

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Develop an  
Electricity Integrated Resource Planning  
Framework and to Coordinate and Refine Long-  
Term Procurement Planning Requirements.

Rulemaking 16-02-007  
(Filed February 19, 2016)

**2018 INTEGRATED RESOURCE PLAN OF  
TIGER NATURAL GAS, INC.**

**(PUBLIC)**

Gregory Klatt  
DOUGLASS & LIDDELL  
411 E. Huntington Drive #107-356  
Arcadia, CA 91006  
Telephone: (626) 802-5733  
Email: [klatt@energyattorney.com](mailto:klatt@energyattorney.com)

Attorney for  
**TIGER NATURAL GAS, INC.**

August 1, 2018

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In accordance with Ordering Paragraph 14 of Decision 18-02-018, Tiger Natural Gas, Inc. (Tiger) hereby submits this Integrated Resource Plan, including the following documents incorporated herein by reference:

- Alternate LSE Plan (Type 1)
- Conforming Portfolio
- Preferred Portfolio
- CEC Form S-1: Capacity Resource Accounting Table
- CEC Form S-2: Energy Balance Accounting Table
- Power Source Disclosure Program 2017 Annual Report
- Officer Verification

Respectfully submitted,



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Gregory S.G. Klatt  
DOUGLASS & LIDDELL

Attorney for  
**TIGER NATURAL GAS, INC.**

August 1, 2018

(PUBLIC)

# Alternative LSE Plan

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TIGER NATURAL GAS, INC.

2018 INTEGRATED RESOURCE PLAN

August 1, 2018

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## 1. Executive Summary

This 2018 Integrated Resource Plan (2018 IRP) of Tiger Natural Gas, Inc. (Tiger) consists of the following forms, reports and information:

- CEC Form S-1: Capacity Resource Accounting Table.<sup>1</sup>
- CEC Form S-2: Energy Balance Accounting Table.
- Tiger’s Power Source Disclosure Program 2017 Annual Report.
- A description of Tiger’s treatment of disadvantaged communities.
- A description of how Tiger’s planned future procurement is consistent with Tiger’s individual Greenhouse Gas Benchmark.
- Tiger’s Conformed Portfolio.
- Tiger’s Preferred Portfolio, including identification and justification for deviations in assumptions from the Reference System Portfolio.
- A description of how Tiger’s Preferred Portfolio is consistent with relevant statutory and administrative requirements.
- An action plan for implementing Tiger’s 2018 IRP.
- A discussion of lessons learned from this IRP and suggestions for improving the IRP process.

## 2. Study Design

Tiger used the following process to develop its 2018 IRP:

1. Tiger used its 2019 Resource Adequacy Year-Ahead Load Forecast (RA Load Forecast) as is “assigned load forecast,” which served as the basis for calculating:
  - Tiger’s annual energy requirement inputs for the GHG Calculator<sup>2</sup>;
  - Tiger’s annual capacity requirements as reported in CEC Form S-1<sup>3</sup>;

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<sup>1</sup> Load serving entities (LSEs) use Form S-1 and Form S-2 to report electricity supply resource plan information to the California Energy Commission (CEC) as part of the CEC’s data collection for the biennial *Integrated Energy Policy Report*. However, Tiger was not required to file an electricity supply resource plan for the 2017 IEPR, given that Tiger’s peak load was less than 200 megawatts (MW) in both 2015 and 2016. Tiger prepared the S-1 and S-2 forms that are being submitted as part of this 2018 IRP solely for that purpose. Accordingly, the electricity supply resource plan information reported in forms S-1 and S-2 is limited to the current IRP Planning Period (i.e., 2018-2030) and does not include historical information. Moreover, to minimize inconsistencies with the load data used for the GHG Calculator, the load data reported in forms S-1 and S-2 is derived from the same data set that was used for Tiger’s 2019 Resource Adequacy Year-Ahead Load Forecast.

