

# The Impact of Automated Return-Call Systems

A case study of the Virtual Hold Technology  
Virtual Hold™ Queue Management Solution  
designed for Atmos Energy



Excerpted from

*From Cost to Profit Center:  
How Technology Enables the Difference*

by

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### **Acknowledgement**

We wish to thank Atmos Energy Corporation whose story appears in this study, and thank their managers and staff whose cooperation and support enabled us to produce our findings.

We also want to express our gratitude to Virtual Hold Technology, LLC for their sponsorship of this landmark research study.

### **Executive Summary**

The goal of our research was to evaluate the impact that the Atmos Energy (hereinafter, "Atmos") call center experienced following their implementation of Virtual Hold Technology's (hereinafter, the "Sponsor") automated queue management return-call system (hereinafter, the "Virtual Hold System"), which allows customers to request a return call from a call center rather than wait in a queue for their call to be answered.

Specifically, we wanted to determine the impact that offering callers the option of a return call rather than requiring the caller to remain in queue had on:

1. customer satisfaction
2. CSR performance
3. operating costs.

Our objective was to measure and quantify the performance levels that the call center realized following the implementation of the Virtual Hold System, and calculate the corresponding financial benefit to Atmos.

The highlights of our research findings are summarized on the following page. This executive summary forms the basis of the remainder of this case study.

### *Our Most Important Findings*

After installing the Virtual Hold System, Atmos experienced the following changes:

1. Approximately 60% of their callers who were offered the return-call option accepted the offer.
2. Over 97% of the returned calls were successfully completed.
3. Average handle times for answered calls decreased by 10%.
4. Approximately 38% of the callers who rejected the return call offer hung up before the call was answered.
5. Staffing was reduced by the equivalent of 17 full-time CSRs during the peak heating season.
6. Cost per call for the five month heating season following implementation of the Virtual Hold solution was 39% lower than the cost per call in the comparable period a year earlier.
7. Toll costs for calls waiting in queue decreased by 93% for the comparable heating season periods.
8. Cost per call dropped 39% for the five month heating season compared to the comparable period the previous year earlier.
9. Cost reductions in cost per call allowed Atmos to pay for the Virtual Hold System within 4 months, with added savings to pay the annual maintenance charge for more than 5 years.

### **Introduction to Our Product Validation Research**

Powerful technology solutions designed specifically for call centers allow imaginative executives to initiate sales and service strategies that could not have been successfully implemented until now. Through these innovative call center solutions, businesses are better able to:

1. meet customer needs
2. increase satisfaction
3. increase market share
4. increase revenues
5. reduce transaction costs
6. improve CSR retention
7. acquire new customers
8. retain existing customers
9. increase profits and earnings per share.

Our researchers have developed a scientific method to determine the impact that such enabling technologies have on leveraging a contact center's ability to achieve all of the above.

Our case studies tell a compelling story. We have found astounding ROIs, with paybacks of less than four months in some cases and less than twelve months in most cases. Because of our focus on revenue generation, and/or cost reduction, our quantitative product validations stimulate the imagination of executives, who have their eye on bottom-line profits.

It is an unfortunate fact that, in almost all cases, the financial impact of call center improvement initiatives are not adequately measured, and therefore, the success stories are never told. This is a loss for both the vendor providing the improvement solution, and the company's "champion" who could take full credit for the financial gains, if only someone would do the research.

It is our conviction that documenting these success stories will engage the imaginations of business leaders and call center professionals to reach out and embrace the power of enabling technology for call centers.

This unique case study documents another such financial success story.

### **Ideal Components of an Automated Return-Call System**

An ideal system should:

1. interface with the automatic call director (hereinafter, "ACD") to:
  - a. monitor and record the length of time that a call waits in queue before being answered
  - b. seize the call when the actual wait time exceeds a predetermined threshold
2. include an interactive voice response system (hereinafter, "IVR") to:
  - a. inform the caller of the predicted wait time to reach a customer service representative (hereinafter, "CSR")
  - b. offer the caller the option to:
    - i. remain on hold
    - ii. place a request to the call center for a return call when a CSR is available, or
    - iii. schedule a request for a return call by a CSR at a more convenient time for the caller
  - c. return the call to the ACD queue if the caller declines the return-call offer
  - d. capture the caller's contact information and return telephone number if the caller elects to receive a return call

- e. register the time the caller requests a return call to occur
3. provide an interface with the computer telephony integration (hereinafter, "CTI") server to capture required information about the caller
4. ensure no functionality is lost when the return call occurs and the call is released to a CSR
5. include an automatic dialer to:
  - a. dial the caller's telephone number at the time scheduled for the return call to occur
  - b. monitor the call progress. tones to determine when the placed call is answered
  - c. determine when the person who placed the initial call is on the phone
  - d. transfer the call to the ACD to be answered by the next available CSR
  - e. follow business rules established by call center management when the return call does not reach the customer who originally placed the call. These rules can include:
    - i. attempt to place the call again later, or
    - ii. leave a recorded message for the customer to call back
6. contain an administrative and reporting system that includes:
  - a. a real time monitor showing the current state of both the ACD and automated return-call system queues
  - b. a comprehensive and customizable historical reporting subsystem
  - c. easy to use administrative tools to:
    - i. configure and change settings and control options,  
and
    - ii. optimize system performance.

