

## A Day In The Life Of An EDI Invoice

With energy prices at an all-time high, managing your energy costs closely and accurately has become critical. Typically, a paper invoice is sent by mail, arrives at its destination 3-5 days later, is key-punched into an AP System (often with errors), and is then evaluated and validated (often by more than one person or department!). Potential problems must be disputed or investigated, and then the invoices are eventually approved and paid. It should be a simple process, but the actual real life experience can be costly and time-consuming. You may think that ramping up a more efficient electronic solution could be complicated and expensive - involving new software, learning about Electronic Data Interchange (EDI), and re-training staff on new applications with vastly new procedures. However, the truth is that when adopting a simple EDI application with an integrated utility accounting tool, the electronic process follows nearly the same path as the paper process but with two big differences - it takes significantly less time, effort and cost to complete the process and you can feel more assured that you are making sound utility accounting and bill processing decisions. This article takes a look at the typical journey of an EDI invoice as it makes its way from the Utility to an Energy Customer using both EDI and a utility accounting software application. It illustrates how the adoption of an EDI/Utility Accounting solution can offer huge benefits to an Energy Customer in terms of time, cost and efficiency.

### 1. The Scenario

Pacific Gas & Electric needs to invoice an Energy Customer for natural gas and electricity services they've provided during a given service period. Assume the Energy Customer has 200 PG&E electric and gas accounts and uses their proprietary A/P System to process their invoices. Also assume that the Energy Customer has invested in utility accounting software and wants all invoice data to run through it before being approved for payment processing.

### 2. The Day

|   |   |   |
|---|---|---|
| <p><b>1. Day One 4:00am</b><br/><b>EDI Bills Created and Sent by PG&amp;E</b></p> <p>PG&amp;E takes the day's meter reads and creates EDI invoices which are sent to the Energy Customer via PG&amp;E's EDI network (VAN). The invoices are delivered to the Energy Customer's VAN mailbox.</p> | <p><b>2. Day One 10:00am</b><br/><b>EDI Bills Downloaded by Customer</b></p> <p>When the Energy Customer decides to process invoices (many choose to do this just one time a week), it runs its EDI Software which downloads the EDI invoices from the customer's VAN mailbox.</p>  | <p><b>3. Day One 10:02am</b><br/><b>Bills Translated out of EDI Format</b></p> <p>The EDI software translates the invoices from an EDI format and creates a file format that can be imported into the Customer's utility accounting tool.</p>   |
| <p><b>4. Day One 10:02am</b><br/><b>Bill Representations Created</b></p> <p>An HTML or text bill representation is created for each invoice in case a copy needs to be sent to a person or department for approval, dispute, or record keeping.</p>   | <p><b>5. Day One 10:02am</b><br/><b>Validation Reports Created</b></p> <p>The EDI Software produces Error Reports indicating bills with previous balances, and any invoices whose lines items don't add up to its total amount due value. This gives the Energy Customer more tools to facilitate invoice validation.</p> | <p><b>6. Day One 10:07am</b><br/><b>Utility Accounting Program Performs Billing Audit</b></p> <p>The utility accounting program performs a variety of checks, including comparisons with previous bills, to ensure invoice accuracy and identify any billing anomalies.</p>   |
| <p><b>7. Day One 11:00am</b><br/><b>Bills Approved for Payment</b></p> <p>After reviewing validation and audit reports, the Energy Customer approves a batch of invoices for payment. The utility accounting program exports both an AP file and a Payment file.</p>                            | <p><b>8. Day One 11:02am</b><br/><b>AP System updated</b></p> <p>The AP File is imported into the Energy Customer's AP System, thus updating its Accounts Payable records. Any additional internal approvals are completed.</p>   | <p><b>9. Day One 11:05am</b><br/><b>Bills Paid and Sent to Bank</b></p> <p>The Payment File is run through the EDI Software which can create either an EDI Payment or ACH file (with EDI embedded in it). This EDI/ACH file is delivered to the Energy Customer's bank via VAN or bank software.</p>                                    |
| <p><b>10. Day One 11:08am</b><br/><b>Bank Receives EDI/ACH Payment</b></p> <p>The bank processes the Payment, transfers the funds from the Energy Customer's account to PG&amp;E's, and forwards the EDI Payment Remittance data to PG&amp;E via their VAN.</p>                                 | <p><b>11. Day One 11:10am</b><br/><b>Invoice data Analyzed</b></p> <p>The new invoice data is available in the utility accounting program for a large variety of energy usage and cost reports and graphs, including energy forecasting &amp; budgeting, and accurate measurement of energy savings.</p>                  | <p><b>12. Day Two 4:00am</b><br/><b>EDI Payment Processes by PG&amp;E</b></p> <p>When PG&amp;E sends the next day's batch of invoices to their VAN, they download the EDI Payment from their EDI network's mailbox, translate it out of EDI format, and import it into their AR System to reconcile the Energy Customer's accounts.</p> |

### 3. The Savings

When compared to a paper-based process, there are substantial savings to be made from making the switch to EDI invoicing for the Energy Customer (as well as PG&E). In addition to AP processing saving, the Energy Customer gains immeasurable benefits by also having utility accounting capabilities. The table below illustrates how the Energy Customer can typically save \$14,760 per year by implementing an EDI solution alone. The addition of a utility accounting tool can add significantly to the potential savings. Figures are based on Gartner Research's results of costs related to data entry into AP, validation and approval processes, and then finally payment processing.

