



Energy Efficiency Reimagined

NASDAQ: TGEN

Year End 2018 Earnings Review  
March 28, 2019

# Participants



**Benjamin Locke**

 Chief Executive Officer

**Robert Panora**

 President & Chief Operating Officer

**Bonnie Brown**

 Chief Accounting Officer

# Safe Harbor Statement



This presentation and accompanying documents contain “forward-looking statements” which may describe strategies, goals, outlooks or other non-historical matters, or projected revenues, income, returns or other financial measures, that may include words such as "believe," "expect," "anticipate," "intend," "plan," "estimate," "project," "target," "potential," "will," "should," "could," "likely," or "may" and similar expressions intended to identify forward-looking statements. These statements are only predictions and involve known and unknown risks, uncertainties, and other factors that may cause our actual results to differ materially from those expressed or implied by such forward-looking statements. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Forward-looking statements speak only as of the date on which they are made, and we undertake no obligation to update or revise any forward-looking statements.

In addition to those factors described in our Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q under “Risk Factors”, among the factors that could cause actual results to differ materially from past and projected future results are the following: fluctuations in demand for our products and services, competing technological developments, issues relating to research and development, the availability of incentives, rebates, and tax benefits relating to our products and services, changes in the regulatory environment relating to our products and services, integration of acquired business operations, and the ability to obtain financing on favorable terms to fund existing operations and anticipated growth.

In addition to GAAP financial measures, this presentation includes certain non-GAAP financial measures, including adjusted EBITDA which excludes certain expenses as described in the presentation. We use Adjusted EBITDA as an internal measure of business operating performance and believe that the presentation of non-GAAP financial measures provides a meaningful perspective of the underlying operating performance of our current business and enables investors to better understand and evaluate our historical and prospective operating performance by eliminating items that vary from period to period without correlation to our core operating performance and highlights trends in our business that may not otherwise be apparent when relying solely on GAAP financial measures.

# Earnings Call Agenda



## Benjamin Locke

- Tecogen Overview
- 2018 Financial Overview
- Strategic Update
- Market Update

## Bonnie Brown

- Financial Review

## Robert Panora

- Ultera Emissions Update

## Benjamin Locke

- 2019 Outlook




## Q&A



# Advanced Modular Cogeneration Systems



Heat, Power, and/or Cooling that is:

-  **Cheaper**  
Industry leading efficiency and reduced exposure to expensive electricity
-  **Cleaner**  
Proprietary near-zero emissions technology, GHG reductions
-  **More reliable**  
Real-time monitoring, blackout protection, and improved grid resiliency



All of Tecogen's equipment is powered by efficient natural gas equipped with Tecogen's patented Ultra Emission Control

# 2018 Financial Results



## Q4 2018

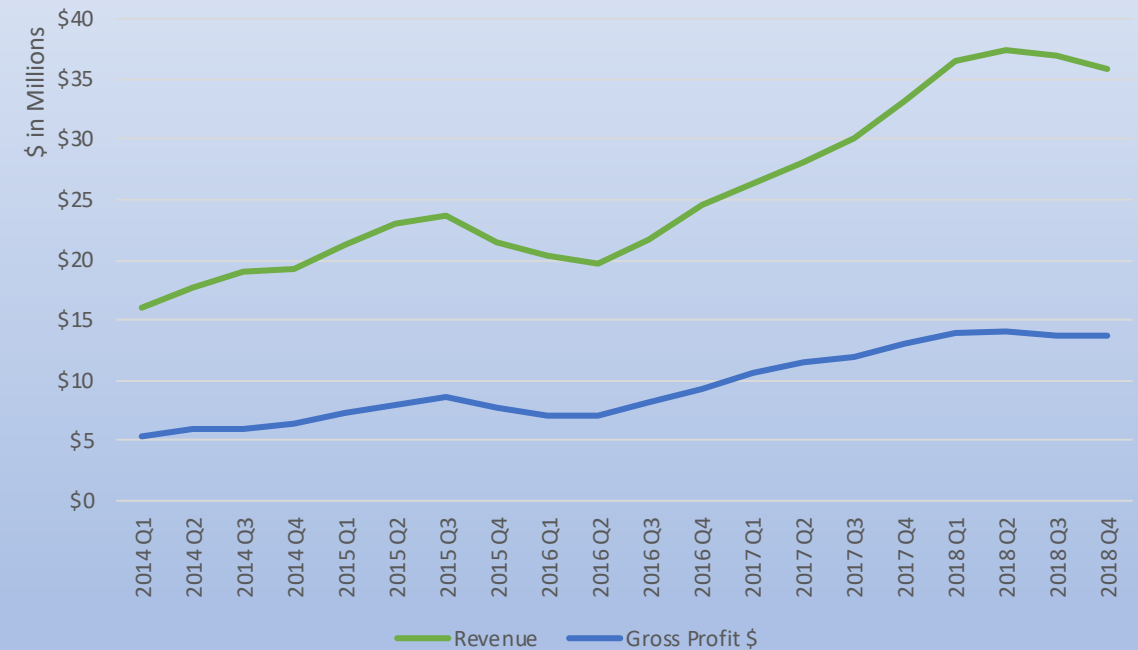
- 🌱 Q4 2018 revenues of \$9.3 million
- 🌱 Adjusted EBITDA\* of \$502K for 4Q'18 compared to \$533K for 4Q'17
- 🌱 Gross margin of 40% compared to 37% in Q4 '17
- 🌱 Chiller sales grow 21% year over year
- 🌱 11% growth in service contract revenue
- 🌱 Goodwill Impairment loss of \$4.4 million