### **Research Project Background**

We performed a thorough and comprehensive study to determine the changes in performance resulting from the deployment of the Virtual Hold System. To do so, we compared KPIs for the five-month heating season peak-period prior to its implementation (December 2000 through April 2001) with the five-month heating season peak period following implementation (December 2001 to April 2002).

In our research project, working closely with Atmos call center management, we achieved the following:

1. identified the KPIs we expected to change due to implementation of the Virtual Hold System
2. collected baseline monthly performance data for three months beginning in January 2000
3. analyzed the change in the behavior of callers who selected a return-call option compared with those callers who chose to remain on hold in the queue
4. analyzed the data collected to measure KPI changes that we could attribute to the Virtual Hold System
5. identified changes made in the call workflow processes which resulted from the implementation of the Virtual Hold System
6. identified changes in management processes required to support the Virtual Hold System
7. identified the effects of the implemented Virtual Hold System on other key constituencies
8. quantified the economic value of the improvements resulting from the deployment of the Virtual Hold System
9. computed a return on investment (ROI) for the Virtual Hold System at Atmos.

While we certainly expected to find some performance impact, no guarantees of the outcome were given to either the Sponsor or Atmos. Whatever conclusions we made were driven and supported by the data we gathered during our study.

### **Research Project Methodology**

We followed an iterative discovery process with Atmos and the Sponsor consisting of:

1. telephone interviews with the executive manager and key operational staff
2. preparation of a list of major KPIs
3. analysis and interpretation of the data provided
4. on-site visit to:
  - a. interview key management and staff
  - b. observe the operation and environment
  - c. validate and enhance the data being used in the study

5. development and review of preliminary conclusions
6. validations of the data to ensure the accuracy of our conclusions

Our primary interviews were with the Atmos team comprised of David Floden, Resource Manager, and members of his staff including James Keith, Business Support Analyst, Helmut Kreft, Business Support Analyst, and Chris Jones, Network Administrator. In addition, we also interviewed Bonnie Nunley, Manager of Human Resources, and Phyllis Williams, Customer Operations Supervisor of Atmos monitoring and quality assurance.

The Sponsor provided us with performance data captured and reported by the Virtual Hold System installed at Atmos and helped our researchers understand and interpret these data.

Atmos management team was able to provide us with accurate data for the following:

1. monthly KPI measurements of call center performance for three years beginning January 2000
2. monthly KPI measurements for a one-year period beginning October 2001, immediately preceding deployment of the return-call system
3. detail on the Virtual Hold System features and rules implemented to address the large increase in call volume that occurred in the heating season of December 2000 through April 2001
4. costs, pricing, and staffing changes resulting from the implementation of the Virtual Hold System
5. feedback from the reaction of customers experiencing the return-call system, the CSRs, and call center management who interacted with these customers.

We used this data to construct the financial models, and to conduct a “before-and-after” benchmark of the Virtual Hold System.

The Atmos and Sponsor teams were very cooperative in furnishing and validating the data provided. Our ROI analysis and conclusions are based upon the actual financial results.

### **Brief Background of Atmos Energy**

Atmos Energy Corporation, headquartered in Dallas, Texas is one of the largest pure natural gas distributors in the country, serving 1.7 million residential and commercial utility customers in 12 states.

Atmos Energy operates a call center in Amarillo, Texas with a smaller call center in Metairie, Louisiana. These centers house approximately 180 CSRs, support Atmos customers in all 11 states, and handle 2,200,000 calls per year.

Customers contact the call centers with calls related to billing, collections, new accounts, service and emergencies. The call centers serve both English and Spanish speaking customers.

Call volumes, average call handling times, and customer complaints reach their peaks during the winter heating season from December through April.

The 2000-2001 heating season was the coldest winter on record for Atmos. The cold weather, combined with tight natural gas supplies, pushed up gas prices to almost 4 times the historical winter peak price. Many Atmos customers had difficulty paying their higher gas bills.

In his November 2, 2001 Letter to the Shareholders, Robert W. Best, Chairman, President and Chief Executive Officer stated, "Higher gas prices caused an equally unprecedented 15-fold rise in calls to our Customer Support Center in Amarillo, Texas. Our employees undertook extraordinary efforts to minimize the customer hold time by setting up satellite call centers, enhancing Web-based customer service options and staffing local offices to be available for customers who wanted to talk to a company representative in person."