<sup>2</sup> The energy requirements in Tiger’s 2019 RA Load Forecast include distribution losses, while the GHG Calculator adds transmission and distribution losses to inputted energy requirements. Therefore, to calculate the energy requirement inputs for the GHG Calculator, Tiger deducted distribution losses from the energy requirements reported in its 2019 RA Load Forecast.

<sup>3</sup> Whereas the peak loads reported in the RA Load Forecast are *monthly* peak loads by *service territory*, the instructions for CEC Form S-1 call for LSEs to forecast their *annual non-coincident system* peak loads.

- Tiger's annual energy requirements as reported in CEC Form S-2<sup>4</sup>;
  - Tiger's individual GHG Emissions Benchmark.
2. Tiger used its assigned load forecast and the methodology set forth in Decision 18-02-018 to calculate its individual GHG Emissions Benchmark.<sup>5</sup>
  3. Tiger produced a Conforming Portfolio based on:
    - Tiger's assigned load forecast;
    - Tiger's estimated Renewables Portfolio Standard (RPS) procurement obligations for 2018, 2022, 2026 and 2030;
    - Tiger's estimated Energy Storage procurement obligations<sup>6</sup>;
    - Inputs and assumptions matching those used in developing the Reference System Portfolio.
  4. Tiger used the Clean Net Short Methodology and the GHG Calculator to estimate the GHG emissions produced by its Conforming Portfolio.
  5. Tiger produced an Alternative Portfolio using the same inputs and assumptions that it used to produce its Conforming Portfolio, except that Tiger set the load associated with Home Electric Vehicle Charging to zero.
  6. Tiger used the Clean Net Short Methodology and the GHG Calculator to estimate the GHG emissions produced by its Alternative Portfolio.
  7. Tiger used the resources and methodology referenced in staff's guidance to identify any customers in disadvantaged communities.

### 3. Study Results

#### 3.1. Preferred and Conforming Portfolios

For Tiger's Conforming Portfolio, Tiger projected its historical RPS procurement, in terms of both resource type and portfolio content category, across the IRP Planning Horizon. The estimated GHG emissions associated with Tiger's Conforming Portfolio total [REDACTED] MMtCO<sub>2</sub>/yr, which exceeds Tiger's GHG Benchmark by 4.2%. Because of the complexity of the GHG Calculator, it is difficult to determine the causes of that result with precision. However, Tiger believes it is mostly

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Thus, while the forecast 2019 annual system peak load reported in Form S-1, which serves as the forecast peak load reported in Form S-1 for each year of the 2018-2030 forecast period, was calculated using the same data set that was used to develop the monthly peak loads for each service territory reported in Tiger's 2019 RA Load Forecast, the former is not the simple sum of the latter.

<sup>4</sup> The annual energy requirements reported in Form S-2 mirror the energy requirement inputs for the GHG Calculator.

<sup>5</sup> Tiger's individual GHG Emissions Benchmark is [REDACTED] MMtCO<sub>2</sub>/yr.

<sup>6</sup> As an electric service provider (ESP), Tiger is required to procure energy storage equal to 1% of its 2020 peak load, with the procured energy storage to be in commercial operation by no later than 2024.

due to the significant (25.7%) increase in Tiger’s forecast 2030 energy requirements that is attributable to inputs and assumptions built into the GHG Calculator.

To test this hypothesis, Tiger made one minor adjustment to the GHG calculator, which was to set the assumed “Electric Vehicle Load - Home Charging Only” load inputs to zero.<sup>7</sup> This small adjustment and the resulting decrease in Tiger’s load forecast reduced Tiger’s estimated GHG emissions for 2030 under this Alternative Portfolio to ████████ MMtCO<sub>2</sub>/yr., i.e., GHG emissions in excess of Tiger’s benchmark were entirely eliminated.

