

EMV Preparedness Survey

for the

U.S. Convenience and Retail Fueling Industry

August 9, 2019

Version 1.0



Document Summary

From June 10 to July 8, 2019 Conexus fielded an electronic survey to determine the level of preparedness of the retail fueling industry for the EMV liability shift for both automated fueling dispensers (AFDs) set to take place in October 2020 and all other transactions which went into effect in October 2015. This document details the results of that survey.

Questions? Please email: info@conexus.org

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1 Introduction

According to the 2018 NACS State of the Industry (SOI) report, the United States has over 153,000 retail fueling and convenience stores. These stores perform 160M transactions per day with annual sales totaling more than \$654B. Approximately 80% of stores sell fuel and well over 60% of stores are owned by a single store operator.

Many stores carry “branded” fuel. While the brand (e.g., major oil) may not own the store, it has significant influence on equipment and solutions that the site installs. For major oils, as well as chains with larger store counts, it is typical to support multiple vendors for each component in the payment ecosystem (e.g., dispensers, POS, EPS, PINPad terminals). Due to the many combinations of equipment that can occur, development, testing, and certification requirements increase in order to fully support EMV across all stores in the chain or brand.

From June 10 to July 8, 2019 Conexus fielded an electronic survey to determine the level of preparedness of the U. S. retail fueling industry for the EMV liability shift for both automated fueling dispensers (AFDs) set to take place in October 2020 and all other transactions which went into effect in October 2015.

In an attempt to maximize the total number of responses, Conexus reached out to over 1600 individuals (CEO, CFO, payment professionals) at 1100 organizations representing individual sites, retail chains, major oils, and fuel distributors and wholesalers.

Recipients were encouraged to choose one person within their company with the most knowledge of the topic to complete the survey, in order to avoid duplicate responses.

Utilizing convenience sampling methods, **88 unique completed surveys were received, of which 79 respondents own or operate a total of 26,284 retail sites.** Not all questions were asked of every respondent (varied by company classification and answers to specific questions earlier in the survey) and not every respondent chose to provide answers to all asked questions. Therefore, the sample for each question varied and is shown in the results reported below. If the reported data is a number by itself or a number followed by a percentage in parenthesis, the number represents the total count for that answer to the question. In column headings where a number is shown in parenthesis, this indicates the sample size for the question.

No company identifying information (e.g., name or email address of respondent, company name) were captured as to encourage accurate disclosure. The following report details the aggregate results from the survey.

2 Executive Summary

Industry will not be EMV compliant on the fuel island by October 1, 2020

The survey included a cross section of major oils, fuel distributors/wholesalers, and company owned/retail site operators. The survey confirmed that the vast majority of sites were *in-store* EMV operational, while a small minority of sites are EMV operational on the fuel island.

While questions about contactless EMV and fraud were asked, this summary only provides information on the results from the contact EMV questions (when the card is inserted in reader).

For respondents who own and operate sites:

In-store contact EMV status – 86% surveyed report fully deployed.

- For those reporting no sites deployed with inside EMV, all indicated that it was their intention to implement.
- For those that were not fully deployed, almost 87% of the sites have functional hardware installed, but almost 44% of the sites are waiting on software.

Fuel island contact EMV status – 13% surveyed report fully deployed

- Almost 70% indicated they had 0 (zero) sites deployed
- 9% indicated the rollout was completed for less than 25% of their sites.
- Those reporting no sites deployed with outside EMV, 80% indicated they intended to implement it, while 17% were undecided.
- For respondents that were undecided or had decided not to implement, the cost of upgrading (43% of respondents) along with the risk not justifying the expense (also 43% of respondents) were the top reasons.
- For those that were not 100% deployed, only 23% of the sites have functional hardware installed, with the remainder needing new hardware or upgrades.
- The top challenge cited by respondents not 100% EMV ready was lack of available software (52%).
- 42% reported that they already are, or will be 100% deployed by the liability shift date of Oct 1, 2020.
- 25% of respondents did not know when they might be ready.