### **General Business Conditions that Prompted a New Strategy**

Handling unusually high call volumes has always presented a difficult challenge for call center management. Prior to the implementation of the Virtual Hold System, Atmos attempted a number of strategies to respond to excessive call volumes, with only limited success and significant customer dissatisfaction. Additionally, these strategies represented a significant increase in their cost of operation.

The following are the key issues that prompted the need for a new strategy:

1. More than 250,000 calls were placed to the Atmos call center on January 2, 2001. In a typical day, during the heating season, the call center will handle 8,000 to 10,000 calls.
2. Atmos contracted with their long distance provider to answer and queue calls in the network to prevent callers from receiving busy signals. As incoming ACD trunks became available the network provider delivered calls to the ACD, where they continued to wait in queue for a customer service representative (hereinafter, "CSR") to become available.
3. Toll costs for callers waiting to reach a customer service increased dramatically. From an average toll expense of \$13,000 per month in 2000, the long distance charges for January 2001 for the lengthy queue times exceeded \$600,000.
4. Atmos established a manual return-call system to handle the increased call volume, using temporary, unskilled staff hired specifically to
  - a. answer calls,
  - b. inform the caller that Atmos would call him/her back,
  - c. record the caller's return-call information, and

- d. release the call.
5. Atmos distributed the caller's information collected by the temporary staff to Atmos field offices where employees returned the call and addressed the caller's issues. Over 100,000 calls were handled in this fashion between January and March 2001.
6. By queuing calls in the network, adding temporary staff in the call center, and asking field office employees to return customer calls, Atmos was able to handle their customer demand.
7. To ensure that, in future years, they would be able to handle a similar jump in demand, without incurring the high costs they faced during the 2000/2001 season, Atmos undertook the following steps prior to the heating season of 2001/2002:
  - a. increased their permanent CSR staff. By the fall of 2001, CSR headcount was 55% higher than the previous year
  - b. quadrupled the number of incoming phone lines to their main center in Amarillo and the number of ACD ports available to support the additional phone lines
  - c. acquired and implemented the Virtual Hold System.

### **KPIs Before Implementation of the Return-Call System**

The KPIs listed below were used in the study to measure the performance improvements, perform the ROI analysis, and calculate the added economic value resulting from the implementation of an automated return-call system.

To understand the impact of the Virtual Hold System, we compared KPIs for the heating season of December 2000 through April 2001 with the KPIs for December 2001 through April 2002.

For the heating season of 2000/2001 these KPIs included:

1. calls offered to the ACD = 1,003,267
2. calls answered and queued in the network = 3,883,235
3. calls handled by CSRS = 818,890
4. calls abandoned = 14.3%
5. average queue time (network + ACD) per answered call = 877 seconds (14.6 minutes)
6. average monthly CSR staffing 128
7. average temporary full-time equivalent (hereinafter, "FTE") staffing = 34
8. effective monthly CSR staffing = 162

9. average call handle time = 364 seconds
10. total hours of queue time = 199,393
11. direct cost data:
  - a. call related staffing = \$1,804,220
  - b. incoming trunks = \$24,000
  - c. queue time toll = \$1,702,089
  - d. total direct costs = \$3,530,308
12. cost per call handled by CSRs = \$4.31.

### **Specific Features of the Virtual Hold System**

Specific features of the Virtual Hold System deployed by Atmos are:

1. ACD integration to:
  - a. monitor calls arriving in the queues being served by the Virtual Hold System
  - b. determine the current queue time for each call that arrives
  - c. establish a virtual placeholder in the queue to hold a slot for callers requesting a return call
  - d. continually monitor the queue and ACD statistics to:
    - i. determine when it is time to place a scheduled automated return call
    - ii. capture call data required for real time and historical reporting purposes
2. CTI server integration for capture of caller information to support “screen pops” at the CSR desktop when the automated return call occurs
3. An integrated IVR that:
  - a. announces the estimated hold time
  - b. offers callers the return-call options
  - c. captures the caller’s return-call information if they select the return-call offer
  - d. release the call to the ACD queue if the caller rejects the return-call option
  - e. terminates the call if the caller selected the return-call option

4. An automatic dialer to
  - a. Place the scheduled return-call
  - b. Identify when the correct individual is on the phone
  - c. Connect the call to the appropriate ACD queue
  - d. Continue to redial the caller, following predetermined rules, should the caller not answer the call when scheduled.
5. A real-time reporting system showing the status of the Virtual Hold System at the current time, as well as extensive historical reports
6. An administrative system that allows Atmos to configure, manage, change, and optimize the Virtual Hold System settings and options.

### **Effects of the Enabling Technologies**

#### *Effect of the Virtual Hold System on Call Workflow Processes*

The Virtual Hold System is designed to work alongside an ACD. The Virtual Hold System continuously monitors the ACD queues to determine when the estimated hold time exceeds a specified threshold.