Importantly, Tiger does not serve any residential load, thus making the zeroing out of Home EV Charging Load an eminently reasonable adjustment. Moreover, the total amount of DA load is capped by statute, thus making the attribution of any significant amount of incremental load to Tiger questionable. Accordingly, Tiger submits the aforesaid Alternative Portfolio more closely approximates Tiger’s planned portfolio and estimated GHG emissions, while still meeting all IRP regulatory and administrative requirements. Tiger therefore requests that its Alternative Portfolio be certified as Tiger’s Preferred Portfolio.

### **3.2. Disadvantaged Communities Impacts**

None of the customers that Tiger currently serves are in disadvantaged communities (DACs). Therefore, the IRP descriptive requirements for DACs are inapplicable to Tiger.

Tiger has no DAC-specific activities or programs. However, Tiger’s customers help fund utility activities and programs aimed at customers in DACs through public purpose program charges.

Tiger has no planned procurement from generation resources located in DACs. Therefore, the IRP requirements related to estimating and minimization of local air pollution in DACs are inapplicable to Tiger.

### **3.3. Cost and Rate Analysis**

Because the direct access market is both competitive and capped, Tiger endeavors to secure and retain customers by procuring energy and capacity products, including statutorily mandated products (e.g., RA capacity and RPS products), at the lowest cost possible. Tiger plans to continue this practice throughout the IRP forecast period.

### **3.4. Local Needs Analysis**

Tiger’s local capacity procurement needs will likely vary over the IRP forecast period, as such needs are dependent on the make-up and location of Tiger’s customers, which will vary over time.

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<sup>7</sup> The inputs for same appear in the GHG Calculator Dashboard at Line 33.

Whatever those needs may be, however, Tiger will use its best efforts to procure Local RA capacity in the locations and amounts required to meet Tiger's assigned Local RA obligations.

#### **4. Action Plan**

Tiger's 2018 IRP Plan closely reflects Tiger's current procurement practices, which are to (a) procure RA and RPS products in the amounts required to satisfy Tiger's regulatory obligations and (b) procure its energy requirements primarily from CAISO markets. It does not appear that any changes to those practices will be required to meet Tiger's individual GHG Emissions Benchmark under its Alternative/Preferred Portfolio.

#### **5. Lessons Learned**

Tiger's focus in this first IRP cycle has been simply to understand and satisfy the IRP requirements. Energy Division staff has been exceptionally helpful in that regard. Prior to the next IRP cycle, however, Tiger recommends that the Energy Division hold a workshop with the aim of identifying IRP informational and analytical requirements that, given the differences between electric service providers (ESPs) and other classes of LSEs, can be simplified or eliminated for ESPs without detracting from the Commission's ability to meet statutory requirements.

#### **6. Confidentiality**

Tiger is requesting confidentiality of portions of its 2018 IRP.



# **CONFORMING PORTFOLIO**

**Cell Color Scheme**  
 Yellow cells are inputs that can be changed by the user (only in the Dashboard and Custom Profiles tabs)  
 Orange cells contain drop-down menus that show the original custom values  
 Green cells are final outputs

**Tab Color Scheme**  
 Light Orange tabs are where the user inputs values and views results  
 Green tabs contain data from the 2017 EPR that the user should input into the "EPR Manager Retail Sales Forecast" cells on the Dashboard  
 Yellow tabs are read-only tabs that contain inputs and calculations

**INPUTS**  
**Notes:**  
 Input values (if low cell) shown here are pre-calculated. Users should replace all inputs with values specific to their system.  
 Inputs and results are in \$/MWh for the 2018-2022 and 2030 modeling years. Any intermediate years should be interpolated outside of this tool.

