

**SAP Solution in Detail
SAP for Utilities**



ENERGY SALES AND BILLING FOR COMMERCIAL AND INDUSTRIAL (C&I) CUSTOMERS

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EXECUTIVE SUMMARY

To handle competition in deregulated markets, utilities must change and adapt their business processes. The SAP for Utilities set of solutions provides powerful energy sales and billing capabilities that help utilities serve their commercial and industrial customers in these competitive markets. SAP for Utilities handles the entire sales and billing cycle, from campaigns to complex billing and invoicing.

NEW CHALLENGES IN A DEREGULATED ENVIRONMENT

Competition in most markets worldwide has deeply affected all entrepreneurs within the utilities industry. Utility companies, which were formerly vertically integrated, must now unbundle their distribution and supply structures despite the blurred political framework that exists in most countries. They must open their grid to third parties, and they must guarantee the security of supply, as well as its environmental safety. At the same time, utilities must offer their customers attractive products. To be successful, a utility company must meet all of these challenges.

In such an area of conflict, utilities not only have to consider their cost structures, they must also seize new opportunities to create value. Within this context, the unclearly defined political demand facing a utility can be identified as a cost driver, but one that returns almost no additional benefits. In particular, the organizational and legal requirements of unbundling are now challenging the industry in a new dimension.

This transformation touches almost all areas within the utilities industry. Utilities must provide discrimination-free grid access and create and manage the resulting business processes. From device management to customer billing and from grid maintenance to financial accounting, all areas of a utility company must cooperate to successfully meet these challenges. In this new environment, utilities must redesign their existing business processes, and they must organize and manage the new tasks that these redesigned processes demand.

In addition to the transformation being caused by the political and legal forces, utilities must capture sales opportunities within a competitive market. Because no significant increase in the consumption of energy is expected in the near future, utilities must grow by crowding out the competition. This struggle is reflected by innovative new energy products, optimized energy purchasing, energy trading, the acquisition of new customers, and the winning back of former customers.

SAP for Utilities helps you to meet these challenges with energy sales and billing functions that allow you to handle the complex needs of commercial and industrial customers in competitive, deregulated markets.

OVERVIEW OF ENERGY SALES AND BILLING FOR COMMERCIAL AND INDUSTRIAL CUSTOMERS

A detailed discussion of energy sales and billing begins with an overview of the sales and billing process used by the largest customers.

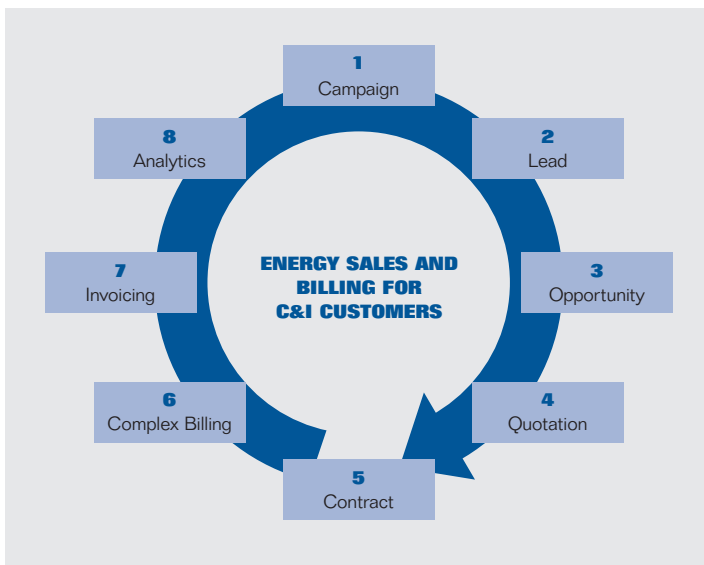


Figure 1: The Energy Sales and Billing Cycle for Commercial and Industrial Customers

As you can see in Figure 1, the energy sales and billing cycle begins with the campaign, a lead, a sales opportunity, and the generation of a quotation. Once a customer has accepted a quotation, the utility company creates a contract. The complex steps of billing, invoicing, and analysis follow.