During times of peak call traffic, the Virtual Hold System intercedes and plays a script that educates the caller about the current estimated hold time and promises a return call in the same amount of time that the customer will need to hold on the line to speak with a customer service agent. If the estimated time of the return call is not convenient for a customer, Virtual Hold also offers callers the option of scheduling an appointment to speak with a CSR at a later, more convenient time.

When calls exceeding the threshold arrive, the calls are placed in the ACD queue. Simultaneously, the Virtual Hold System's IVR:

1. Informs the callers of the expected wait time for their call to be answered.
2. Asks callers if they would like to
  - a. remain in queue for the next available CSR,
  - b. be called back when a CSR is available, or
  - c. schedule a return call at a later time that would be more convenient for them.

When the caller chooses the return call option, the Virtual Hold System collects the customer's name and phone number, then disconnects the call and inserts a virtual placeholder (with the customer's information) into the ACD queue to reserve the caller's place in line. As the queue is worked off, the system then begins to make outbound return calls at the rate in which agents become available.

When a return call is answered, the system plays a reconnection script. The reconnection script informs the answering party of the origin and intent of the call. To ensure that the system gets the intended party on the line, the script includes a voice file with the customer's name, spoken in their own voice. In addition, the script requests that a key be pressed on the phone's touch-tone pad when the intended party is on the line. Upon pressing the key, the call is transparently routed to the next available agent. The return call takes place in the same amount of time as if the customer had remained on hold.

All of these steps are completely transparent to the CSRs and managers in the call center.

#### *Effect of the Virtual Hold System on Atmos Technology*

1. **ACD System:** Virtual Hold's reporting systems are integrated with the ACD to ensure that real-time information as well as historical reports presented to CSRS and management accurately reflected the calls selecting the return-call option. Specifically:
  - a. **Real-Time Displays:** Atmos has television monitors positioned such that every CSR, supervisor and manager can see a monitor while seated at their desk or standing in the aisles. These monitors display the current call status of inbound queues, including the number of calls presently holding for a CSR, and the length of time the call has been waiting. 'Phantom' calls (calls that selected the automated return-call options) are included in these statistics. Today, when CSRs observe a call queue wait time longer than the threshold set by management, they are confident that the majority of those calls are actually waiting for a return call.
  - b. **Historical Reports:** The ACD vendor installed a prepackaged database module so that no existing reports had to be modified and also to ensure that calls selecting the return call options are not counted twice.
2. **CTI Server:** Virtual Hold Technology provides an adapter between the CTI server that is utilized by Atmos and the Virtual Hold System so that the caller's information needed to support the "screen pop" application is captured and presented to the ACD when the return call is reconnected to the ACD. This avoids the callers having to identify themselves a second time.

#### *Effect of the Virtual Hold System on Key Constituencies*

Strategic technology initiatives impact many different constituencies. An analysis of this impact on several constituencies at Atmos follows:

1. **Customers:** Callers now receive an estimate of their expected wait time and a choice to:
  - a. remain on the phone sitting in queue,
  - b. receive a return call when their queue slot is going to reach a CSR, or

- c. schedule a return call at a later, more convenient time.

Atmos customer reactions to the system have been very favorable. Approximately 60% of those receiving the return-call offer, accept the offer.

On average, fewer than 3% of the returned calls fail to complete successfully, whereas the abandon rate for callers choosing to remain in the queue when given the offer exceeded 35% during the heating season of 2001/2002.

Customers often express their appreciation for the service when they begin their conversation with CSRs. This is in contrast to the complaints CSRs were accustomed to receiving when customers had to wait extended periods of time before reaching a CSR.

This improved customer satisfaction led to a 10% decrease in average handle time, which is worth \$.18 per call, more than \$163,000 for the heating season of 2001/2002.

2. **CSRs:** All CSRs are able to see the current status of the Atmos call queues on at least one monitor.

Prior to implementing the Virtual Hold System, CSRs knew they would get their share of customers complaining about the length of time and frustration they had experienced merely reaching a CSR during busy periods. This added stress to their job.