For major oil and fuel distributors/wholesalers responding about the requirements they are imposing on branded sites:

- Only 10% of the respondents indicated they are not requiring indoor contact EMV.
- 30% indicated they were not requiring outside contact EMV.
- For indoor contact EMV, almost 60% indicated they had certified solutions ready for deployment from ALL of their vendors.
- For outdoor contact EMV, no respondents had certified solutions ready for deployment from ALL of their vendors.
 - Over 28% are waiting on software from one or more vendor
 - Almost 15% are waiting on hardware.

3 Survey Sample Description

3.1 Company Classification

Respondents self-identified as to whether they were a major oil, fuel distributor or wholesaler or a retail site operator.

Company Classification broken out by respondents	
Major Oil	10 (11.36%)
Fuel Distributor/Wholesalers	6 (6.82%)
Company Owned/Retail Site Operators	72 (81.82%)
Total	N = 88

Company Classification broken out by sites represented	
Major Oil	184 (0.7%)
Fuel Distributor/Wholesalers	358 (1.36%)
Company Owned/Retail Site Operators	25,742 (97.9%)
Total	N = 26,284

3.2 NACS Store Count Categories

The NACS annual SOI report utilizes 5 categories (A, B, C, D, and E) to classify store count size. Some questions are broken out utilizing these same categories.

NACS Store Count Categories broken out by respondents	
A (1-10 stores) **	30 (37.97%)
B (11-50 stores)	22 (27.85%)
C (51-200 stores)	14 (17.72%)
D (201-500 stores)	5 (6.33%)
E (501+ stores)	8 (10.13%)
*The total respondent for this question is N=79 . 9 survey respondents do not operate sites.	
** Note that 11 respondents were single store operators.	

NACS Store Count Categories broken out by sites represented	
A (1-10 stores)	120 (0.46%)
B (11-50 stores)	481 (1.83%)
C (51-200 stores)	1,415 (5.38%)
D (201-500 stores)	1,700 (6.46%)
E (501+ stores)	22,568 (85.86%)
Total	N = 26,284

3.3 Region

Areas of the Country Where Respondents Operate Sites	
New England (Maine, Rhode Island, Vermont, Connecticut, New Hampshire and Massachusetts)	8.88%
Mid Atlantic (New York, New Jersey, and Pennsylvania)	13.92%
South (Virginia, West Virginia, Kentucky, Delaware, Maryland, North and South Carolina, Tennessee, Arkansas, Louisiana, Florida, Georgia, Alabama, and Mississippi)	43.04%
Midwest (Michigan, North and South Dakota, Iowa, Minnesota, Kansas, Nebraska, Ohio, Indiana, Illinois, Wisconsin, and Missouri)	34.18%
Southwest (Texas, Arizona, New Mexico and Oklahoma)	24.05%
Rocky Mountain (Montana, Idaho, Colorado, Utah, Wyoming and Nevada)	17.72%
Pacific (California, Oregon and Washington)	20.25%
*Note: This will not equal 100% in total as respondents could select more than one region. Data related to store count per region is not available. N=79 as only those who answered “Yes” to “own and operate stores” were prompted for this question.	

4 Major Oil and Fuel Distributor Only Questions

The questions in this section were only asked of those respondents who self-identified as either major oil or fuel distributor/wholesaler company classification. These companies are responsible for ensuring tested and certified EMV solutions exist for their branded sites, regardless of whether or they actual own and operate them.

4.1 Are you requiring your retail branded sites to implement EMV?

EMV Implementation Requirements			
	Major Oil (10)	Fuel Distributor (6)	Total (16)
INSIDE CONTACT			
Yes	60%	66.66%	62.5%
Yes, but up to site to decide if they want to turn it on	30%	0%	18.75%
No	10%	16.66%	12.25%
Undecided	0%	16.66%	6.5%
INSIDE CONTACTLESS			
Yes	50%	16.66%	37.5%
Yes, but up to site to decide if they want to turn it on	30%	16.66%	25%
No	10%	66.66%	31.25%
Undecided	10%	0%	6.25%
OUTSIDE CONTACT			
Yes	40%	33.33%	37.5%
Yes, but up to site to decide if they want to turn it on	40%	16.66%	31.25%
No	20%	50%	31.25%
Undecided	0%	0%	0%
OUTSIDE CONTACTLESS			
Yes	10%	16.66%	12.5%
Yes, but up to site to decide if they want to turn it on	50%	0%	31.25%
No	10%	66.66%	31.25%
Undecided	30%	16.66%	25%