IDENTIFYING RELEVANT CUSTOMER GROUPS

By splitting a market into different customer groups, you can identify the mass market. For utilities, this consists of residential customers with standard products and commercial and industrial (C&I) customers. C&I customers compose the middle market segment, which typically includes chain and cluster customers with standard products, such as bakeries or bakery chains, as well as a segment for interval customers, who have much more personalized contracts and billing procedures.

Because the market for interval customers is becoming more and more attractive for utility companies, this Solution in Detail covers all the relevant functions provided by SAP for Utilities – from the initial contact in a call center or through a key account manager to postings within financial accounting and sales analyses in SAP® Business Intelligence.

SALES WITH mySAP™ CUSTOMER RELATIONSHIP MANAGEMENT

SAP for Utilities is tightly integrated with the mySAP™ Customer Relationship Management (mySAP CRM) solution, which offers applications for sales, marketing, and service. mySAP CRM is supported by industry-specific enhancements tailored for the utilities industry. All of the functions mentioned here are accessed through one user interface – the key account manager portal. That means you don't need to log on to different systems because they are all combined within this one application.

The steps in the energy sales process are:

- Campaign
- Lead
- Opportunity
- Quotation
- Contract

Within marketing, campaigns are typically undertaken for residential customers. Television ads and leaflets, for example, are classical instruments for attracting a huge amount of customers.

A utility's largest customers are normally contacted through key account managers. In this case, utilities create a marketing strategy to maximize and manage all leads within the sales process through key account managers.

When you identify a new sales opportunity, that opportunity should be entered into mySAP CRM based on a specific sales methodology. This enables you to structure additional steps in the sales process.

An opportunity represents the possibility of future sales and profits. It describes potential customers, the products and services offered to them, potential competitors, and the projected sales volume. It also provides information about the estimated likelihood of concluding a contract, as well as the technical objects.

You can deal with opportunities in various situations. In companies with a large sales volume, more than one employee is involved in the sales process, and the selling cycle lasts for a longer period of time.

An essential element of opportunity management is the sales methodology used for both new prospects and existing customers.

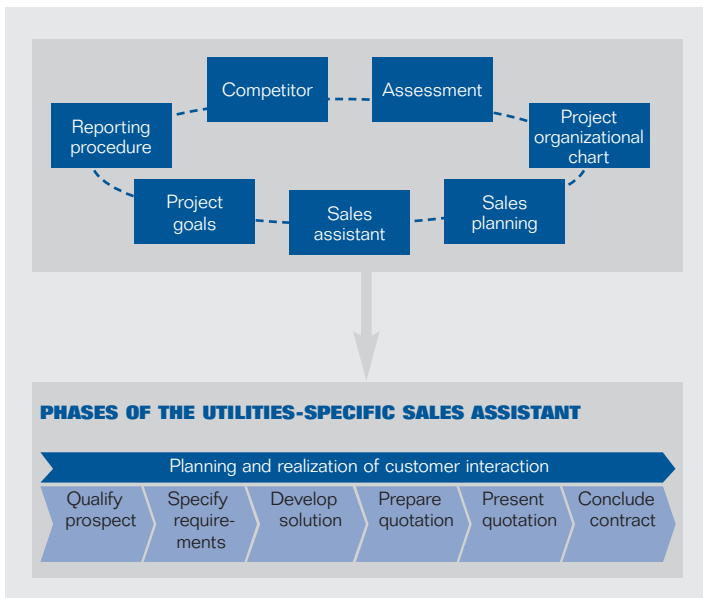


Figure 2: Utilities-Specific CRM Sales Methodology

ELEMENTS OF THE mySAP CRM SALES METHODOLOGY

The mySAP CRM sales methodology helps you structure the entire sales cycle:

- It provides detailed information about competitors and the products they offer.
- An evaluation questionnaire helps you to evaluate the probability of closing a sale.
- In the buying center, you can describe who the customer-side decision makers are and what arguments would appeal to them.
- Sales planning includes everyone – internal utility employees and external partners – who is involved in the contract.
- It defines project goals on a detailed level, such as product selection and revenue goals.
- Reporting tools allow you to print out a condensed version of the specific opportunity.

