UNDERSTANDING LOAD PROFILES PUBLISHED FROM MSATS

PREPARED BY:	Retail Markets and Metering
DOCUMENT NO:	MT_MA1772v005.5
VERSION NO:	5.5
PREPARED FOR:	National Electricity Market
EFFECTIVE DATE:	August 2013

Important Disclaimer

This document is made available to you on the following basis:

(a) **Purpose** – This document is provided to you for information purposes only. You are not permitted to commercialise it or any information contained in it.

(b) **Reliance** – This document may be subsequently amended. Any reliance on this document is at your own risk.

(c) **Intellectual Property** – AEMO Limited is the owner of the copyright in this document. All rights are reserved. All material is subject to copyright under the Copyright Act 1968 (Commonwealth) and permission to copy it, or any parts of it, must be obtained in writing from AEMO. AEMO is the owner of all other intellectual property rights in this document and the information contained in it. You must not in any way, or by any means, store, reproduce or modify it without AEMO's express written consent.

(d) **No Warranty** - Neither AEMO nor any of AEMO's advisers, consultants or other contributors to this document (or their respective associated companies, businesses, partners, directors, officers or employees) make any representation or warranty, express or implied, as to the currency, accuracy, reliability or completeness of this document, or the information contained in it.

(e) **No Liability** - To the maximum extent permitted by law, neither AEMO, nor any of its advisers, consultants or other contributors to this document (or their respective associated companies, businesses, partners, directors, officers or employees) shall have any liability (whether arising from negligence or otherwise) in respect of your use of the information (including any reliance on its currency, accuracy, reliability or completeness) contained in this document.

Version Control

VERSION	DATE	DETAILS
1	15/05/2002	Original Issue
2	7/06/2002	Added new section 5
3	30/06/2003	Updated section 3.1 for SA and ACT and section 6 references, and other minor updates
4	12/07/2005	Entire Document Updated
5	01/08/2007	Updated in include Profiling for Energex and Ergon Networks for the commencement for FRC in Queensland effective 01/07/2007
5.1	August 2009	Minor updates to reflect the change in governance from NEMMCO to AEMO
5.2	October 2011	Minor Updates to reflect addition of NSLP for Tasmania effective from 01/07/2011
5.3	March 2012	Updates to references of Metrology Procedure in Clause 3.3, Section 8 and Appendix A,B,C,D & E.
5.4	July 2012	Updated to include a table in Section 4.3 to define the Profile Area names with the correct Network/Business name of each distribution network and remove Victoria & NSW maps from section 4.1
5.5	August 2013	Updated section 4.3 to include the current business names for profile area UMPLP Updated Section 8 to include current document references

Table of Contents

1. Document Purpose

This paper provides an overview of the load profiles produced by MSATS which AEMO subsequently publishes on its website. This document also discusses a method for extracting and interpreting these profile shapes without the need for an asexml parser.

2. Background

A basic meter (also referred to as a Type 6 meter) records the total amount of energy consumed at a connection point from the initial energisation of the meter. Periodical readings of basic meters are used to determine the energy used between two points in time. These energy values are then used to calculate the energy component of a consumer's electricity bill. For Jurisdictions with Full Retail Competition (FRC), AEMO uses this energy to determine the amount owed by a retailer due to the retailer's second-tier consumers with a basic meter(s).

Energy usage measured by a basic meter cannot be used in its raw format for wholesale settlement purposes in the National Electricity Market (NEM). This is because the electricity market is settled on 30-minute trading intervals whereas a basic meter reading is a single reading spanning a period of time, from a single day up to several months.

Several possible solutions were considered for resolving this issue prior to the introduction of FRC.

Two options considered were the use of interval meters for all second tier sites or the introduction of a mathematical process, called profiling, to approximate half hourly basic meter readings. This process effectively replicates the functionality of an interval meter and thus allows a Type 6 meter reading to be settled on the wholesale market.

Jurisdictions and regulators agreed that for consumers of less than 160MWh/year (100MWh/year in Queensland and NSW & 150MWh/year Tasmania) the latter option was preferable as it was a more economically efficient metering solution.

3. Profiling

Profiling is a process that converts readings from an accumulated energy meter reading into estimated energy consumption for each 30-minute trading interval period, which the original accumulated reading covered[1].

Two distinct types of profiles exist, Net System Load Profile (NSLP) and Controlled Load Profile (CLP). There are two methods (Basic and Basic with Peel-Off) of calculating the NSLP based on determining a load shape on the system profile of the distribution network in which the basic meter is installed.

3.1 **NSLP ("Basic ")**

The basic NSLP is applicable in the Australian Capital Territory (ACT), Victoria (VIC), Tasmania (TAS) and for Ergon Energy distribution network in Queensland and is the profile applied to convert all second-tier basic meter readings into energy consumption for each 30-minute trading interval for settlement purposes.

[1] For detailed information on the profiles to a Type-6 meter reading, refer to Section 13 Metrology Procedure: Part B Metering Data Validation, Substitution and Estimation Procedure for Metering Types 1 – 7.