4.2 Do you own and operate sites?

Do You Own and Operate Sites?			
	Major Oil (10)	Fuel Distributor (6)	Total (16)
No	70%	33.33%	56.25%
Yes	30%	66.66%	43.75%

4.3 EMV Solution Status (no company owned and operated stores)

The questions in this subsection were only asked of those respondents who self-identified as either major oil or fuel distributor/wholesaler company classification *and* did not own or operate stores. (Companies that did own stores were asked a different set of questions.) Two of the major oils who reported that they did not operate sites chose not to respond to the following questions.

4.3.1 What is the status of EMV solutions for the equipment you support?

EMV SOLUTION STATUS			
(Respondents could choose all that applied, therefore the total % will not equal 100%)			
	Major Oil (5)	Fuel Distributor (2)	Total (7)
INSIDE CONTACT			
I am waiting on software from one or more vendor(s)	0%	50%	14.29%
I am waiting on hardware from one or more vendor(s)	0%	0%	0%
I am in lab testing	0%	0%	0%
I am in network certification testing	20%	0%	14.29%
I have certified solutions ready for deployment from one or more vendor(s)	40%	0%	28.57%
I have certified solutions ready for deployment from ALL of my vendor(s)	60%	50%	57.14%
INSIDE CONTACTLESS			
I am waiting on software from one or more vendor(s)	0%	50%	14.29%
I am waiting on hardware from one or more vendor(s)	0%	0%	0%
I am in lab testing	0%	0%	0%
I am in network certification testing	20%	0%	14.29%
I have certified solutions ready for deployment from one or more vendor(s)	40%	0%	28.57%
I have certified solutions ready for deployment from ALL of my vendor(s)	60%	50%	57.14%

EMV SOLUTION STATUS			
(Respondents could choose all that applied, therefore the total % will not equal 100%)			
	Major Oil (5)	Fuel Distributor (2)	Total (7)
OUTSIDE CONTACT			
I am waiting on software from one or more vendor(s)	20%	50%	28.57%
I am waiting on hardware from one or more vendor(s)	20%	0%	14.29%
I am in lab testing	20%	0%	14.29%
I am in network certification testing	0%	0%	0%
I have certified solutions ready for deployment from one or more vendor(s)	80%	20%	71.43%
I have certified solutions ready for deployment from ALL of my vendor(s)	0%	0%	0%
OUTSIDE CONTACTLESS			
I am waiting on software from one or more vendor(s)	60%	50%	57.14%
I am waiting on hardware from one or more vendor(s)	20%	0%	14.29%
I am in lab testing	0%	0%	0%
I am in network certification testing	0%	0%	0%
I have certified solutions ready for deployment from one or more vendor(s)	20%	50%	28.57%
I have certified solutions ready for deployment from ALL of my vendor(s)	0%	0%	0%

4.3.2 When do you expect to have certified solutions for deployment from ALL your vendor(s)?

CERTIFIED SOLUTION AVAILABILITY			
	Major Oil (5)	Fuel Distributor (2)	Total (7)
INSIDE CONTACT			
I have them now	40%	50%	42.9%
2019	60%	0%	42.9%
First half of 2020	0%	0%	0%
Second half of 2020	0%	0%	0%
First half of 2021	0%	0%	0%
Second half of 2021	0%	0%	0%
2022	0%	50%	14.29%
2023	0%	0%	0%
2024 or beyond	0%	0%	0%
INSIDE CONTACTLESS			
I have them now	40%	50%	42.86%
2019	40%	0%	28.57%
First half of 2020	20%	0%	14.29%
Second half of 2020	0%	0%	0%
First half of 2021	0%	0%	0%
Second half of 2021	0%	0%	0%
2022	0%	50%	14.29%
2023	0%	0%	0%
2024 or beyond	0%	0%	0%
OUTSIDE CONTACT			
I have them now	0%	0%	0%
2019	0%	50%	14.29%
First half of 2020	40%	0%	28.57%
Second half of 2020	40%	0%	28.57%
First half of 2021	20%	0%	14.29%
Second half of 2021	0%	50%	14.29%
2022	0%	0%	0%
2023	0%	0%	0%
2024 or beyond	0%	0%	0%