Another powerful element of the mySAP CRM sales methodology is the sales assistant. As Figure 2 shows, the sales assistant determines various phases within the sales process. Each of these phases is characterized by a large number of activities, which are allocated to the various sales people within a team.

With the support of the sales methodology, opportunity management forms the basis for efficiently executing, observing, and steering sales – from initial contact to contract conclusion. Due to this structured system support, mySAP CRM ensures that sales opportunities are processed in an optimal way, leading to a greater likelihood of contract conclusion and reduced process costs. The business intelligence capabilities of the solution enable decision makers to analyze the sales pipeline, as well as the overall performance of the sales organization, including detailed win-loss reports that deliver information for strategic decisions.

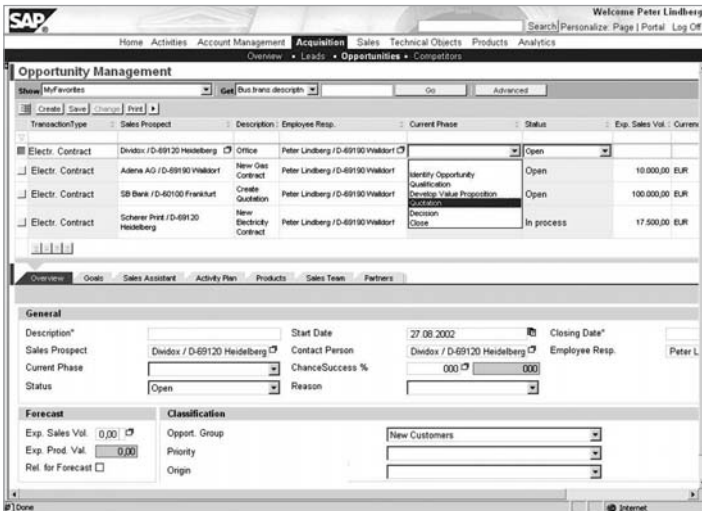


Figure 3: The Key Account Manager Portal

OPPORTUNITY MANAGEMENT AND THE KEY ACCOUNT MANAGER PORTAL

Quotation and contract management is another essential function for commercial and industrial customers. Both are available through the key account manager portal.

With the portal, you can display a hierarchy of customer groups and describe special conditions in contracts. The portal also provides consumption data-and-load profiles and price profiles for calculating quotation prices. Furthermore, you can create quotations at the point of delivery. The solution can automatically include the distributor and it can calculate the quotation's profitability and contribution to the margin.

When calculating an offer, you must obtain the following information:

- **Access fees and grid conditions**

To provide this information, you must determine the relevant grid operator and distribution company by allocating the point of delivery to the grid. In the object grid, you can maintain both the settlement coordinator and the distribution company, which enables you to determine the correct information about the required fees.

- **Controlling data**

You also need to access controlling data from various accounting systems to determine the profitability of the quotation. A data repository provides additional information about product-related default prices, such as consumption data, or a purchasing system that might be directly connected to an energy exchange.

- **Customer historical consumption**

A customer's historical consumption is critical information. For extremely large customers, this consumption is usually stored in profiles with equidistant time series, such as 15-minute or 30-minute intervals. This information is stored in the energy data repository of SAP for Utilities.

To obtain this information, SAP for Utilities contains standard interfaces for common automated meter-reading system manufacturers. Data procured from electronic data interchange (EDI) in formats, such as XML, can be easily adopted, as well as data that is procured via standard PC or OLE-compliant applications like Microsoft Excel.

When you import time-slice values, SAP for Utilities runs predefined consistency checks to evaluate the data entering the system and reacts with preconfigured responses based on the value. Individual checks, such as checks for exceeded value limits or already existing values, can be summarized in freely definable groups, and you can allocate them to time series as required. If the values are incorrect, the solution can automatically replace individual values according to your requirements.

