



# Meter Data Management System (MDMS)





## Meter Data Management System

### **Copyright © 2006 CeleritasWorks, L.L.C.**

This work was created by CeleritasWorks, L.L.C. (“Creator”). This work and all rights therein and thereto, including copyright rights and/or patent rights, are owned by Creator and/or another entity (collectively, “Owner”). This shall serve as notice of such ownership as of the date of this and associated files or subject matter, if any, as depicted above and/or as depicted with an electronic file date stamp and/or any versions thereof and their associated dates, if any.

This work may not be reproduced for any purpose, distributed, modified, reverse-engineered, stored in a retrieval system, transmitted, used, made, offered for sale, or sold, in whole or part, in any form or by any means, electronic, mechanical, audio, photocopying, recording, or otherwise, without the prior written permission of Owner.

This work may not be exported unless in compliance with the applicable technology export laws. While this information is presented in good faith and believed to be accurate, Creator does not guarantee satisfactory or any results from reliance upon such information.

Creator reserves the right, without notice, to alter or improve the designs, specifications, creations, or works of the subject matter herein. Nothing herein is to be construed as a warranty or guarantee, express or implied, against infringement, or regarding performance, merchantability, fitness, or any other matter with respect to products, processes, or any other subject matter herein, and such warranties and guaranties are expressly disclaimed. Nothing herein is to be construed as a recommendation to use any product or process in conflict with any third party rights in any intellectual property.

All products, languages, or trademarked names that are mentioned in this work are acknowledged to be the proprietary property of the respective owner.





# Meter Data Management System

---

The *WattageWorks*<sup>TM</sup> Meter Data Management System (MDMS) provides a flexible, robust and scalable solution that allows market participants to transmit required meter data to their RTO.

The open architecture allows for developing utility-specific solutions that are compatible with market participant's unique business systems.

The MDMS is compliant with RTO specifications.





## Meter Data Management System

# MDMS Product Benefits:

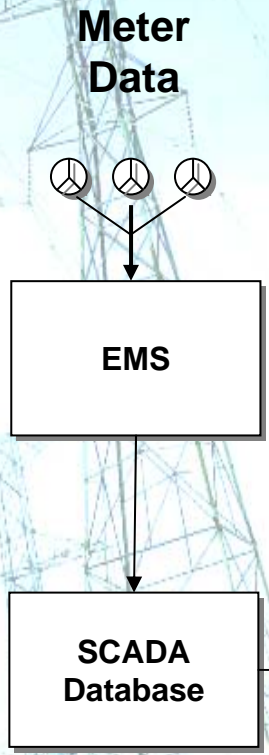
---

- ❖ Existing install base of market participants who chose the MDMS solution for their RTO market
- ❖ An RTO-compliant/API compatible solution
- ❖ Open architecture allows interfacing with existing SCADA systems & third party solutions
- ❖ Historical data retrieval and audit trail capabilities
- ❖ Open, robust database architecture with data warehousing and reporting capabilities to support energy accounting & other business specific needs



