hail losses and exclude losses caused by floods, including those caused by storm surge.

10. If the answer to question 9 is no, then please explain why TWIA is including a provision to cover some storm surge losses in its rates.

TWIA includes a provision representing 10% of the increase in modeled average annual losses due to storm surge in its hurricane loss provision for both commercial and residential. This provision is considered necessary because TWIA anticipates that, while its policies exclude flood losses, including losses attributable to storm surge, storm surge can be accompanied by damage for which the cause of loss (wind vs. flood) is difficult to determine on account of the observational evidence available after the storm (e.g., slab claims). This provision is intended to cover the additional losses that TWIA would pay in settlement of these claims.

11. Separately for commercial property and residential property, and separately for the AIR and RMS hurricane models, please provide TWIA's modeled hurricane losses **without demand surge**. This should be the equivalent to the "total" amounts shown on Exhibits 7 and 8, Sheet 2, column (3), except with demand surge turned **off**.

RMS RiskLink v17 Hurricane Loss Estimates
County Limits and AAL - Net of Deductibles
*Historical & Near-Term Event Rates **excluding** Loss Amplification and Storm Surge*

REPORTED COUNTY	HUR LOSS - Historical COMMERCIAL	RESIDENTIAL
Aransas	$1,047,615	$4,622,677
Brazoria	$1,942,121	$17,355,553
Calhoun	$516,201	$3,241,676
Cameron	$4,977,934	$5,445,868
Chambers	$192,061	$2,474,980
Galveston	$14,680,700	$54,063,907
Harris	$245,215	$2,856,261
Jefferson	$1,271,887	$12,994,043
Kenedy	$1,373	$15,148
Kleberg	$90,261	$321,078
Matagorda	$401,248	$3,231,296
Nueces	$6,473,595	$23,277,741
Refugio	$36,377	$190,492
San Patricio	$490,899	$3,955,566
Willacy	$69,719	$237,158
TOTAL	**$32,437,207**	**$134,283,444**

Note:

1) Losses exclude loss amplification and storm surge. Hurricane losses are based on historical event rates.

2) No LAE factor was applied to losses.

Texas Windstorm Insurance Association

Inforce Exposure as of 11/30/2017 - Excluding Depop Policies

AIR Touchstone v5 Hurricane Loss Estimates

County Limits and AAL - Net of Deductibles

Historical & Near-Term Event Sets ***excluding*** *Demand Surge and Storm Surge*

REPORTED COUNTY	HUR LOSS - Historical COMMERCIAL	RESIDENTIAL
Aransas	$1,013,760	$4,985,548
Brazoria	$1,559,276	$17,189,309
Calhoun	$326,436	$2,780,568
Cameron	$3,243,837	$4,590,694
Chambers	$143,260	$2,480,458
Galveston	$19,568,753	$69,891,135
Harris	$275,522	$4,175,106
Jefferson	$1,115,360	$13,141,404
Kenedy	$783	$6,669
Kleberg	$35,930	$206,457
Matagorda	$283,097	$3,101,260
Nueces	$5,722,124	$28,609,354
Refugio	$17,037	$133,479
San Patricio	$358,063	$3,915,892
Willacy	$43,349	$167,851
TOTAL	**$33,706,587**	**$155,375,182**

Note:

1) Losses exclude demand surge and storm surge. Hurricane losses are based on historical event sets.

2) No LAE factor was applied to losses.

Net Cost of Reinsurance (Exhibit 11, Sheet 2, Both Filings)

12. Are there any provisions in TWIA's reinsurance contracts that adjust the premium up or down for changes in TWIA's exposures after the effective date of the contract? For example, if TWIA's exposures dropped 25 percent on July 1 (one month after the contract) is there an adjustment to the reinsurance premium? If the answer differs by reinsurance layer (for example, traditional reinsurance vs. Alamo Re Series 2018-1 Notes vs. Alamo Re Series 2017-1 Notes) please provide separate answers for each layer.

ARTICLE 7 of the Property Catastrophe Aggregate Excess of Loss Reinsurance Contract (the "traditional reinsurance contract"), which provides coverage in the aggregate of 71.4% of $1.4 billion excess of $2.8 billion, provides a one-time adjustment to the premium based on changes in TWIA's exposure after the effective date of the contract (June 1, 2018). The deposit premium is based on TWIA TIV as of November 30, 2017, the adjustment to the deposit premium is based on TWIA TIV as of October 31, 2018.