Using these plausibility and validation checks, you can display and evaluate time series using a variety of methods. SAP for Utilities provides a graphical and tabular screen where you can display or modify data. Whenever values are changed – either through an individual change or a mass change – the solution can automatically write a new version, which allows you to monitor all historical changes within a profile.

Furthermore, you can process all types of primary data series, such as energy and demand series; load time series, including measured load shapes and analytical load profiles; schedules; and the results of calculations. The solution can also process all time series that can't be directly allocated to the energy flow, for example, price and currency time series; conversion factors for gas billing; or weather data for load forecasts.

The dependency between the input and output values is mapped in a formula. You create formulas using flexible calculation rules that you can define and are based on mathematical functional relationships. A formula is assigned to time series that were originally stored as input parameters. As the result of a calculation, the output parameter is also stored as a time slice. After the calculation run, you can use the results in subsequent processes, like creating a quotation when a rep makes a sale.

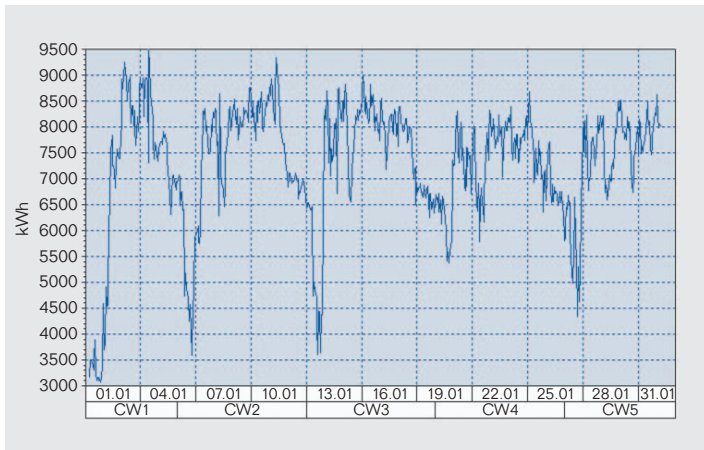


Figure 4: Graphical Display of Profile Values for a Commercial and Industrial Customer

After these data types have been brought up into the system, you must make a precise calculation on a single point of delivery. To make this calculation, you need some sort of calculation tools – Microsoft Excel, internal calculation tools, or the ability to integrate to existing external calculation tools. You can then send the quotation to the customer electronically or on paper.

If your potential customer accepts the quotation, you create a contract and initiate a change of supplier process. This informs the old supplier that it has lost a customer, and it alerts the distribution company, which provides information about technical data, such as the point of delivery, after certain checks have been successfully completed.

COMPLEX BILLING FOR COMMERCIAL AND INDUSTRIAL CUSTOMERS

For extremely large customers, the next step in the sales cycle is required for complex individual customer billing. SAP for Utilities makes it possible to bill all kinds of rates and energy products on the basis of measured time series, that is, contracts that refer to measured load shapes or load profiles, such as energy supply and grid usage. All of the amounts billed using consumption billing can be invoiced to the respective business partners.

SAP for Utilities can handle energy products and rates that are based on fluctuating energy exchange or index prices, such as 15-minute or 60-minute intervals. The measured load shapes and the exchange of index prices are stored in the energy data repository. For each hour, the billing run values the measured volume of the load shape using the price specified for that hour. The solution can take into account volume deliveries, partial deliveries, or any value limits.

You can also summarize the measured values for time series according to previously defined time segments and then value them with an individual price for the time slice. A simple example of this is to divide the load shape of an interval customer into on- and off-peak periods and then value these periods with the corresponding on- and off-peak prices. You can do this with seasonal values, such as different on- and off-peak rates for summer and winter, and for calendar aspects, such as different on- and off-peak rates for working days, Sundays, and public holidays. Furthermore, you can account for consumption, such as valuating measured consumption portions in combination with consumption or demand limits.