# Meter Data Management Process

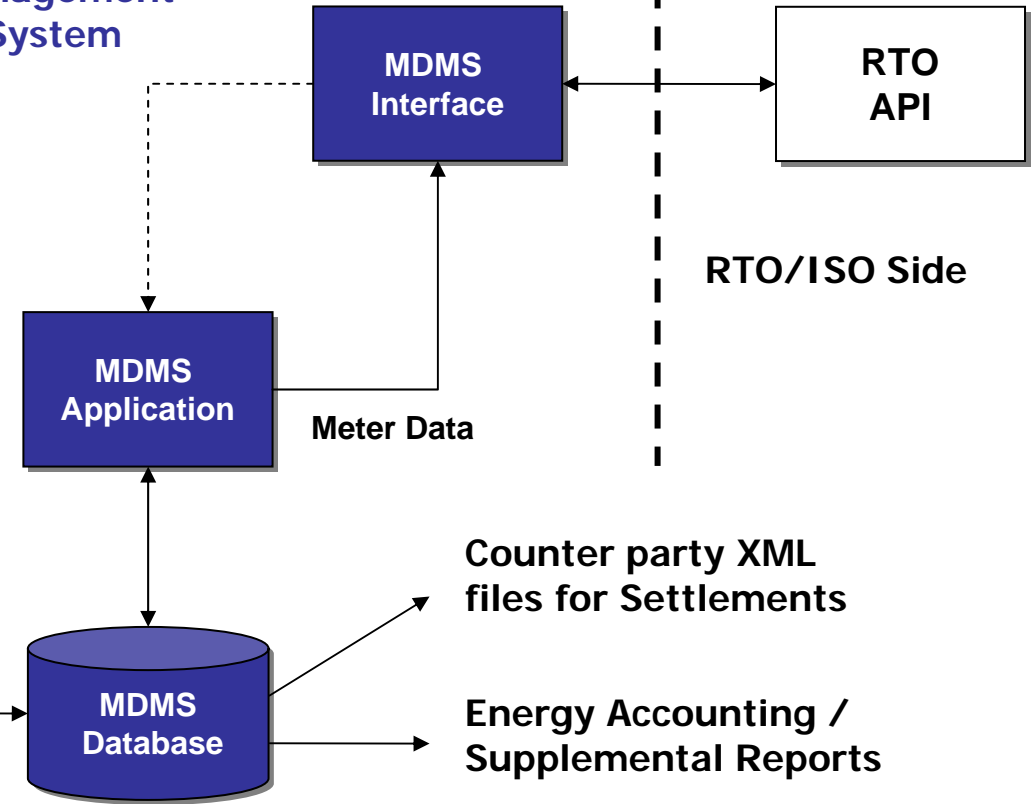
Utility Side



Meter Data

## Meter Data Submission Process

Meter Data Management System



The MDMS interface which receives meter data from the client's SCADA system is architected such that ANY third party SCADA system can be configured to interface.





## Meter Data Management System

# Usability and Functionality

**WattageWorks™**

- Meter Data**
  - Meter Agent Review
  - XML Archive
- User Maintenance**
  - Add New User
  - Change Password
  - Update Contact Information
  - User Administration
- Data Maintenance**
  - Search Counter Parties
  - New Counter Party
- System**
  - Application Log Review
  - Search Calendar Entries
  - New Calendar Entry
  - Search Properties
  - New Property
  - Logout

**WattageWorks™**  
Meter Data Management System

**Celeritas®**  
UTILITIES

WattageWorks™ MDMS provides a simple interface and the functionality needed to allow end users & meter agents to easily review, approve and maintain their meter data removing typical reliance on technical support.





## Meter Data Management System

# Meter Data Approval and Submittal

Meter Agent Review Search Criteria

Location:

Operating Start Date:

Approval Start Date:

File Start Date:

Load Start Date:

Filter Ch2  Date format: MM/DD/YYYY

Operating End Date:

Approval End Date:

File End Date:

Load End Date:

Status:

Search Results

App	Location	Operating Date	Status	Load Date	Approval	Zip Date	5-Day Deadline	45-Day Deadline					
<input checked="" type="checkbox"/>	EES.OKGE	01/25/2006	X	02/17/2006	03/20/2006	03/20/2006	01/27/2006	03/09/2006 More...					
Ch1=		[01] -315	[02] -287	[03] -263	[04] -281	[05] -308	[06] -343	[07] -361	[08] -489	[09] -613	[10] -525	[11] -489	[12] -385
		[13] -374	[14] -340	[15] -296	[16] -294	[17] -282	[18] -346	[19] -440	[20] -403	[21] -369	[22] -327	[23] -236	[24] -127
<input type="checkbox"/>	OKGEAS	01/25/2006	P	02/17/2006			01/27/2006	03/09/2006 More...					
<input type="checkbox"/>	OKGEENID	01/25/2006	P	02/17/2006			01/27/2006	03/09/2006 More...					
<input type="checkbox"/>	! OKGEHLS138	01/25/2006	U	02/17/2006			01/27/2006	03/09/2006 More...					
<input type="checkbox"/>	OKGEHLS69	01/25/2006	X	02/17/2006	07/31/2006	07/31/2006	01/27/2006	03/09/2006 More...					