The "Second Season Cover", which was purchased in 2017, became effective June 1, 2018 as a result of the depletion of the CRTF following Hurricane Harvey. It provides coverage of 50% of $800 million in aggregate losses excess of $2.0 billion. This contract provided a one-time adjustment to the premium in 2017 based on changes in TWIA's exposure after the effective date of the contract. There is no adjustment to the premium based on changes in TWIA's exposure in 2018.

Premiums associated with the Alamo Re Series 2018-1 Notes and the Alamo Re Series 2017- 1 Notes paid to Hannover Re adjust annually based on the reset provisions contained in the accompanying reinsurance agreement.

13. If there is such a provision, please explain how the provision works. If the answer differs by reinsurance layer (for example, traditional reinsurance vs. Alamo Re Series 2018-1 Notes vs. Alamo Re Series 2017-1 Notes) please provide separate answers for each layer.

The traditional reinsurance contract specifies that the reinsurance premium shall be adjusted at a rate of 0.0853% applied to the Associations actual Total Insured Value (TIV) at October 31, 2018.

The Second Season cover premium was adjusted in 2017. The premium is fixed for 2018.

The premium amounts for the Alamo Re Series 2018-1 Notes were set at the initial issuance and the based on the "Initial Risk Interest Spread" (3.25% per annum) multiplied by the "Original Limit" ($400.0 million). The annual reset calculations for the Alamo Re Series 2018-1 Notes provide that the "Reset Agent" (AIR) perform certain analysis using updated data and agreed hurricane models to provide TWIA a revised risk spread calculation based on the model output and updated attachment points for the underlying reinsurance.

The premium amount associated with Alamo Re Series 2017- 1 Notes were based on the annual reset provisions contained therein, which are similar to the Series 2018-1 Notes.

14. If there is such a provision, how did TWIA consider this when determining the reinsurance premium on Exhibit 11, Sheet 2, line (1)?

Reinsurance premium on Exhibit 11, Sheet 2, line (1) is sum of payments for both traditional reinsurance and CAT bonds. $55,003,916 of CAT bond payments is fixed with no further adjustments for the subject period of 6/1/2018 to 5/31/2018. $51,192,373 of traditional reinsurance premium was derived from forecast TIV through 10/31/2018.

Questions 15 – 17 relate to line (1). The note for line (1) states "From TWIA reinsurance contract effective June 1, 2018, through May 31, 2019."

15. Is this the premium amount stated in the reinsurance contract?

No

16. Is this amount net or gross of broker's discount? If gross, what is the amount of broker's discount?

The premium amount is net of any broker's discount. The broker's discount totals $5,480,473. as indicated on the Excel file attached below.

17. If this is not the amount stated in the contract, please provide actuarial support for line (1). The support must begin with the premium stated in the contract and show the calculations step-by step how TWIA arrived at line (1) and describe all material assumptions used.

Please refer to the attached Excel file

TWIA 2018-2019 Reinsurance Program

18. The note for line (4) states the formula is (2c) x $[(1 + (3))_{1.000}]$. This implies a one-year trend period. Please provide an explanation of how TWIA determined a one-year trend period was the most appropriate when the average exposure date is November 30, 2017, and the mid-point of the hurricane season is September 1, 2018. Please provide all material assumptions used.

TWIA 2018 – 2019 reinsurance contract covers period from 6/1/2018 to 5/31/2019. Average earned date of the period is December 1, 2018. Average exposure data is November 30, 2017. Trend length is from November 30, 2017 to December 1, 2018, which is one year. It's is difficult to predict next hurricane season's reinsurance market, to keep consistent with TWIA's previous filings, reinsurance provision does not account for any trends beyond 5/31/2019.

19. Line (5) appears to contain an arithmetic error. If so, please correct. If not, please provide the correct formula.

The correct formula is (5) = (1) – (4)*1.125, 0.125 is the loading for Loss Adjustment Expense

Commercial Premium Trend (Exhibit 3, Sheet 2, Commercial Rate Filing)

20. For each quarter 2Q 2009 through 4Q 2017, please provide the corresponding **written policies** for the written premiums contained in Exhibit 3, Do not provide policies in force.

Please refer to Column V of **TWIA 4 Premium Trend** tab of 2018 data.xls as attached in question number 1.

21. Exhibit 3, Sheet 2 indicates TWIA based its premium trend on the average written premium (at current rate level) per $1,000 of coverage. How did TWIA account for changes in the average amount of coverage per policy?