**RESULTS**

Metric	Unit	2018	2022	2026	2030	Notes
Energy for Load (excluding BTM PV)	MWh	-	-	-	-	Owned or contracted non-dispatchable GHG-emitting resources
Owned or contracted non-dispatchable GHG-emitting resources	MWh	0.35	0.35	0.35	0.35	Perfect capacity - 100% CF, e.g. Cogeneration
Large Hydro	MWh	-	-	-	-	Includes overcapacity
Renewable Generation (Including BTM PV)	MWh	-	-	-	-	Due to storage losses and subhourly reserves.
User-specified GHG-free Power	MWh	-	-	-	-	
Storage Energy Imbalance	MWh	-	-	-	-	
Clean Net Short	MWh	-	-	-	-	
<b>Total</b>	<b>MWh</b>	<b>0.35</b>	<b>0.35</b>	<b>0.35</b>	<b>0.35</b>	<b>2030 MWh</b>
Average emission intensity	MMtCO2/MWh	0.3653	0.2668	0.891	0.1483	Includes overcapacity emissions credits
<b>Overcapacity</b>	<b>MMtCO2/yr.</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2030 MWh</b>
Overcapacity Emission Credits	MMtCO2/yr.	-	-	-	-	Scaled to LSE load ratio share within CAISO
<b>Capacity/Peak</b>	<b>Unit</b>	<b>2018</b>	<b>2022</b>	<b>2026</b>	<b>2030</b>	<b>Notes</b>
Owned or contracted non-dispatchable GHG-emitting resources	MW	-	-	-	-	Start of hourly and profile - not a 1-D peak
Large Hydro	MW	-	-	-	-	
Nuclear	MW	-	-	-	-	
Total Baseload Renewables	MW	-	-	-	-	Includes BTM PV
User-specified GHG-free Power	MW	-	-	-	-	
Energy Storage	MW	-	-	-	-	
Maximum Clean Net Short	MW	-	-	-	-	

Metric	Unit	2018	2022	2026	2030	Notes
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User-specified GHG-free Power	MWh	-	-	-	-	
Storage Energy Imbalance	MWh	-	-	-	-	
Clean Net Short	MWh	-	-	-	-	
<b>Total</b>	<b>MWh</b>	<b>0.35</b>	<b>0.35</b>	<b>0.35</b>	<b>0.35</b>	<b>2030 MWh</b>
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Energy Storage	MW	-	-	-	-	
Maximum Clean Net Short	MW	-	-	-	-	

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Energy Storage	MW	-	-	-	-	
Maximum Clean Net Short	MW	-	-	-	-	

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Total Baseload Renewables	MW	-	-	-	-	Includes BTM PV
User-specified GHG-free Power	MW	-	-	-	-	
Energy Storage	MW	-	-	-	-	
Maximum Clean Net Short	MW	-	-	-	-	

# **PREFERRED PORTFOLIO**





Tiger Natural Gas, Inc.

Yellow fills indicate confidentiality is being requested pursuant to Appendix A.  
 2018 MW numbers are illustrative.

Where cell specifies more than one datum separate data with a semicolon.

Bold font cells sum automatically. Data input by User are in dark green font.

line	Capacity Resource Accounting Table (MW)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	<b>PEAK LOAD CALCULATIONS</b>	(↓ Prior Forecasts ↓)		(Forecast Supply ⇒)													
1	Forecast Total Peak-Hour 1-in-2 Demand																
2a	ESP Demand Existing Customer Contracts																
2b	ESP Demand New and Renewed Contracts																
2c	ESP Demand in PG&E service area																
2d	ESP Demand in SCE service area																
2e	ESP Demand in SDG&E service area																
3	Additional Achievable Energy Efficiency (-)																
4	Demand Response / Interruptible Programs (-)																
5	<b>Adjusted Demand: End-Use Customers</b>	0	0	0													
6	Coincidence Adjustment (-)																
7	<b>Coincident Peak-Hour Demand</b>	0	0	0													
8	Required Planning Reserve Margin	0	0	0													
9	Credit for Imports That Carry Reserves (-)																
10	Firm Sales Obligations																
11	<b>Firm LSE Procurement Requirement</b>	0	0	0													

