

# Oracle Utilities Market Settlements Management



Market settlement is a critical task for all participants in the deregulated energy marketplace, from grid operator to wholesaler to distributor to retailer, as it translates business operations into dollars. Fast and accurate settlement data is central to market-rule compliance, invoice generation, and ensuring payables are in line with what is actually owed. Despite this significant impact, however, market settlement often takes place in the shadows of utility operations, understood by limited, specially-skilled staff and managed through a variety of make-shift or outdated tools.

Oracle Utilities Market Settlements Management (MSM) is a modern, agile solution that delivers reliable core processes, advanced automation, and the adaptability needed to meet market needs today and in the dynamic energy landscape ahead. Oracle Utilities MSM brings the entire settlements process out into the light, providing unparalleled visibility into processes, data insights, modeling and automation.

## A powerful engine for a complex process

Settlement processes are the cornerstone of deregulated market operations, determining load responsibility for each market participant and therefore directly impacting the bills or payments received. While the settlement concept is simple, the task is quite complicated.

The new Oracle Utilities Market Settlements Management (MSM) is designed to streamline the complex processes and calculations needed for settlement of modern energy markets. Oracle Utilities MSM collects usage, customer, weather, and market data from external applications and then uses it to perform the aggregations and calculations required by business operations, the market and regulatory agencies.

For further efficiency, the raw input data, intermediate results and final results are then cataloged and saved for other settlement processes or later analysis.

## Key Business Benefits

Oracle Utilities MSM is a modern settlement solution providing the following benefits:

- Minimize financial risk by verifying settlement statements
- Minimize regulatory risk by studying proposed changes as well as reacting quickly to approved changes
- Less estimations and more accurate settlement results
- Process manager flows can walk users through the required settlement steps, lowering training costs
- Allows users to visually compare various settlement results to easily find errors.
- CIS integration to “settle what was billed”
- Lower integration costs by providing integration to Oracle Utilities MDM and CCB
- Lower hardware costs by optionally sharing a database with Oracle Utilities MDM

## Current Capabilities

- Market Participant Management
- Wholesale Procurement

Oracle Utilities MSM is designed to be the single database-of-record for historical settlement results used by many areas of a business.

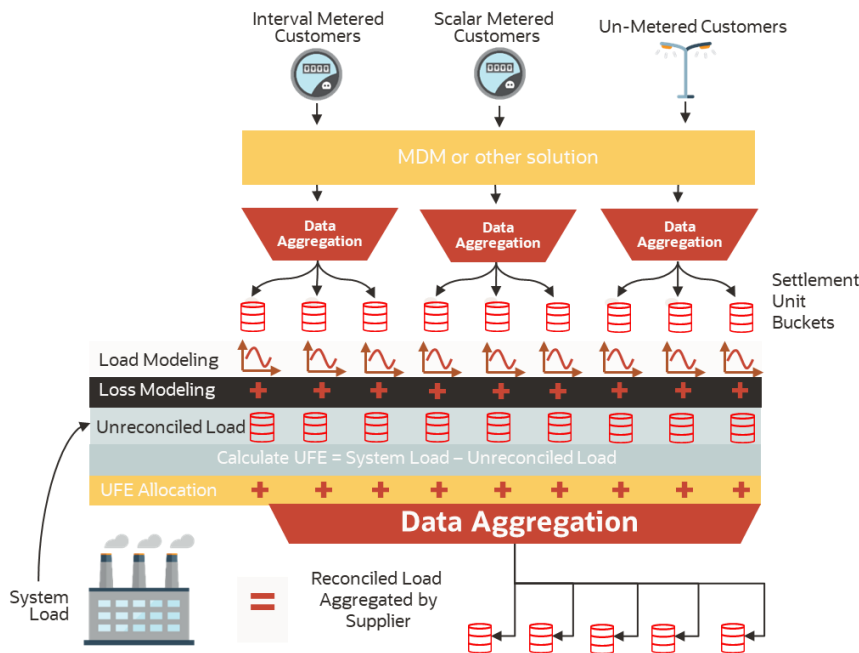


Figure 1: Overview of Oracle Utilities Market Settlements Management data aggregation and processing engine.