Indicates that there were issues with the aggregation process for this record.

The easy-to-read Meter Agent Review Screen is used to review & approve meter data and convert & transmit XML files to the market participant's RTO or ISO





# Meter Data Management System

## Meter Point Data Analysis

**Meter Point Recordings Search Criteria**

Operating Begin Date:        Operating End Date:

Aggregation Begin Date:        Aggregation End Date:

Load Begin Date:        Load End Date:

Meter Point Name:       Display Name:

Settlement Location:

Meter Point Type:

Data Source:

Include Inactive:

Error Flags:

---

**Search Results**

Operating Date	Settlement Location	Meter Point Display Name	Meter Point Name	Backup Used	Status	Data Source	Primary	Channel	Interval	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	DST
01/24/2006	Acme.ABCD	RSTV-1231 - 1st Teir - Ft. Smith	05095001	N	A	SCADA	Tie	Y	1	-429	-398	-387	-400	-355	-353	-398	-472	-509	-552	-575	-566	-514	-437	-420	-400	-360	-535	-603	-568	-519	-469	-512	-402	
			05095002	N	A	SCADA	Tie	Y	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			06041001	Y	A	SCADA	Gen	N	1	-322	-322	-320	-320	-319	-319	-320	-318	-317	-318	-317	-319	-318	-318	-318	-316	-316	-316	-319	-319	-319	-319	-320		
			05065001	Y	A	SCADA	Gen	Y	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

The Meter Point Recording Review Screen allows the user to view information for each meter point which can be validated against user defined parameters – such as interval repeat count, out of bounds, and rate of change.







# Meter Data Management System

## Meter Point Maintenance

**Search Meter Points Criteria**

Settlement Location:  Meter Point Type:  Data Source:  Include Inactive:

Meter Point Display Name:  Meter Point Name\*:  Description:

\* - The meter point name is typically a system assigned identifier and used by the system to match the uploaded data with data in the system. The meter point name is not typically as readable, or user friendly as the display name.

**Search Results**

Display Name	Name	Status	Location	Type	Source	Re
Caney Creek	05228002	A	ABC	Tie	SCADA	
Caney Creek	765916-OUT	A	Acme	Tie	MV-90	
Caney Creek	765916-OUT	A	Acme	Tie	MV-90	
Caney Creek	765916-OUT	A	Acme_Test	Tie	MV-90	
Caney Creek	765916-OUT	A	ABC-SA	Tie	MV-90	
Caney Creek - 86737138L	05228001	A	Acme	Tie	SCADA	
Caney Creek - 86737138L	05228001	A	Acme_Test	Tie	SCADA	
Caney Creek - 86737138L	05228001	A	Acme-243	Tie	SCADA	
Caney Creek - 86737138L	05228001	A	ABC_Test1a	Tie	SCADA	
Caney Creek - 86737138L	765916-IN	A	Acme	Tie	MV-90	
Caney Creek - 86737138L	765916-IN	A	EnergyThree	Tie	MV-90	
Caney Creek - 86737138L	765916-IN	A	Acme-345	Tie	MV-90	
Caney Creek - 86737138L	765916-IN	A	ABCGas	Tie	MV-90	
Cimarron 138	05063013	A	Acme	Tie	SCADA	
Cimarron 138	05063013	A	ABCGas_Test	Tie	SCADA	
Cimarron 138	05063013	A	EnergyThree	Tie	SCADA	
Cimarron 138	05063013	A	Acme	Tie	SCADA	

**New Meter Point Information**

Meter Point Display Name:

Meter Point Name\*:

Meter Point Type:

Data Source:

Primary Meter:

Active:

Desc:

\* - The meter point name is typically a system assigned identifier and used by the system to match the uploaded data with data in the system. The meter point name is not typically as readable, or user friendly as the display name.

**Meter Data Check Values**

Note: No data checks will be done for empty check values.