CAPACITY SUPPLY RESOURCES																	
12a	<b>Total Fossil Fuel Supply</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12b	[state fuel then list each resource e.g. Fossil Unit 1]																
12c	[state fuel; then list each resource, e.g. Natural Gas; Fossil Unit 2]																
12d	[state fuel; then list each resource, e.g. Natural Gas; Fossil Unit N; list planned resources last]																
13a	<b>Total Nuclear Supply</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13b	[Nuclear Unit 1]																
13c	[Nuclear Unit 2]																
14a	<b>Total Hydroelectric Supply</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14b	Total Hydro Supply from Plants larger than 30 MW																
14c	Total Hydro Supply from Plants 30 MW or less																

line	Capacity Resource Accounting Table (MW)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
15a	<b>Total Utility-Controlled Renewable Supply</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15b	[state fuel then list each resource e.g. Renewable Plant 1]																
15c	[state fuel; then list each resource, e.g. Geothermal Renewable Project 2]																
15d	[state fuel; then list each resource, Wind Renewable Project N; list planned resources last]																
17a	<b>Total Qualifying Facility (QF) Contract Supply</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17b	Biofuels																
17c	Geothermal																
17d	Small Hydro																
17e	Solar																
17f	Wind																
17g	Natural Gas																
17h	Other																
18a	<b>Total Renewable Contract Supply</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18b	Renewable DG Supply																
18c	[state fuel then Renewable Contract 1 (Supplier Name)]																
18d	[Small Hydro; then Renewable Contract 2 (Supplier Name)]																
18e	[Solar then Renewable Contract N list planned resources																
19a	<b>Total Other Bilateral Contract Supply</b>	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19b	Non-Renewable DG Supply																
19c	[state fuel if known; then name Other Bilateral Contract 1 (Supplier Name)]																
19d	[state fuel; then list each resource, e.g. Natural Gas Other Bilateral Contract 2 (Supplier Name)]																
19e	[Portfolio Other Bilateral Contract 3 (Supplier Name)]																
19f	[System Other Bilateral Contract N (Supplier Name)]																
19n	Planned Resources list each on lines inserted below this line.																
20	<b>Short-Term and Spot Market Purchases (and Sales)</b>																

CAPACITY BALANCE SUMMARY																	
21	<b>Total: Existing and Planned Supply</b>	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	Firm LSE Procurement Requirement	0	0	0													
23	<b>Net Surplus (or Need)</b>	0	0	0													
24	Generic Renewable Supply																
25	Generic Non-Renewable Resources																
26	Specified Planning Reserve Margin				15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%

line	Historic LSE Peak Load:	MW	
		Year 2015	Year 2016
27	Annual Peak Load / Actual Metered Deliveries		
28	Date of Peak Load for Annual Peak Deliveries	/15	/16
29	Hour Ending (HE) for Annual Peak Deliveries		
30	Interruptible Load called on during that hour (+)		
31	Self-Generation and DG Adjustments		
32	Adjustments for Major Outages		
33	<b>Adjusted Annual Peak Load</b>	0.0	0.0

Lines	Notes
x	
x	



Tiger Natural Gas, Inc.

Yellow fills indicate confidentiality is being requested pursuant to Appendix A.  
 2018 GWh numbers are illustrative.

Where cell specifies more than one datum separate data with a semicolon.

Bold font cells sum automatically.

Data input by User are in dark green font.

line	Energy Balance Table (GWh)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	<b>ENERGY DEMAND CALCULATIONS</b>	(↓ Actual Supply ↓)		(Forecast Supply ⇒)													
1	Forecast Total Energy Demand / Consumption																
2a	ESP Demand Existing Customer Contracts																
2b	ESP Demand New and Renewed Contracts																
2c	ESP Demand in PG&E service area																
2d	ESP Demand in SCE service area																
2e	ESP Demand in SDG&E service area																
3	Additional Achievable Energy Efficiency (-)																
4	Demand Response / Interruptible Programs (-)																
5	<b>Adjusted Demand: End-Use Customers</b>																
6	Coincidence Adjustment [does not apply to S-2 form]																
7	Coincident Peak-Hour Demand [does not apply to S-2]																
8	Required Planning Reserve [does not apply to S-2]																
9	Credit for Imports That Carry Reserves [does not apply]																
10	Firm Sales Obligations																
11	<b>Firm LSE Procurement Requirement</b>	<b>0</b>	<b>0</b>	<b>0</b>													