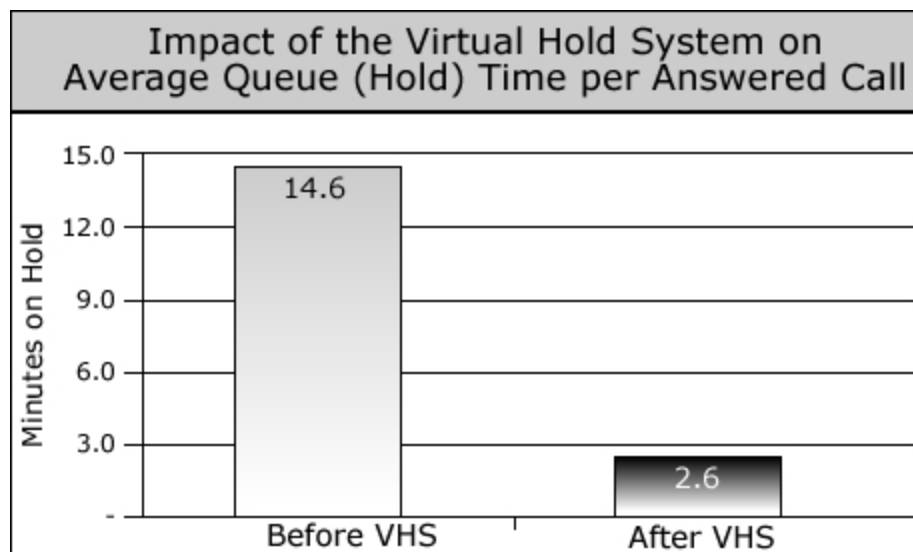


Figure 5.1 Impact of the Virtual Hold System on average queue (hold) time

As depicted in figure 5.1, the Virtual Hold System dramatically reduced the average amount of time that callers waited on hold in the queue. Today when CSRs see calls queuing up, they know that well over half of the callers will be receiving a return call and will not have been waiting in the queue for an extended period of time. The callers who chose to hold are less likely to complain about the wait because they

were offered a choice. CSRs have been trained to remind callers who do complain about the choice they made.

Quality scores have improved, handle times have declined, and CSR turnover has dropped.

3. **Supervisors and Managers:** Call center supervisors and managers like the return-call system for the same reason as the CSRs.

Complaints about the time spent in queue are infrequent, but when they do receive a complaint, they have a ready response: the caller was offered a choice. Atmos would have been happy to call them back when their position in the queue was about to reach a CSR, or at a scheduled time convenient for them.

4. **State Public Utilities Commissions:** State Public Utilities Commissions have received fewer complaints from Atmos customers regarding the hold times they experienced trying to reach the call center. Several state commissions are encouraging other utilities in their state to implement a similar solution.

### **KPIs After Implementation of the Virtual Hold System**

Atmos reported performance metrics (KPIs) for the heating season of December 2001 through April of 2002:

1. Calls queued in the network = 0
2. Calls offered to the ACD = 1,015,733
3. Calls handled by CSRs = 899,751
4. Calls abandoned = 9%
5. Average queue time per answered call = 2.6 minutes
6. Average monthly CSR Head Count = 173
7. Average temporary FTE head count = 0
8. Effective monthly CSR head count = 173
9. Average Handle Time for completed calls = 326 seconds
10. Total hours of queue time = 38,537
11. Direct cost data:
  - a. CSR related costs = \$2,165,000
  - b. Incoming trunk costs = \$92,000
  - c. Queue time (toll) costs = \$190,488

d. Total direct costs = \$2,372,610

12. Direct cost per call = \$2.62.

*Table 5.1 Comparison of KPIs Before / After the Virtual Hold System*

<b>KPI Comparison Table</b>	<b>Before Virtual Hold</b>	<b>After Virtual Hold</b>	<b>Gap</b>	<b>% Change</b>
Calls queued in network	3,883,235	0	(3,883,235)	-100%
Calls offered to ACD	1,003,267	1,015,733	12,466	1.2%
Calls handled by CSRs	818,890	899,751	80,861	9.9%
Calls Abandoned	143,303	91,176	(52,127)	-36.4%
% Abandoned	14.3%	9.0%	(0)	37.2%
Average handle time in seconds	364	326	(38)	-10%
Cost per call	\$ 4.31	\$ 2.64	(\$ 1.67)	-39%
Cost per hour of call handling time	\$ 45.24	\$ 29.08	(\$16.16)	-36%
Total queue costs	\$ 1,702,089	\$ 115,610	(\$1,586,479)	-93%

### **Financial Analysis of the Economic Impact**

#### *Economic Value Realized From the Changes in the Performance Metrics*

To determine the economic value realized from the Virtual Hold System, we compared KPIs for the 2000/2001 heating season immediately preceding the implementation of the Virtual Hold System with KPIs for the 2001/2002 heating season immediately following its implementation.

*Table 5.2 Impact to Atmos Energy of the Virtual Hold System*

<b>KPIs &amp; Costs: Dec – Apr Heating-Season</b>	<b>Before Virtual Hold</b>	<b>After Virtual Hold</b>	<b>Gap</b>	<b>% Change</b>
Total calls answered	818,890	899,751	80,861	+10%
Total hours of CSR handling time (talk plus after call work)	78,034	81,575	3,541	+5%
Average handle time in seconds	364	326	(38)	-10%
Total CSR costs	\$ 1,804,220	\$ 2,165,000	\$ 360,780	+20%
Total costs of incoming trunks	\$ 24,000	\$ 92,000	\$ 68,000	+283%
Total queue costs	\$ 1,702,089	\$ 115,610	(\$1,586,479)	-93%
Total direct operating costs (CSR + trunks + queue)	\$ 3,530,308	\$2,372,610	(\$1,157,698)	-33%
Costs per call answered	\$ 4.31	\$ 2.64	(\$ 1.67)	-39%
Cost per hour of call handling time	\$ 45.24	\$ 29.08	(\$ 16.16)	-36%

As shown in Table 5.2 above, calls handled increased by 10%, while the average handle time decreased by 10%. Atmos spent \$1,157,698 to operate its call center in the heating season of 2001/2002 than it spent the previous year.