CERTIFIED SOLUTION AVAILABILITY			
	Major Oil (5)	Fuel Distributor (2)	Total (7)
OUTSIDE CONTACTLESS			
I have them now	0%	0%	0%
2019	0%	0%	0%
First half of 2020	20%	50%	28.57%
Second half of 2020	20%	0%	14.29%
First half of 2021	20%	0%	14.29%
Second half of 2021	40%	0%	28.57%
2022	0%	50%	14.29%
2023	0%	0%	0%
2024 or beyond	0%	0%	0%

5 Questions for Site Owners/Operators

The questions in this section were only asked of those respondents who answered affirmative to owning/operating sites. This could include major oils and fuel distributors/wholesalers.

5.1 Contact EMV Inside

5.1.1 What percentage of your sites have contact EMV currently working inside at the POS?

Inside Contact Deployment	
	Respondent Count (78)
0%	3.85%
< 25%	2.56%
25%-50%	2.56%
50%-75%	2.56%
75%-100%	2.56%
100%	85.90%

5.1.2 Do you plan on implementing contact EMV inside at some point in the future for at least some of your sites?

This question was only for site owners who have 0% deployment contact inside.

Inside Contact Plans	
	Respondent Count (3)
Yes	100%
No	0%
Undecided	0%

5.1.3 Inside Contact EMV Challenges

These questions were asked of respondents that do not currently have 100% deployment of inside contact EMV. A total of 6,997 sites are represented across the 10 respondents who chose the answer the question.

Inside Contact EMV Challenges	
Hardware Status	
	Site Count (6,997)
I have deployed hardware that is functional as is	86.77%
I have deployed hardware but it needs to be upgraded	9.68%
I have not deployed hardware	1.32%
I have some sites that I won't be upgrading	0.08%
I don't know	2.14%
Software Status	
	Site Count (6,997)
I have software in lab testing	42.87%
I have software in network certification testing	0%
I have certified software available; I just haven't deployed it yet	9.76%
I am waiting on software from vendor(s)	43.57%
I have some sites that I won't be upgrading	0.07%
Don't know	3.73%
What is preventing you from being 100% deployed? (Respondents could choose all that applied, therefore the total % will not equal 100%)	
	Respondent Count (10)
Lack of available hardware	0%
Lack of available software	30%
Waiting on certification	10%
Not sure how to pay for it	10%
Effort, complexity	20%
Other priorities	30%
My fuel brand has told me a solution is not available yet	10%
I am waiting to deploy indoor and outdoor at the same time	20%
Other: (Specific reasons included deployment is in progress or is starting soon, EMV is painfully slow and creating long lines)	30%

Inside Contact EMV Challenges	
Expectation for 100% deployment for sites you want to upgrade?	
	Respondent Count (10)
2019	40%
First half of 2020	20%
Second half of 2020	10%
I don't know	30%

5.2 Contact EMV Outside

In the following tables, responses are split out by respondent's store count using the NACS store count categories, where:

- A = 1-10 Stores
- B = 11-50 Stores
- C = 51-200 Stores
- D = 201-500 Stores
- E = 501+ Stores

5.2.1 What percentage of your sites have contact EMV currently working outside at the dispenser?

Outside Contact Deployment						
	A (25)	B (17)	C (13)	D (5)	E (6)	Total Respondent Count (66)
0%	56%	70.59%	84.62%	100%	66.67%	69.7%
< 25%	4%	11.76%	15.38%	0%	16.67%	9.09%
25%-50%	8%	0%	0%	0%	0%	3.03%
50%-75%	4%	5.88%	0%	0%	0%	3.03%
75%-100%	0%	0%	0%	0%	16.67%	1.52%
100%	28%	11.76%	0%	0%	0%	13.64%

5.2.2 Do you plan on implementing contact EMV outside at some point in the future for at least some of your sites?

This question was only for site owners who have 0% deployment contact outside.