line	Energy Balance Table (GWh)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	<b>ENERGY SUPPLY RESOURCES</b>																
12a	<b>Total Fossil Fuel Supply</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
12b	[state fuel then list each resource e.g. Fossil Unit 1]																
12c	[state fuel then list each resource e.g. Natural Gas Fossil Unit N; list planned resources last]																
12d	[state fuel; then list each resource, e.g. Natural Gas; Fossil Unit N; list planned resources last]																
13a	<b>Total Nuclear Supply</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
13b	[Nuclear Unit 1]																
13c	[Nuclear Unit 2]																
14a	<b>Total Hydroelectric Supply</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
14b	Total Hydro Supply from Plants larger than 30 MW																
14c	Total Hydro Supply from Plants 30 MW or less																

line	Energy Balance Table (GWh)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
15a	<b>Total Utility-Controlled Renewable Supply</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
15b	[state fuel then list each resource e.g. Renewable Plant 1]																
15c	[state fuel; then list each resource, e.g. Geothermal Renewable Project 2]																
15d	[state fuel; then list each resource, Wind Renewable Project N; list planned resources last]																
17a	<b>Total Qualifying Facility (QF) Contract Supply</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
17b	Biofuels																
17c	Geothermal																
17d	Small Hydro																
17e	Solar																
17f	Wind																
17g	Natural Gas																
17h	Other																
18a	<b>Total Renewable Contract Supply</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
18b	Renewable DG Supply																
18c	[state fuel; then Renewable Contract 1 (Supplier Name)]																
18d	[Small Hydro; then Renewable Contract 2 (Supplier Name)]																
18e	[Solar then Renewable Contract N list planned resources]																
19a	<b>Total Other Bilateral Contract Supply</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
19b	Non-Renewable DG Supply																
19c	Solar (RA Contract)																
19d	[state fuel; then list each resource, e.g. Natural Gas Other]																
19e	[Portfolio Other Bilateral Contract 3 (Supplier Name)]																
19f	[System Other Bilateral Contract N (Supplier Name)]																
19n	Planned Resources list each on lines inserted below this line.																
20	<b>Short Term and Spot Market Purchases (and Sales)</b>																

line	ENERGY BALANCE SUMMARY	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
21	<b>Total: Existing and Planned Resources</b>	<b>0</b>	<b>0</b>	<b>0</b>													
22	<b>Firm LSE Procurement Requirement</b>	<b>0</b>	<b>0</b>	<b>0</b>													
23	<b>Net Surplus (or Need)</b>																
24	Generic Renewable Supply																
25	Generic Non-Renewable Supply																

line	Notes
x	
x	



**ANNUAL REPORT TO THE CALIFORNIA ENERGY COMMISSION:  
 Power Source Disclosure Program  
 Schedule 1 and 2, applicable to: Load Serving Entities  
 For the Year Ending December 31, 2017**

Load serving entities are required to use the posted template and are not allowed to make edits to this format.  
 Please fill out the company name and contact information.

**GENERAL INSTRUCTIONS**

COMPANY NAME	
	Tiger Natural Gas, Inc.
PRODUCT NAME (If Multiple Products Offered)	
CONTACT INFORMATION	
Name	Gregory Klatt
Title	Attorney
Mailing Address	411 E. Huntington Drive #107-356
City, State, Zip	Arcadia, CA 91006
Phone	626.802.5733
E-mail	<a href="mailto:klatt@energyattorney.com">klatt@energyattorney.com</a>
Website for PCL Posting	tigernaturalgas.com

Please fill out the schedules that apply to your company's filing requirements. Provide the annual report and attestation together in PDF format and the annual report in an excel file by email to [PSDprogram@energy.ca.gov](mailto:PSDprogram@energy.ca.gov). Remember to fill in the company name above, submit separate reports and attestations for each additional product if multiple electric service products are offered. Report procurements in MWh (not kWh).