## YE 2018

- 🌱 Record revenue in 2018 of \$35.9 million
- 🌱 Gross margin of 38% for YE18 vs 39% for YE17
- 🌱 2018 Adj. EBITDA of \$217K vs. \$1.1 million in 2017
- 🌱 Chiller sales a record of \$7.2 million

\* Adjusted EBITDA is defined as net income (loss) attributable to Tecogen Inc, adjusted for interest, depreciation and amortization, stock based compensation expense, goodwill impairment and one-time merger related expenses.

T4Q – Revenue and Gross Profit



Steady growth of revenues and gross profits

# 4Q 2018 Adjusted EBITDA of \$502K



<i>\$ in thousands</i>	4Q'18	4Q'17	YoY Change		Comments
<b>Revenue</b>					
Products	\$ 3,703	\$ 4,642	\$ (939)		
Service	3,965	4,118	(153)		
Energy Production	1,649	1,504	145		
Total Revenue	9,316	10,264	(948)	-9%	Product shift to chiller sales
<b>Gross Profit</b>					
Products	\$ 1,501	\$ 1,891	\$ (390)		
Service	1,534	1,381	153		
Energy Production	676	523	153		
Total Gross Profit	3,711	3,795	(84)	-2%	
<b>Gross Margin: %</b>					
Products	41%	41%	0%		
Service	39%	34%	5%		
Energy Production	41%	35%	6%		
Total Gross Margin	40%	37%	3%	8%	Maintaining solid margins
<b>Operating Expenses</b>					
General & administrative	\$ 2,668	\$ 2,478	\$ 190		
Selling	759	713	45		
Research and development	305	296	9		
Total Operating Expenses w/o GW Impairment	3,731	3,487	244	7%	Merger related expenses and R&D activities account for this increase
Goodwill impairment	4,391	-	4,391		
Net income without goodwill impairment	19	269	(250)		Adds back effect of goodwill impairment loss
<b>Adjusted EBITDA</b>	\$ 502	\$ 533	\$ (31)		See Adjusted EBITDA reconciliation slide