- Settlement Accounts & Usage
- Settlement Unit
- Settlement Schedules
- Business Process Management
- Cube Viewer
- Dynamic Aggregations
- Market Transaction Services

#### Roadmap Capabilities

- Wholesale Billing
- Gas Allocations
- Gas Nominations
- Gas Imbalance Calculations

## Leverage AMI & metering data for increased accuracy

At any given time, utility organizations need an accurate tally of what was consumed and by whom, because usage is the commodity directly correlated to revenue. For this reason, usage is often a key factor that causes errors in calculations. Rolling up vast quantities of usage data can quickly lead to millions of dollars in errors if performed incorrectly.

A modern settlements application must enable the use of interval data from Advanced Metering Infrastructure (AMI), or smart meters, in calculations and aggregations, providing accuracy checks to identify errors data errors.

## Gain visibility into settlements processes

Settlement processes are critical to ensuring market efficiency and promoting reliable market operation. Oracle Utilities MSM provides the analytical capabilities and graphical interface needed to provide understanding and insights around settlement process status and calculation results.

The screen image in Figure 2 shows a typical initial settlement process flows illustrated by the “train tracks” which show the status of the current settlement run. The Unaccounted for Energy (UFE) step highlights problems (in red) and graphically illustrates preliminary settlement calculations.



Figure 2: Overview of Oracle Utilities Market Settlements Management data aggregation and processing engine.

## Benefits & Features

<b>Complete solution</b>	<ul style="list-style-type: none"> <li>Define the Market and Market Participant relationships</li> <li>Supports all consumption data: consumptive interval, subtractive interval, consumptive scalar, subtractive scalar, and un-metered.</li> <li>Viewing and analysis of settlements inputs and results</li> <li>Define the specific steps in a settlement process</li> <li>Interface with the market and external systems</li> <li>Capture the results of a settlement process in a Settlement Transaction</li> <li>Complex calculation engine for defining any market rule (i.e. Unaccounted for Energy/UFE, capacity, etc.)</li> <li>Settlement Unit to define aggregation buckets based on implementation defined parameters and the application of UFE and losses per settlement process.</li> <li>Forecasting / Back-casting</li> </ul>
<b>Enhanced usability</b>	<ul style="list-style-type: none"> <li>Advanced navigation</li> <li>Process Flows</li> <li>Cube Viewer</li> <li>Aggregation defined via a user friendly interface</li> </ul>
<b>Settlement processes</b>	<ul style="list-style-type: none"> <li>Load settlements</li> <li>Capacity settlements</li> <li>Shadow settlements</li> <li>Ancillary services settlements</li> </ul>
<b>Data dissemination</b>	<ul style="list-style-type: none"> <li>Settlement Subscriptions for storing settlement process results</li> <li>Market interactions</li> </ul>
<b>Integration capability</b>	<ul style="list-style-type: none"> <li>MDM and CIS Integration Foundation</li> <li>SOA: Web Services, Business Services</li> </ul>
<b>Productized integration (separate licenses required)</b>	<ul style="list-style-type: none"> <li>Oracle Utilities Smart Grid Gateway</li> <li>Oracle Utilities Customer Care and Billing</li> <li>Oracle Utilities Meter Data Management</li> </ul>
<b>Scalability and performance</b>	<ul style="list-style-type: none"> <li>Designed for scalability from the ground up</li> <li>Customizations use the same technology as the base package</li> <li>Shares processes with Oracle Meter Data Management that scales extensively</li> </ul>

### Uses Oracle technologies

- Java
- Database Technologies: Partitioning, RAC, Compression
- Oracle Enterprise Manager
- Exadata and Exalogic

### Built on the OUAF

- Shares the Oracle Utilities Application Framework (OUAF) with Oracle Utilities Customer Care and Billing and other Oracle Utilities products
- Common look and feel with other OUAF products

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