**NOTE:** Information submitted in this report is not automatically held confidential. If your company wishes the information submitted to be considered confidential an authorized representative must submit an application for confidential designation (CEC-13), which can be found on the California Energy Commissions's website at [http://www.energy.ca.gov/commission/chief\\_counsel/documents/CEC13.pdf](http://www.energy.ca.gov/commission/chief_counsel/documents/CEC13.pdf)

If you have questions, contact PSD staff at [PSDprogram@energy.ca.gov](mailto:PSDprogram@energy.ca.gov) or (916) 653-6222.







**ANNUAL REPORT TO THE CALIFORNIA ENERGY COMMISSION:  
Power Source Disclosure Program  
For the Year Ending December 31, 2017  
SCHEDULE 2: ANNUAL POWER CONTENT LABEL CALCULATION  
Applicable to: Load Serving Entities**

INSTRUCTIONS: Total specific purchases (by fuel type) and enter these numbers in the first column. Null power purchases should be included with Unspecified Power. REC only purchases should be included as part of the fuel type they represent. Total retail sales information from Schedule 1 will autopopulate on this schedule. Any difference between total net purchases and total retail sales will be applied pro-rata to each non-renewable fuel type. Each fuel type total will then be divided by retail sales to calculate fuel mix percentages.

	Net Purchases (MWh)	Percent of Total Retail Sales (MWh)
<b>Specific Purchases</b>		
Renewable	-	0%
Biomass & Biowaste		0%
Geothermal		0%
Eligible hydroelectric		0%
Solar		0%
Wind		0%
Coal		0%
Large Hydroelectric		0%
Natural Gas		0%
Nuclear		0%
Other		0%
<b>Total Specific Purchases</b>	-	0%
<b>Unspecified Power (MWh)</b>		<b>100%</b>
<b>Total</b>		<b>100%</b>
<b>Total Retail Sales (MWh)</b>		


COMMENTS:



**ANNUAL REPORT TO THE CALIFORNIA ENERGY COMMISSION:  
Power Source Disclosure Program  
For the Year Ending December 31, 2017  
ATTESTATION FORM**

**Applicable to: All participants in the Power Source Disclosure Program**

I, Grgory Klatt, declare under penalty of perjury, that the statements contained in Schedules 1 and 2 are true and correct and that I, as an authorized agent of Tiger Natural Gas, Inc., have authority to submit this report on the company's behalf. I further declare that the megawatt-hours claimed as specific purchases as shown in these Schedules were, to the best of my knowledge, sold once and only once to retail consumers.

Signed:  \_\_\_\_\_

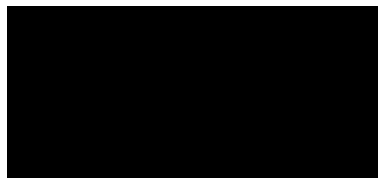
Dated: May 18, 2018

Executed at: Arcadia, CA

## VERIFICATION

I, Johnathan Burris, am an officer of Tiger Natural Gas, Inc., and I am authorized to make this verification on its behalf. I have read the foregoing *2018 Integrated Resource Plan of Tiger Natural Gas, Inc.*, including all attachments thereto, and affirm the contents thereof are true of my own knowledge, except as to matters which are therein stated on information and belief, and as to those matters I believe them to be true. I declare under penalty of perjury that the foregoing is true and correct.

Executed on August 1, 2018, at Tulsa, Oklahoma.

A solid black rectangular box used to redact the signature of Johnathan Burris.

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Johnathan Burris  
Executive Vice President