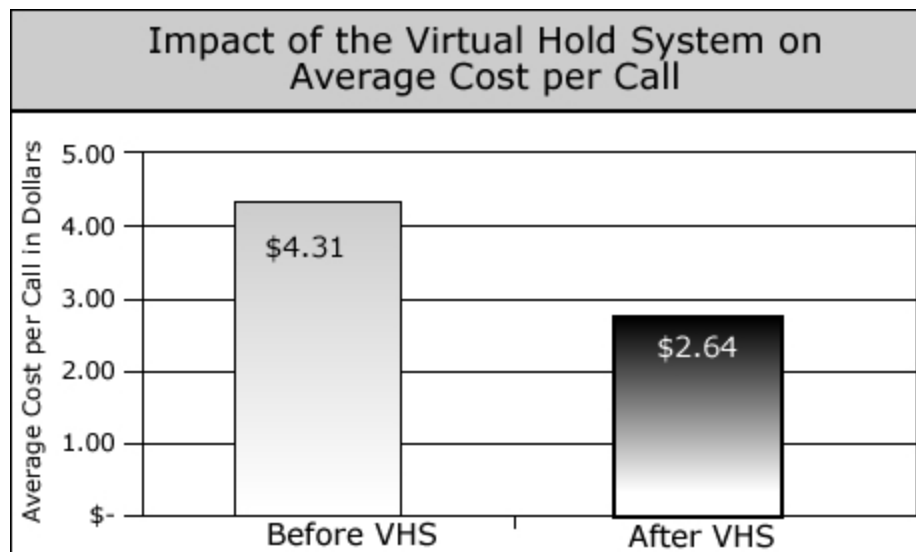


Figure 5.2 Cost per call after implementation of the Virtual Hold System

As depicted in figure 5.2, the average cost per call handled decreased by 39% during the 2002—2002 Heating Season following implementation of the Virtual Hold System.

*Financial Impact to Atmos Energy on Average Handle Time*

We concluded that the average handle time reduction of 38 seconds per call was directly related to customers’ acceptance of the return-call system. CSRs and managers reported significantly fewer complaints about the time spent in queue, which reduced the conversation time between the CSR and the caller.

Table 5.3 Impact of Virtual Hold on Reduction of Average Handle Time

Cost Analysis of Average Handle Time Following Implementation of the Virtual Hold System

Reduction in AHT attributable to Virtual Hold (sec/call)	38
Calls answered during heating season	899,751
Total handle time reduction (sec)	34,190,538
Total handle time reduction (hrs)	9,497
Direct CSR hourly cost	\$ 14.20
Toll costs per hour	\$ 3.00
CSR cost savings	\$ 134,906
Toll cost savings	\$ 28,492
<b>Total savings attributable to reduced handle time</b>	<b>\$ 163,398</b>

Table 5.3 indicates that the reduction in average handle time produced a savings worth \$163,398 to Atmos during the 2001/2002 heating season. Atmos would have required an additional 17 CSRs without this handle time reduction.

*Impact of the Virtual Hold System on Toll Costs*

We found that the implementation of Virtual Hold’s automated return-call system resulted in significantly lowered toll costs to Atmos Energy.