TWIA can cover multiple risks or buildings under one policy. Average numbers of buildings per commercial policy is about 2 and decreasing significantly over the past few years. Please refer to Column AA of TWIA 4 Premium Trend tab of 2018 data.xls for details. Changes in average amount of coverage per TWIA policy have been driven by number of buildings covered by one policy, inflations in building values (Coverage A limits), and all other changes in the characteristics of policies. Changes in number of buildings covered by one policy and inflations in building values will be accounted automatically in amount of insurance through coverage A limits. Impact of all other changes in the characteristics of policies is expected to be accounted by the premium trend calculated in Exhibit 3, Sheet 2.

TWIA was aware of the decreasing trend in number of buildings covered by one TWIA policy when preparing its 2017 rate filing, however decided to keep consistent with its previous filing. TWIA made the change in its 2018 filing that premium trend is based on the average written premium (at current rate level) per $1,000 of coverage versus average written premium per policy. Using average premium per exposure base that underlies the rate represents an improvement compared to previous approach and is more consistent with basic ratemaking literatures.

Residential Non-Hurricane Loss Development (Exhibit 3, Sheet 1, Residential Rate Filing)

22. Please provide loss development triangles that contain TWIA-specific residential paid loss data using similar accident years-ending and similar evaluation points.

In its 2018 rate filing, TWIA derived its loss development factors with accident years-ending and evaluation points same as Exhibit 3, Sheet 1 from its regular quarterly loss development triangles. Please refer to columns R-Z of Exhibit 3.1 of 2018 Residential Indications as attached for question 1 for calculations.

TWIA Rx 2018 Q2- paid ldfs provides loss development triangles that contain TWIA residential and commercial paid loss data.

<u>TWIA Rx 2018 Q2-paid ldfs.pdf</u>

Exhibit 3.1 of 2018 Residential Indications contain both industry loss development patterns and TWIA -specific loss development factors. Only TWIA -specific loss development factors are applied to develop TWIA Non-Hurricane paid losses. Industry loss development factors are included for purpose of comparison and contrast. 2018 is the first year TWIA adopted the change (applied the TWIA specific loss development factors versus industry development factors to

TWIA experience) in its rate filing. Going forward, TWIA will reconsider the content and format of Exhibit 2.3, 2.4, 3.1 for its future filings.

23. Please explain why TWIA used industry loss development rather than TWIA-specific loss development, especially considering there are TWIA-specific laws with respect to claims handing (Chapter 2210, Subchapter L-1).

TWIA applied industry loss developments in its 2017 rate filing to keep consistent with its past practice. While preparing for its 2018 rate filing, TWIA was aware of the different loss development patterns between TWIA and industry and applied the TWIA loss development factors to TWIA non-hurricane paid losses in Exhibits 2.3.

Exhibit 3.1 of 2018 Residential Indications contain both industry loss development patterns and TWIA -specific loss development factors. Only TWIA -specific loss development factors are applied to develop TWIA Non-Hurricane paid losses. Industry loss development factors are included for purpose of comparison and contrast. 2018 is the first year TWIA adopted the change (applied the TWIA specific loss development factors versus industry development factors to TWIA experience) in its rate filing. Going forward, TWIA will reconsider the content and format of Exhibit 2.3, 2.4, 3.1 for its future filings.

Residential Premium Trend (Exhibit 3, Sheet 2, Residential Rate Filing)

24. Please provide the corresponding **written policies** for the written premiums contained on sheet 2. Provide this for each of the quarters 2Q 2008 through 4Q 2017. Do not provide policies in force.

Please refer to column AF of **TWIA 4 Premium Trend** tab of 2018 data.xls

25. Sheet 2 indicates TWIA based its premium trend on the average written premium (at current rate level) per $1,000 of coverage. How did TWIA account for changes in the average amount of coverage per policy?

TWIA can cover multiple risks or buildings under one policy. Changes in average amount of coverage per TWIA policy have been driven by number of buildings covered by one policy, inflations in building values (Coverage A limits), and all other changes in the characteristics of policies. Changes in number of buildings covered by one policy and inflations in building values will be accounted automatically in amount of insurance through coverage A limits. Impact of all other changes in the characteristics of policies is expected to be accounted by premium trend.

TWIA made the change in its 2018 filing that premium trend is based on the average written premium (at current rate level) per $1,000 of coverage versus average written premium per policy. Using average premium per exposure base that underlies the rate represents an improvement compared to previous approach and is more consistent with basic ratemaking literatures.

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