Record Quarterly  
Chiller Sales

Goodwill Impairment loss,  
Q4 2018

Consistently Strong  
Gross Margins

# YE 2018 Adjusted EBITDA of \$217K



<i>\$ in thousands</i>	YE 2018	YE 2017	YoY Change	Comments
<b>Revenue</b>				
Products	\$ 12,625	\$ 12,991	\$ (366)	
Service	16,859	16,377	482	
Energy Production	6,400	3,834	2,566	2018 represents first full year
<b>Total Revenue</b>	<b>35,884</b>	<b>33,202</b>	<b>2,682</b>	<b>8%</b>
<b>Gross Profit</b>				
Products	\$ 4,827	\$ 4,979	\$ (152)	
Service	6,166	6,175	(9)	
Energy Production	2,598	1,800	798	Full year in 2018, partial in 2017
<b>Total Gross Profit</b>	<b>13,592</b>	<b>12,954</b>	<b>638</b>	<b>5%</b>
<b>Gross Margin: %</b>				
Products	38%	38%	0%	
Service	37%	38%	-1%	
Energy Production	41%	47%	-6%	
<b>Total Gross Margin</b>	<b>38%</b>	<b>39%</b>	<b>-1%</b>	Margin remains steady overall
<b>Operating Expenses</b>				
General & administrative	\$ 10,790	\$ 9,520	\$ 1,270	
Selling	2,651	2,272	379	
Research and development	1,298	937	361	
<b>Total Operating Expenses w/o GW Impairment</b>	<b>14,739</b>	<b>12,729</b>	<b>2,010</b>	<b>16%</b>
Goodwill impairment	4,391	-	4,391	
Net income (loss) without goodwill impairment	(1,318)	47	(1,365)	Adds back effect of goodwill impairment loss
<b>Adjusted EBITDA</b>	<b>\$ 217</b>	<b>\$ 1,103</b>	<b>\$ (885)</b>	See Adjusted EBITDA reconciliation slide

Record Revenue for the Year

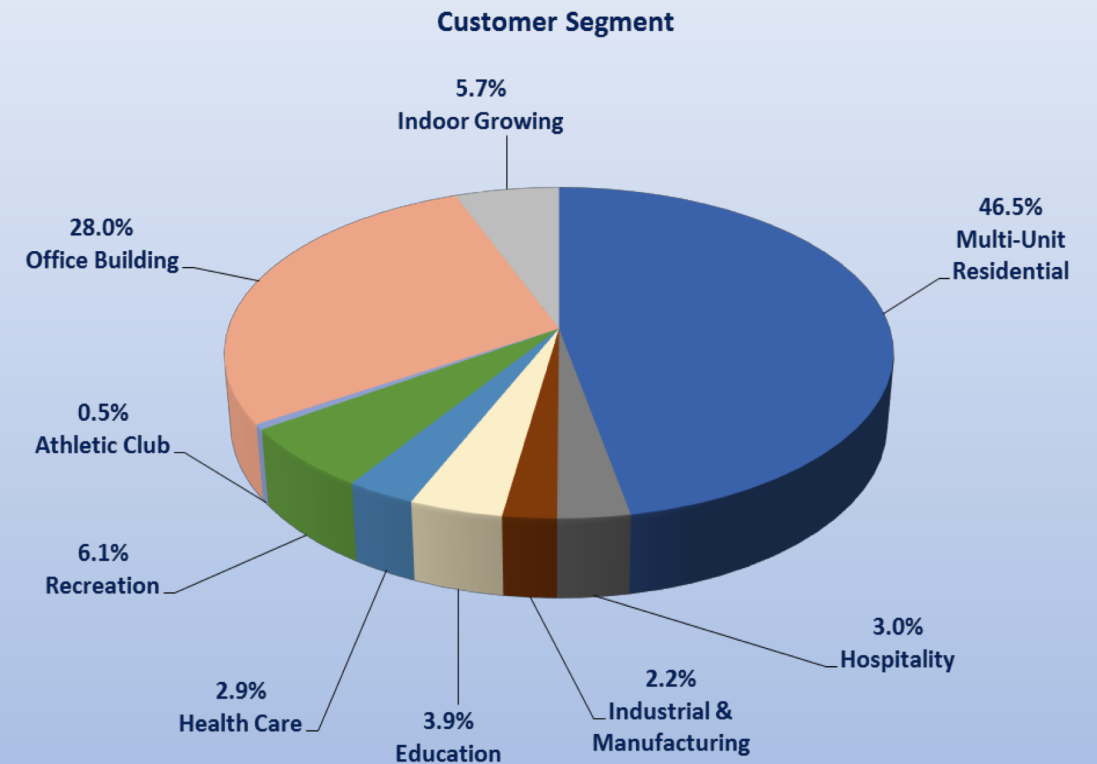
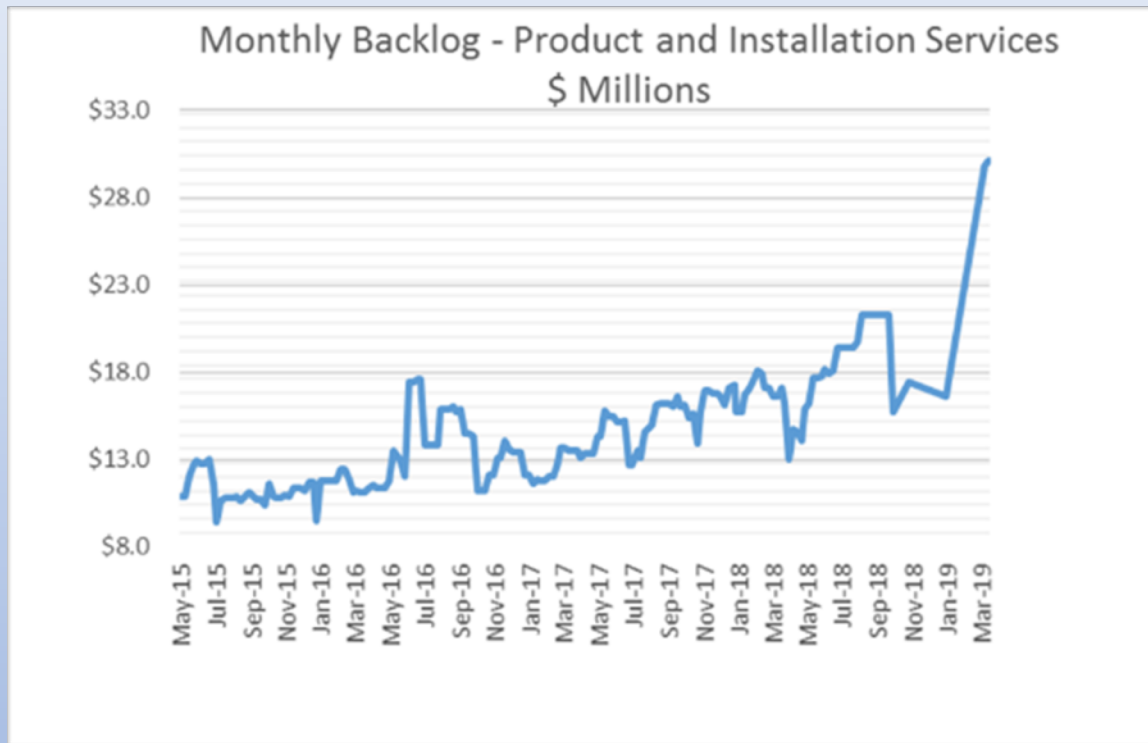
5% Growth in Gross Profit