Outside Contact Plans						
	A (14)	B (12)	C (11)	D (5)	E (4)	Total Respondent Count (46)
Yes	71.42%	91.67%	63.63%	100%	100%	80.43%
No	7.14%	0%	0%	0%	0%	2.17%
Undecided	21.43%	8.33%	36.36%	0%	0%	17.39%

5.2.3 Why aren't you implementing contact EMV outside?

This question was only for site owners who have 0% deployment contact outside and indicated they were either undecided about or definitely not implementing it.

Why aren't you going to implement outside contact? (Respondents could choose all that applied, therefore the total % will not equal 100%)	
	Respondent Count (7)
I don't know how	0%
It's too complex, requires too much effort	0%
Other priorities	14.29%
The cost is too high	42.86%
I'm not sure how to pay for it	0%
My risk for not converting doesn't justify the expense	42.86%
Other (Specific reasons included waiting on decisions from management, fuel brand, networks)	28.57%

5.2.4 Outside Contact EMV Challenges

These questions were asked of respondents that do not currently have 100% deployment of outside contact EMV. A total of 24,242 sites are represented across 48 respondents.

Outside Contact EMV Challenges	
Hardware Status	
	Site Count (24,242)
I have deployed hardware that is functional as is	23.48%
I have deployed hardware but it needs to be upgraded	41.60%
I have not deployed hardware	35.20%
I have some sites that I won't be upgrading	1.72%
Software Status	
	Site Count (24,242)
I have software in lab testing	24.93%
I have software in network certification testing	10.86%
I have certified software available; I haven't deployed yet	19.80%
I am waiting on software from vendor(s)	43.60%
I have some sites that I won't be upgrading	0.24%
Don't know	0.57%
What is preventing you from being 100% deployed? (Respondents could choose all that applied, therefore the total % will not equal 100%)	
	Respondent Count (48)
Lack of available hardware	14.58%
Lack of available software	52.08%
Waiting on certification	29.17%
Not sure how to pay for it	29.17%
Effort, complexity	25%
Other priorities	29.17%
My fuel brand has told me a solution is not available yet	16.67%
Other: (Specific reasons included availability of certified technicians, waiting on installs, vendor delays, no certification for outside debit, can't justify expense, brand readiness, solution is reliable, plan to upgrade closer to liability shift date)	16.67%

Outside Contact EMV Challenges	
What % of your sites do you expect to have EMV working outside by Oct 1, 2020?	
	Respondent Count (48)
0%	14.58%
< 25%	6.25%
25%-50%	18.75%
50%-75%	10.42%
75%-100%	16.67%
100%	33.33%
Expectation for 100% deployment for sites you want to upgrade?	
	Respondent Count (48)
2019	8.33%
2020	35.42%
First half of 2021	12.5%
Second half of 2021	4.17%
2022	4.17%
2023	6.25%
2024 or beyond	4.17%
I don't know	25%

5.3 Contactless EMV

Contactless EMV	
Are you planning to deploy contactless inside?	
	Respondent Count (54)
Yes, and I'm 100% deployed at sites where I have contact EMV deployed inside	59.26%
Yes, but I'm not 100% deployed	18.52%
No	5.56%
Undecided	16.67%
Are you planning to deploy contactless outside?	
	Respondent Count (54)
Yes, and I'm 100% deployed at sites where I have contact EMV deployed outside	11.11%
Yes, but I'm not 100% deployed	50%
No	3.70%
Undecided	35.19%
If you are not implementing contactless, why not? (Respondents could choose all that applied, therefore the total % will not equal 100%)	
	Respondent Count (23)
I don't know how	13.04%
Effort, complexity	13.04%
Other priorities	30.43%
The cost is too high	47.82%
Not sure how to pay for it	30.43%
Requires additional upgrades	60.87%
Other: (Specific reasons included will probably implement eventually, cost is ridiculous, worried about skimming and other threats to contactless, will only deploy at sites that already have necessary hardware, not sure it's needed)	17.39%