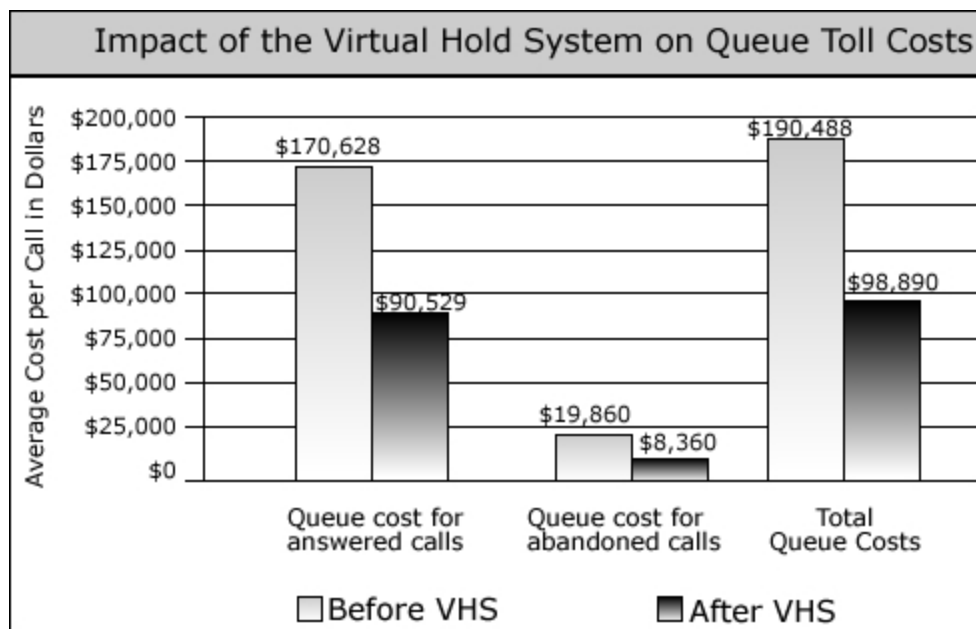


Figure 5.3 Impact of the Virtual Hold System on queue toll costs

Figure 5.3 illustrates the comparison of queue toll costs before and after adoption of the Virtual Hold System by Atmos Energy, with a 93% reduction in queue costs.

Table 5.4 Impact of Virtual Hold on the Reduction of Toll Costs

<b>Cost Analysis of Queue Toll Costs Following Implementation of the Virtual Hold System</b>	
Total number of calls accepting Virtual Hold	272,899
% of total calls handled using Virtual Hold	30%
Total Virtual Hold hold-time (min)	68,524
Average Virtual Hold hold-time (min)	15.1
Virtual Hold toll cost savings	\$ 205,573

Table 5.4 shows that 30% of the calls answered during the busy season of 2001/2002 were actually return-calls. On average, these callers received the return-call within 15

minutes. Had they waited in queue rather than allowing Atmos to call them back, Atmos would have incurred an additional \$205,000 in toll costs.

#### *Costs Associated with the Virtual Hold System*

The total acquisition costs of the Virtual Hold System used during the heating season of 2001/2002 was \$554,600. This included:

1. licensing and installation costs from Virtual Hold,
2. additional licenses from the CTI supplier, and
3. database module from the ACD supplier to ensure accurate historical reporting.

On-going support cost for the Virtual Hold System is \$20,000 annually.

#### *Financial Analysis of the Economic Impact of the Virtual Hold System; Methodology Used to Compute the Actual ROI*

A strong argument could be made that attributing the reduction in the costs Atmos incurred in the two heating seasons to the Virtual Hold System would overstate the value of the Virtual Hold System for the following reasons:

1. In order to ensure callers did not receive busy signals when calling, Atmos contracted with their network provider to queue calls in the network at four times the cost of holding the calls in their ACD queues. Atmos could have reduced their toll costs by adding more incoming trunks. While adding incoming trunks does not happen overnight, Atmos was able to add these trunks before the next heating season.
2. The Atmos call center was understaffed, which required them to
  - a. hire temporary CSRs to take return-call information, and
  - b. reach out to their branch offices for resources to make the return calls.
3. Although the call center was understaffed, the calls were eventually handled. We were able to determine the total number of call handling hours and calculated the average number of effective CSRs Atmos provided from its CSR staff the temporaries and the field resources.

This argument caused us to postulate the following notion: What would the Atmos cost per call have been in the 2000/2001 heating season had Atmos provided sufficient trunk capacity to queue all of the incoming calls at their ACD and had increased the permanent CSR staffing levels sufficient to meet call volume demand. The results of our analysis are shown in Table 5.5.

Table 5.5 Adjusted Heating Season Comparison

KPIs & Costs: Dec – Apr Heating-Season	Heating Season 2000/2001	Heating Season 2000/2002	Gap	% Change
Total queue time (hours)	199,393	38,537	(160,856)	-80.7
CSR head count	164.5	173.2	8.7	+5.3%
Adjusted queue toll costs	\$ 598,178	\$ 115,610	(482,568)	-80.7%
Adjusted CSR costs	\$ 2,056,677	\$ 2,165,000	108,323	+5.3%
Adjusted incoming trunk costs	\$ 92,000	\$ 92,000	0	0.0%
Total adjusted costs	\$ 2,946,412	\$ 2,411,320	(535,092)	-18.2%
Total calls answered	818,890	899,751	80,861	+9.9%
Cost per call	\$ 3.60	\$ 2.62	\$ 0.98	-25.5%

As shown in Table 5.5, the cost per call for the 2000/2001 heating season would have been \$3.60 if Atmos had added trunk capacity and staffing sufficient to meet their anticipated demand, whereas the actual the cost per call dropped to \$2.62 using the Virtual Hold System.

We projected what the costs would have been in the 2001/2002 heating season had Atmos continued to operate at the 2000/2001 heating season adjusted cost per call. Table 5.6, below, illustrates these projections.