Consistently Strong Gross Margin

Goodwill Impairment loss, Q4 2018



# Product and Installation Backlog



Current Backlog of \$ 29.9 million  
Product backlog: \$15.4 mm, Install backlog \$14.5 mm

# Strategic Achievements



Adjusted product mix to emphasize on chiller sales



Less competition,  
Well defined channels to market

Established ADG sites as solid investment assets



Enabled selective sale to strengthen balance sheet

Forklift Emissions program with Cat/Mitsubishi



Potential for fleet forklift conversion to Ultra emissions

Financial Stability



No additional capitalization currently planned

**Tecogen positioned for continued growth in core business while building value for Ultra Emissions technology**

# Market Update



- 🕒 **Indoor Agriculture Growth Opportunity**
  - 🕒 Proven cost/benefit of Tecochill
  - 🕒 Substantial long term growth as market expands
- 🕒 **Diverse product portfolio enables range of options**
  - 🕒 CHP, chillers, heat pump allows many options
  - 🕒 Tecofrost opens many new markets
- 🕒 **Third party Financing Offers Creative Economics**
  - 🕒 Low cost of capital, able to use tax advantages
  - 🕒 Results in best savings for customer
  - 🕒 Allows capital for large projects (Manhattan data center)
  - 🕒 Additional projects in development
- 🕒 **Increasing focus on microgrids for resiliency**
  - 🕒 “Smart Inverter” Certification requirements
  - 🕒 Opens additional revenues from utility programs



Tecofrost, IIAR Refrigeration Conference, March 2019

# Q4 2018 Financial Metrics: Revenues, Margins, Growth



- After the elimination of goodwill impairment of \$4.4 million, maintained profitability for the quarter
- Four diverse revenue streams
  - 21% growth in chiller sales
  - Long term service contracts provide steady cash flow, growing 11%
  - Turnkey installations facilitate both product sales and service revenue
  - Energy production provides 41% gross margin
- Maintained 40% overall gross margin