Contactless EMV	
If you want to deploy but aren't at 100%, what's the primary reason for why not?	
	Respondent Count (43)
I need new hardware	16.28%
Lack of available software	13.95%
Waiting on certification	9.30%
Not sure how to pay for it	9.30%
Effort, complexity	13.95%
Other priorities	9.30%
My fuel brand has told me a solution is not yet available	11.63%
Other: (Specific reasons included provider delays, waiting until closer to October 2020, cost is too high, worried about spending money and then the technology being exploited and we'll be charged back for the fraud)	16.28%

5.4 Fraud

5.4.1 Fraud Status

Fraud Status	
Do you have sites that were <i>previously</i> in excessive fraud and were able to remediate out?	
	Respondent Count (54)
No	68.52%
Yes	24.07%
Don't Know	7.41%
Are any of your sites <i>currently</i> in excessive fraud for chargeback purposes?	
	Respondent Count (54)
No	75.93%
Yes	22.22%
Don't Know	1.85%
What percentage of your sites are currently in excessive fraud?	
	Respondent Count (54)
< 25%	100%
What regions are the sites located in that are experiencing or were experiencing excessive fraud? (Respondents could choose all that applied, therefore the total % will not equal 100%)	
	Respondent Count (23, after excluding those who chose not applicable as an answer)
New England (Maine, Rhode Island, Vermont, Connecticut, New Hampshire and Massachusetts)	0%
Mid Atlantic (New York, New Jersey, and Pennsylvania)	8.7%
South (Virginia, West Virginia, Kentucky, Delaware, Maryland, North and South Carolina, Tennessee, Arkansas, Louisiana, Florida, Georgia, Alabama, and Mississippi)	43.49%
Midwest (Michigan, North and South Dakota, Iowa, Minnesota, Kansas, Nebraska, Ohio, Indiana, Illinois, Wisconsin, and Missouri)	30.43%

Fraud Status	
Southwest (Texas, Arizona, New Mexico and Oklahoma)	30.43%
Rocky Mountain (Montana, Idaho, Colorado, Utah, Wyoming and Nevada)	13.04%
Pacific (California, Oregon and Washington)	13.04%
Which card brand(s) have you seen excessive fraud?	
(Respondents could choose all that applied, therefore the total % will not equal 100%)	
	Respondent Count (16, after excluding those who chose not applicable as an answer)
American Express	6.25%
Mastercard	50%
Visa	100%

5.4.2 Fraud Mitigation

Fraud Mitigation	
Are you doing anything between now and when you deploy outdoor EMV to mitigate fraud at the dispenser?	
(Respondents could choose all that applied, therefore the total % will not equal 100%)	
	Respondent Count (54)
Nothing	42.59%
Refer people inside	3.70%
Turn Off pay at pump	0%
Fraud prevention program through a card brand	14.81%
Fraud prevention program through your acquirer/network	25.93%
Fraud prevention program in-house	24.07%
White listing and black listing of cards	7.41%
Disallowing pin bypass	7.41%
Other (Specific answers included zip code verification, secure locks)	7.41%
Do you plan to continue any fraud mitigation after you deploy outdoor EMV?	
(Respondents could choose all that applied, therefore the total % will not equal 100%)	
	Respondent Count (54)
Nothing	44.44%
Refer people inside	7.41%
Fraud prevention program through a card brand	14.81%
Fraud prevention program through your acquirer/network	25.93%
Fraud prevention program in-house	27.78%
White listing and black listing of cards	7.41%
Disallowing pin bypass	9.26%
Other (Specific answers included equipment with door sensor, secure locks)	5.56%