Table 5.6 Estimated 2001/2002 Heating season Costs at Previous Season Costs/Call

Total calls	899,751
2000/2001 cost per call	\$ 3.60
Estimated costs without Virtual Hold	\$ 3,237,354
Actual costs	\$ 2,411,320
<b>Difference</b>	<b>\$ 826,034</b>

Table 5.6 demonstrates that Atmos would have spent \$826,034 more in the 2001/2002 heating system if they had not reduced their cost per call by implementing the Virtual Hold System. This is the number we used to perform our Return on Investment Analysis.

#### *Return On Investment Analysis of the Virtual Hold System*

Using the methodology and analytical approach described in the previous section Table 5.7 shows the results of our ROI analysis.

Table 5.7 Return On Investment Analysis

	<b>Adjusted Costs</b>
Initial cost of system	\$ 554,600
Projected annual support costs	\$20,000
First 5 months savings	\$ 826,034
Payback in months	3.36
First five month's savings: % of total investment	149%

Table 5.7 calculates the payback on the Virtual Hold System to be less than four months.

The difference between initial cost of the system from the savings attributed to using automated return-call system is \$270,000, which will pay the annual support costs for more than five years.

### Conclusion and Recommendations

All call centers experience peaks in their call volumes. These peaks can be:

1. seasonal, as is the case with Atmos Energy during the heating season,
2. on specific days of the weeks, (Mondays and Fridays are often busier than other days), and
3. certain hours within each day of the week.

Predicting when the peak demands will occur and scheduling the proper number of CSRs to meet this peak demand is quite challenging. With an automated return-call system such as Virtual Hold, you can minimize the negative impact on customer satisfaction, CSR stress, and costs when unanticipated peaks occur.

In the Atmos study, the Virtual Hold System:

1. effectively created additional call handling capacity for Atmos by reducing the average handle time of calls during their busiest season
2. reduced toll costs by placing the caller in a "Virtual Hold" state, rather than keeping the caller on the line while waiting to reach an agent
3. converted caller dissatisfaction created by waiting in queue to customer delight when they actually received the return call as promised
4. eliminated the fear CSRs often experience before answering the next call when calls have been waiting in queue for extended periods of time .

While an automated return-call system can add significant value during peak calling demand periods, it will not work miracles. If you fail to plan for and provide sufficient resources (incoming trunks, ACD ports, and CSRs) to handle the total amount of talk and after call work demanded by your peak call volume periods, callers will go un-served, with or without an automated return-call system.

The real value of an automated return-call system comes when you do have sufficient resources, but experience peaks in calling demand at unexpected times. This is the real world in which most call center managers exist.

Life would be much simpler if only our customers contacted us when our forecasting system projected they would, and our CSRs adhered to their schedules. In fact, just the opposite occurs.

An automated return-call system can help you better manage your call center performance during the peaks and valleys in your calling demand, producing favorable customer satisfaction in an economically viable manner.

### **About the Sponsor**

We've all experienced the frustration of calling for assistance and being forced to wait on hold. Our company was founded in 1995 on the simple premise that customers demand and deserve more respect for their valuable time.

Virtual Hold Technology is the leader in developing Queue Management Strategies that increase customer satisfaction while reducing contact center operating costs. Our solutions are centered on one key premise: by reducing hold time, contact centers can provide a better experience for customers.

#### *Customer Experience Management*

A company cannot build and manage a customer relationship until they first provide a positive customer experience. The contact center is the front door to your company; when customers enter that door, they provide an opportunity for you to engage them and earn their loyalty. What message do you send to your customers when you force them to wait on hold before speaking with them? Many companies today lack a strategy to ensure that the interaction between business and customer takes place on good terms—and until that positive experience is delivered, you won't be able to develop a successful relationship.

Customer loyalty is built upon repeated positive experiences with a company. In the absence of these positive experiences, a company may not only lose one customer, but also dozens of potential customers who hear a negative review through word-of-mouth.

#### *Queue Management Strategies*

Queue management is the heart of your contact center. When queue management works, your contact center is a healthy organization that represents your company in a positive light. But when queue management fails, your contact center is infected with the "contact center disease"—hold time.

Extended hold time leads to:

- customer dissatisfaction and defection (churn)
- low service levels
- high abandonment rates
- decreased contact center efficiency
- increased telecom expenses
- employee dissatisfaction and turnover.

The traditional response to hold time problems—adding more representatives to meet customer demand—is too costly given today’s competitive landscape, and even then may not provide optimal service during unexpected call volume increases.

You can avoid contracting the “contact center disease” by implementing an intelligent Queue Management Strategy. When you successfully manage your queues, you will increase customer satisfaction and reduce your contact center costs.

Many companies today are discovering that a Queue Management Strategy is an effective way to reduce hold time and improve the customer experience.

If you’d like to learn more about how Virtual Hold’s Queue Management Strategies can improve customer satisfaction and enhance your contact center’s performance, please contact Amy Roberson at (330) 670-2202 or e-mail us at [sales@virtualhold.com](mailto:sales@virtualhold.com). You can also visit us on the Web at <http://www.virtualhold.com>.