The NSLP is calculated by aggregating the wholesale boundary energy and subtracting off all the non-wholesale boundary interval energy (Metering Installation Types 1, 2, 3, 4, 5 and 7).

3.2 NSLP with 'Peel-Off'

For New South Wales (NSW), South Australia (SA) and the Energex distribution network in Queensland the basic NSLP is modified by subtracting, also known as "Peel-Off", an additional profile that represents the Controlled Load Energy (e.g. the off-peak demand of water heating). Two separate controlled loads are defined for the Energex distribution area The resultant profiles are applied to the non-controlled load basic meter readings to convert all basic meter readings into consumption for each 30-minute trading interval for settlement purposes.

3.3 Controlled Load Profile (CLP)

The CLP is calculated from a group of approximately 200 sample interval meters, installed as a sample of controlled loads selected by the Local Network Service Provider for the profile area. This profile is applied to the controlled load basic meter readings to convert them into energy consumption for each 30-minute trading interval for settlement purposes.

Note: Further details of each of these are shown in in Section 13 Metrology Procedure: Part B Metering Data Validation, Substitution and Estimation Procedure for Metering Types 1 – 7.

4 Profile Areas and Names

All NMIs within MSATS are assigned to a profile area via their Transmission Node Identifier (TNI).

4.1 Profile Areas

Each network area is assigned a profile area name that is similar to the name of the network to which it relates. For example, where Energy Australia (now Ausgrid) is the Local Network Service Provider the profile area name assigned is ENERGYAUST. All Transmission Node Identifiers (TNIs) that supply Energy Australia (Ausgrid) network are assigned to ENERGYAUST profile area.

In the case of distribution networks where profiling is not applicable, the profile calculation process is partially scrambled to ensure that confidential data is not inadvertently exposed.

In each jurisdiction there are NMIs associated with the transmission network that are not part of the profiling process. Examples in Victoria and NSW are NMIs that have been assigned to the profiles areas NEMGRID, NSWGRID, VICGRID. The same or similar naming conventions apply to the transmission network in other jurisdictions. These transmission network profiles are not used in any settlement process.

Each distribution area has one or more profiles generated. The diagrams below show the distribution area of each Local Network Service Provider in VIC and NSW.

MSATS calculates a NSLP for each profile area although NSLP is not required in jurisdictions that have not implemented FRC, except Tasmania where profiling is applicable for the Tranche 5A consumers.

4.2 Profile Names

For metering data from interval meters Types 1, 2, 3, 4, 5, & 7 metering installations the profile name assigned is NOPROF.

For metering data from basic meters the profile is either NSLP or Controlled Load (CLOADNSWxx , SACLOAD, QLDEGXCL31 or QLDEGXCL33).

The NSLP applies to all basic meters in VIC, ACT and TAS and to all basic meters in NSW and SA and Ergon Energy Distribution Network in QLD, where the CLP is not applicable.

The profile name CLOADNSWxx is applied to the controlled load in NSW distribution network areas, where xx is replaced by IE, CE, EA to identify the owner of the distribution network.

The profile name SACLOAD is applicable to the controlled load in SA and Energex profile names QLDEGXCL31 and QLDEGXCL33 are applicable to controlled loads in the Energex distribution area in QLD.

4.3 Profile Area – Network/Business Names

ProfileName	ProfileArea	Network / Company Name
CLOADNSWCE	COUNTRYENERGY	Essential Energy
CLOADNSWCE	ENERGYAUST	Ausgrid
CLOADNSWCE	ERGON1	Ergon Energy Corporation Limited
CLOADNSWEA	ENERGYAUST	Ausgrid
CLOADNSWIE	INTEGRAL	Endeavour Energy
NSLP	ACTEWAGL	Actew Distribution Ltd and Jemena Networks (ACT) P
NSLP	AURORA	Aurora Energy Pty Ltd
NSLP	CITIPOWER	CitiPower Pty
NSLP	COUNTRYENERGY	Essential Energy
NSLP	ENERGEX	Energex Limited
NSLP	ENERGYAUST	Ausgrid
NSLP	ERGON1	Ergon Energy Corporation Limited
NSLP	INTEGRAL	Endeavour Energy
NSLP	POWERCOR	Powercor Australia Ltd
NSLP	TXU	SPI Electricity Pty Ltd
NSLP	UMPLP	SA Power Networks
NSLP	UNITED	United Energy Distribution Pty Ltd
NSLP	VICAGL	Jemena Electricity Networks (Vic) Ltd
QLDEGXCL31	ENERGEX	Energex Limited
QLDEGXCL33	ENERGEX	Energex Limited
SACLOAD	UMPLP	SA Power Networks

5. Freeze Process

In order to ensure that the same profile is correctly applied to a total basic meter reading period, the NSLP profiles are permanently fixed (‘frozen’) to ensure that the profile shape for a period covering a final meter reading taken on three-month reading cycle is fixed, and not re-calculated, before the 30-week revision is processed.

The NSLP for a particular settlement week is typically permanently fixed 15-weeks after that settlement week.