#### Energy Customer

| Method (200 invoices) | Costs for processing an invoice | Total Cost per month                    |
|-----------------------|---------------------------------|---|
| Paper                 | \$8.00 <sup>1</sup>             | \$1600                                  |
| Electronic            | \$1.85 <sup>2</sup>             | \$370                                   |
|                       |                                 | <b>Total Savings per Month: \$1,230</b> |
|                       |                                 | <b>Total Savings per Year: \$14,760</b> |

It's more difficult to quantify the amount of benefits you will receive by investing in a utility accounting application, but many organizations have realized substantial savings. Each Energy Customer is different. Whether actual savings come from finding equipment malfunctions, launching an internal conservation incentive program, holding internal departments more accountable for energy costs through their budgets, or spotting invoice errors, money is likely to be saved by accurate monitoring and reporting of your energy data.

| Examples of Utility Accounting Savings  | Total Savings |
|---|---------------|
| <b><u>Incorrect Demand Readings:</u></b> A school district discovered several large demand reading errors due to faulty meters. Refund credits were provided by the utility.                            | \$82,796      |
| <b><u>Incorrect Utility Taxes:</u></b> A school district discovered they were incorrectly paying city utility taxes on their electric accounts due to monitoring their bills. These taxes were removed. | \$82,500/yr   |
| <b><u>Incorrect Accounts:</u></b> A county discovered they were paying for utility accounts that were not county accounts. These accounts were transferred to the correct owner.                        | \$6,200/yr    |

### 4. Return on Investment (ROI) for the Energy Customer

By choosing an integrated EDI/Utility Accounting solution with upfront costs between \$xx,000-\$xx,000, the Energy Customer can achieve a ROI in approximately \_\_\_\_\_, not counting any additional savings by having a utility accounting program. An ROI of less than \_\_\_\_\_ can often be achieved once the power of a utility accounting program is in place that provides timely and accurate energy information throughout your organization and becomes integral to making wise energy decisions.

#### Initial Investment for Energy Customer <sup>3</sup>

| Expense                                    | Includes   | Total Cost  |
|--|--|-------------|
| EnergyCAP Software                         | 5 user license, 1 year of technical support (renewable).   | \$x000      |
| DataTrek EDI Software                      | Mapping, Testing, 1 yr license, and full tech support.   | \$x000      |
| EnergyCAP Database Setup & EDI Integration | Historical utility database with 24-36 months of data. Integration of EDI and EnergyCAP into AP process.   | \$x000-x000 |
| EnergyCAP A/P File                         | Custom software interface with AP and/or other business systems.   | \$x000-x000 |
| EnergyCAP & Support                        | On site software training in EDI bill payment procedures and EnergyCAP database maintenance and data analysis. Additional follow-up support as needed. | \$x000-x000 |

**Total Initial Investment: \$xx,000-\$xx,000**

## 5. The Conclusion

Before an electronic invoicing approach was adopted by the Energy Customer, a traditional paper invoice sometimes took over a month to settle. The invoice would take three or more days to arrive from PG&E, and then it would be dumped on someone's desk along with piles of other paper bills that need to be entered into the AP System. When this tedious task was completed - often with key punch errors along the way - someone would need to decide whether the bills are accurate and should be approved for payment. Often, a large amount of time would be spent investigating whether the bill had previous balances reflected in the total due and then determining whether those balances had been paid or should truly be included in the payment. Sometimes, this invoice would have to be sent to a separate building and department to wait for approval of the fees and total amounts. Determining what is accurate would be a difficult task without an application maintaining historical billing data that includes the ability to audit the bills. All this was a manual process requiring coordination between many people with lots of potential for delays and erroneous decision making along the way. Eventually the invoice would be paid, probably by check, which would take another three days to arrive back to PG&E and then process manually on PG&E's end. The procedure was slow, costly and inefficient. However, now that the Energy Customer has switched to EDI invoicing the process is much quicker and more cost-effective for both parties. And of course, the Energy Customer is armed with a utility accounting tool that will facilitate making informed energy decisions.

<sup>1</sup> Industry research shows that as much as 70% of all invoice processing costs are wrapped up in document handling and data entry processes. According to a survey conducted by International Accounts Payable Professionals (IAPP), the average cost to process an invoice manually is \$8 per invoice. Those costs can increase dramatically if a problem (e.g. an exception) occurs — and approximately one in five invoices contains such a problem.

<sup>2</sup> Xebec Data's calculation: includes mailbox fees, annual maintenance, and K-char costs for PG&E solution. \$x (\$xx/mo mailbox fee, \$.xx/K — each invoice averages 2.5K, annual maintenance fee \$x), and overhead \$x (time of Energy Customer personnel to run EDI software, import invoice to AP system, and computer upkeep and maintenance)

<sup>3</sup> An example of a solution including Xebec Data's DataTrek software and EnergyCAP software.