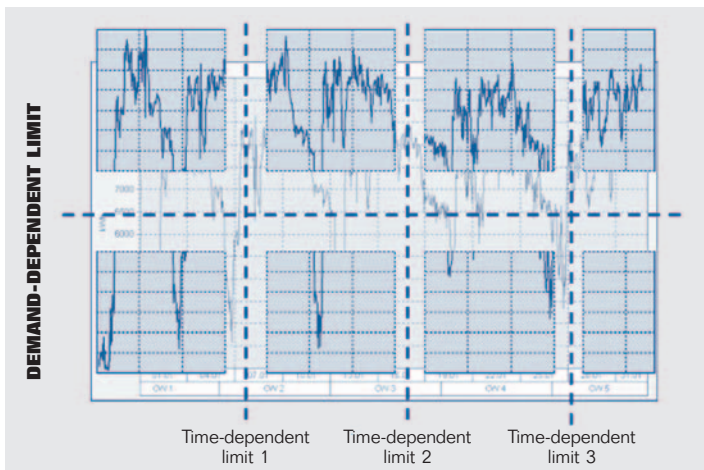


Figure 5: Combined Time- and Demand-Dependent Limits Within Complex Billing

Finally, you can store and bill special agreements with SAP for Utilities. These special agreements must be predefined and activated according to the individual agreement between a customer and a utility company. They can contain particular billing rules, such as individual prices only for a certain period.

SAP for Utilities' complex billing function is an integral part of the billing master data used for contract accounting. As a result, all billing functions can be used so you can bill customers for any utility or other service regardless of the internal division. This also enables flexible billing cycles, cross-contract billing, and billing simulations – and these are just a few examples of the solution's billing capabilities.

INVOICING

The final step is invoicing. Here, the solution processes billing documents, posts documents to contract accounts receivable and payable, and clears billing requests with posting items, particularly any budget billing payments. It also creates print documents, handles reversals, and automatically checks bills. Furthermore, it manages budget billing plans and provides functions for maintaining budget billing amounts. Finally, the

solution determines and helps collect taxes, charges, and duties, in addition to calculating interest, dunning, blocking, and maintaining accounts.

You can handle invoicing using both individual processing and mass or parallel processing. SAP for Utilities also supports an appropriate portioning of the data set to be invoiced, which optimizes transaction runtimes. The processes involved are automatically divided for processing. This particularly applies bill preparation, reversal, and printing.

Invoicing can only take place if billing documents, such as periodic billing documents, credit memos, and back billing, have been created and forwarded successfully from the contract billing application of SAP for Utilities. Billing documents are used as a basis for creating budget billing plans.

The solution's invoicing capabilities include the creation of bill requests and credit memos that are further processed in the contract accounts receivable and payable applications. Moreover, invoicing creates additional postings in contract accounts receivable and payable, such as clearing postings and interest documents. It also provides the print document as the basis for printing bills, as well as the transfer of the bill to the bill-to party.

ANALYTICS

After billing and invoicing, SAP for Utilities offers useful reports to help you analyze the planned versus actual results. This tells you if the expected figures for consumption, revenue, and contribution margin used during the quotation calculation were actually realized. The solution tracks earnings with specific customers. By analyzing this information you can adjust the next contract to improve the margins.

BUSINESS BENEFITS AT A GLANCE

The energy sales and billing functions for commercial and industrial customers from SAP for Utilities provide numerous business benefits. You can:

- Deploy value-based management concepts
- Enable business agility in a complex, deregulated market environment
- Understand and optimize the performance of your C&I business
- Build the flexible business platform needed for changing regulatory requirements
- Gear up for new competitive product and service deliveries

FOR MORE INFORMATION

SAP for Utilities handles complex energy sales and billing within deregulated, competitive markets. With this comprehensive set of solutions you can thrive in tough markets. To learn more about the energy sales and billing capabilities of SAP for Utilities, go to our Web site at www.sap.com/utilities

www.sap.com/contactsap