Interval Repeat Count:  Interval Repeat Check:

Reading Low Range:  Reading Range Check:

Reading High Range:

Primary/Backup Difference:  Primary/Backup Diff Check:

Rate of Change:  Rate of Change Check:

**Mappings**

Settlement Location Name	Begin	End
GRDA_GRDA	05/08/2006	
OKGEMUST138	09/01/2005	01/06/2006

[Add Mapping](#)

The Meter Point data is configurable allowing for on-going maintenance of the data as your assets change in the field.





# Meter Data Management System

## Settlement Location Maintenance

### Search Settlement Locations Criteria

Settlement Location Name:  Include Inactive:

Settlement Area:

### Search Results

Settlement Location	Settlement Area	Status	Multiplier	Zeros For Channel 2
Acme-Acme	KCES-1	A	1	N
Acme	KCES-1	A	1	Y
ABC-ABCD	AR-CTKC	A	1	N
TrendStar	KCES-1	A	1	N
Acme	KCES-1	A	1	N
ABC-Energy	KCES-1	A	1	N
TrendStar	KCES-1	A	-1	N
TrendStar	AR-CTKC	A	1	N
ABC-Energy	KCES-1	A	1	N
Acme	KCES-1	A	1	N
Acme-Acme	KCES-1	A	1	N
Acme	KCES-1	A	1	N
1Energy-44	TRA-EL1	A	1	N
1Energy-44	TRA-EL1	A	1	N
Acme	KCES-1	A	1	N
Acme	KCES-1	A	1	N
Acme	KCES-1	A	1	N
StarOne	TRA-EL1	A	-1	N
StarOne	TRA-EL1	A	1	Y

### New Settlement Location Information

Settlement Location Name\*:

Description:

Negative Multiplier:

Generate Zeros for Channel 2:

Active:

### Settlement Area Information

Settlement Area:


Individual meters can be moved in and out of specified Settlement Locations as assets are reallocated.






# Meter Data Management System


For more information about the WattageWorks™ Meter Data Management System visit our website at [www.wattageworks.com](http://www.wattageworks.com), email us at [sales@celeritas.com](mailto:sales@celeritas.com) or call our Utility sales team at 1-888-383-8324.



- Meter Data
- Meter Agent Review
- XML Archive
- User Maintenance
- Add New User
- Change Password
- Update Contact Information
- User Administration
- Data Maintenance
- Search Counter Parties
- New Counter Party
- System
- Application Log Review
- Search Calendar Entries
- New Calendar Entry
- Search Properties
- New Property
- Logout



**Meter Data Management System**



**Meter Agent Review Search Criteria**

Location: 

 Show Local Metering

Operating Start Date: 
 Operating End Date:

Approval Start Date: 
 Approval End Date:

File Start Date: 
 File End Date:

Load Start Date: 
 Load End Date:

---

**Search Results**

Location	Operating Date	Status	Load Date	Approval	Zip Date	7-Day Deadline	45-Day Deadline
<input checked="" type="checkbox"/> <b>Acme</b>	01/01/2006	<span style="color: green;">E</span>	02/07/2006	01/01/2006	01/01/2006	01/07/2006	01/01/2006 More...
<input checked="" type="checkbox"/> <b>ABC Coa</b>	01/01/2006	<span style="color: green;">E</span>	02/07/2006			01/07/2006	01/01/2006 More...
<input checked="" type="checkbox"/> <b>DEF Coa</b>	01/01/2006	<span style="color: green;">E</span>	02/07/2006			01/07/2006	01/01/2006 More...
<input checked="" type="checkbox"/> <b>GHI Coa</b>	01/01/2006	<span style="color: green;">E</span>	02/07/2006			01/07/2006	01/01/2006 More...
<input checked="" type="checkbox"/> <b>JKL Coa</b>	01/01/2006	<span style="color: green;">E</span>	02/07/2006	01/01/2006	01/01/2006	01/07/2006	01/01/2006 More...

Indicates that there were issues with the aggregation process for this record.