\$ in thousands	Quarter Ended December 31,		YoY Growth	% of Total Rev
	2018	2017		
<b>Revenue</b>				
Cogeneration	\$ 750	\$ 2,209	-66%	8%
Chiller	2,952	2,434	21%	32%
<b>Total Product Revenue</b>	<b>3,703</b>	<b>4,642</b>	<b>-20%</b>	<b>40%</b>
Service Contracts and Parts	2,218	2,003	11%	24%
Installation Services	1,747	2,115	-17%	19%
<b>Total Service Revenue</b>	<b>3,965</b>	<b>4,118</b>	<b>-4%</b>	<b>43%</b>
Energy Production	1,649	1,504	10%	18%
<b>Total Revenue</b>	<b>\$ 9,316</b>	<b>\$ 10,264</b>	<b>-9%</b>	<b>100%</b>
<b>Cost of Sales</b>				
Products	\$ 2,201	\$ 2,751	-20%	
Services	2,431	2,738	-11%	
Energy Production	973	981	-1%	
<b>Total Cost of Sales</b>	<b>\$ 5,605</b>	<b>\$ 6,469</b>	<b>-13%</b>	
<b>Gross Profit</b>				
	\$ 3,711	\$ 3,795	-2%	40%
Net income (loss) attributable to Tecogen Inc.	\$ (4,372)	\$ 269		
Net income attributable to Tecogen w/o GW impairment	\$ 19	\$ 269		
<b>Gross Margin</b>				
Products	41%	41%		
Services	39%	34%		
Aggregate Products and Services	40%	37%		
Energy Production	41%	35%		
Overall	40%	37%		

21% Growth in Chiller Sales

11% Growth in Service Contract Revenue

40% Overall Gross Margin

# Year End 2018 Financial Metrics: Revenues, Margins, Growth



- 🔄 Four diverse revenue streams
  - 🔄 Record-breaking chiller sales
  - 🔄 Long term service contracts provide steadily improving cash flow, representing 24% of revenue
  - 🔄 Turnkey installation activities grew 5% in the year
  - 🔄 Energy production provides full year of reliable cash flow
- 🔄 Maintained total gross margin of 38%

\$ in thousands	Year Ended December 31,		YoY Growth	2018 % of Total Rev
	2018	2017		
<b>Revenue</b>				
Cogeneration	\$ 5,467	\$ 8,186	-33%	15%
Chiller	7,158	4,806	49%	20%
<b>Total Product Revenue</b>	<b>12,625</b>	<b>12,992</b>	<b>-3%</b>	<b>35%</b>
Service Contracts and Parts	8,762	8,697	1%	24%
Installation Services	8,097	7,680	5%	23%
<b>Total Service Revenue</b>	<b>16,859</b>	<b>16,377</b>	<b>3%</b>	<b>47%</b>
Energy Production	6,400	3,834	67%	18%
<b>Total Revenue</b>	<b>\$ 35,884</b>	<b>\$ 33,203</b>	<b>8%</b>	<b>100%</b>
<b>Cost of Sales</b>				
Products	\$ 7,798	\$ 8,012	-3%	
Services	10,693	10,202	5%	
Energy Production	3,801	2,035	87%	
<b>Total Cost of Sales</b>	<b>\$ 22,292</b>	<b>\$ 20,249</b>	<b>10%</b>	
<b>Gross Profit</b>	<b>\$ 13,592</b>	<b>\$ 12,954</b>	<b>5%</b>	<b>38%</b>
Net income (loss attributable to Tecogen)	\$ (5,709)	\$ 47		
Net Income (loss) attributable to Tecogen, w/o GW Impairment	\$ (1,318)	\$ 47		
<b>Gross Margin</b>				
Products	38%	38%		
Services	37%	38%		
Aggregate Products and Services	37%	38%		
Energy Production	41%	47%		
<b>Overall</b>	<b>38%</b>	<b>39%</b>		

Record-Breaking  
Chiller Sales

8% Overall Revenue  
Growth

5% Increase in  
Gross Profit

# Adjusted EBITDA Reconciliation

Adjusted EBITDA positive for the year and 4th quarter



## Q4 and YE Comparative Net income (loss) to Adjusted EBITDA Reconciliation

- EBITDA: Interest, taxes, depreciation & amortization
- Non-cash adjustments
  - Stock based compensation
  - Unrealized loss on investment securities
  - Goodwill impairment
- Non-recurring expenses
  - Merger related expenses

Consistently reaching positive levels of adjusted EBITDA

Non-GAAP financial disclosure	Q4 2018	Q4 2017
Net Income (loss) attributable to Tecogen Inc.	\$ (4,371,904)	\$ 268,981
Interest expense, net	63,716	33,463
Depreciation & amortization, net	202,934	184,882
Income tax expense	(9,931)	-
<b>EBITDA</b>	<b>(4,115,185)</b>	<b>487,326</b>
Stock based compensation	47,380	45,439
Unrealized loss on investment securities	59,042	-
Merger related expenses	120,333	-
Goodwill impairment	4,390,590	-
<b>Adjusted EBITDA*</b>	<b>\$ 502,160</b>	<b>\$ 532,765</b>

Non-GAAP financial disclosure	Year End 2018	Year End 2017
Net Income (loss) attributable to Tecogen Inc.	\$ (5,708,532)	\$ 47,436
Interest expense, net	111,985	127,456
Depreciation & amortization, net	789,123	587,822
Income tax expense	32,748	-
<b>EBITDA</b>	<b>(4,774,676)</b>	<b>762,714</b>
Stock based compensation	181,188	183,768
Unrealized loss on investment securities	118,084	-
Merger related expenses	302,268	156,298
Goodwill impairment	4,390,590	-
<b>Adjusted EBITDA*</b>	<b>\$ 217,454</b>	<b>\$ 1,102,780</b>

\*Adjusted EBITDA is defined as net income (loss) attributable to Tecogen Inc, adjusted for interest, depreciation and amortization, stock based compensation expense, goodwill impairment and merger related expenses.

# Emissions Technology Update



## Forklift Program – Tecogen/Mitsubishi Caterpillar Forklift of America (MCFA)

- Received first samples of alternative engine retuning software from MCFA
- Prototype evaluation completed at Tecogen
  - Tuning shift produced expected result (NOx reduction)
- “Roadmap” provided to MCFA for revised tuning
  - Second revision received, testing underway.
- Multiple iterations typical
  - Encouraged by interest and fast turnaround by MCFA





## Other Emissions Progress

### Southern California generator retrofit program

- All engines permitted, successfully tested for compliance
- Only natural gas engines permitted to current (2010) regs without operating exemption

### Ultra Automotive Catalyst Development

- On road Ultra development work with outside research institute progressing
- Focus is alternative catalyst formulation
- Test samples fabricated
- Testing planned over next few months

### Ultra Project approved by SoCal District Pump Project

- Project approved for new natural gas driven pump procurement
- 800 horsepower engines
- Requires 2x scaleup of system



Natural Gas Generator Upfitted with Ultra in Southern California (LA County)



# 2019 Outlook



## Continued growth in Core business

- Driven by shift in product sales mix to chillers
- No chiller competitors, Predictable sales channels
- Ultra emissions key to certain markets (California)

## Adapt to changing role of CHP in utility distributed generation market

- “Smart Inverter” certification likely to spread to east coast
- InVerde ideally suited to this changing environment
- integration of storage and solar becoming even more important

## Validation of Ultra value proposition

- MCFA program results promising
- Further proof points with other stationary engine retrofits (Generac, EMWD)
- Opportunity for automotive applications

## Stable Financial Footing

- Zero debt, strong balance sheet
- Access to capital if needed



# Closing Comments



## Tecogen Key Value Proposition Remains:

- Use plentiful and affordable natural gas efficiently and cleanly to meet energy needs of large facilities
- Tecogen cogeneration systems have necessary certifications and functionality to participate in new, revenue generating utility support programs
- Tecogen is only manufacturer of natural gas engine chillers, with significant new market potential for indoor growing and ammonia refrigeration systems
- Ultra emission technology successfully implemented on many engine platforms and has potential for significant investor upside.

TGEN 12 month stock chart



# Q&A



## Company Information

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