6 Profiles Published

The profiles being published are identified within the MSATS PPS (RM20) report by Profile *Name, Profile Area, Date, DateTime of calculation, Profile value period 01, Profile value period 02, …, Profile value period 48,SeqNo, Locked, SettlementCase,*

The SeqNo identifies the line number in the CSV file data block.

Note:

- No significance can be attached to values published in the RM 20 Report for profile areas in jurisdictions where profiling is not applied.
- MSATS publishes profile data for all profile areas within MSATS, and may manipulate some profile values to protect the confidentiality of data where the data may be considered to be confidential in jurisdictions where profiling does not apply.

7. Extraction of Profile from Published File

The following steps represent a suggested method for extracting the profile shape data from the *files* published on the AEMO website without an aseXML parser. It is anticipated that organisations with a business requirement to regularly access this data will develop their own methods for extraction.

The profile shapes as published on the AEMO website appear as a Comma Separated Variable (CSV) payload within an aseXML wrapper. The following procedure indicates the steps required to load the profile into excel for those without an XML file parser software package.

The procedure assumes basic computer literacy. In order to carry out this procedure you *will* require the software programs WINZIP, and EXCEL to be installed on your computer, and similarly with the operation of these programs.

1. Select the file on the AEMO web site you would like to extract, by clicking on the “Click to download zip” button.
2. A message box will appear, tick the “Save this file to disk”.
3. Click on the “OK” button.
4. Options will then allow you to save the file to your desired location.
5. Once you have chosen your desired path for saving the file click on the save button.
6. Double click on the saved file to open the file using WinZip (Note: you require an unzip program for this step).
7. Options allow you to view the file
8. Click on the file so the file is highlighted (selected).
9. Click on the “View” button to view the file, and select internal ASCII text viewer. (it is easier to have WordPad set up as the viewer in WinZip, however the ASCII text viewer will work.)
10. Highlight the section you require to parse using the cursor highlight everything between <CSVData> and </CSVData>)
11. Copy this selection from WordPad and paste it into an excel spreadsheet.
12. If the CSV format is not recognised, click on the “Data” tab and select the “Text to Columns” button.
13. Click on the “Delimited” box, and then click on the “Next“ button.
14. Click on the “Comma” box and click on the “Tab” box so only a tick appears in the “Comma” box, then click “Next”.
15. Click on the “Finish” button.

16. The required details of the file are now loaded in an Excel spreadsheet.
17. Highlight the entire spreadsheet by clicking in the top left-hand corner cell.
18. Place the cursor between the A and B columns of the spreadsheet and double click to automatically adjust row widths.
19. Save the file as an Excel file.

8. Further Reading

A substantial amount of material has been published on the AEMO website and through AEMO Communications in support of the MSATS profiling and settlement processes.

AEMO documents:

Guide to MSATS Web Portal, Section 6, Profile Preparation.

MSATS Procedures: MDM Procedures, Document No MT_MP1774vxxx.

National Electricity Market – *Metrology Procedure: Part A National Electricity Market (MT_OP1985)*

Metrology Procedure: Part B : Metering Data Validation, Substitution and Estimation Procedure for Metering Types 1 - 7 (MT_MA1680)

Appendix A – NSLP where there is no CLP (Victoria, ACT & TAS)

The following information was extracted from the Metrology Procedure: Part B Metering Data Validation, Substitution and Estimation Procedure for Metering Types 1 – 7 (Section 13), and shows the formula for calculating the NSLP for a profile area.
NSLP for VIC, ACT and TAS

$$= \sum_{i=1}^{j} (\text{Energy inflows to profile area at the TNI level})_{\mathbf{i}} * MLF_{\mathbf{i}}$$ (equates to wholesale boundary energy * MLF)

$$+ \sum_{m=1}^{n} (\text{Energy generated within profile area from embedded generation})_{\mathbf{m}} * MLF_{\mathbf{m}} * DLF_{\mathbf{m}}$$

$$- \sum_{s=1}^{t} (\text{Half hourly load in profile area})_{\mathbf{s}} * MLF_{\mathbf{s}} * DLF_{\mathbf{s}}$$ **(**Interval meter load)

where:

Mathematical Representation
$\sum$ = the sum of given terms
j = represents the upper limit value
i = is a set initialised value

e.g. $\sum_{i=1}^{j} X_i$ where $(j = 10, \text{result will be } X_1 + X_2 + X_3 ... X_{10})$

n = represents the upper limit value
m = is a set initialised value
t = represents the upper limit value
s = is a set initialised value

Terminology
MLF = Marginal Loss Factor applicable for the Transmission Node Identifier (TNI) with the NMI that is stored in Market Settlements and Transfer Solutions (MSATS)
DLF = Distribution Loss Factor applicable for the NMI that is stored in MSATS
i = Each TNI with energy inflows to LNSP area
m = Each embedded generator with energy generated within LNSP area
s = Half hourly loads in LNSP area, which include:

- Interval metered second-tier loads
- Interval metered first-tier loads

Interval metered loads registered with an embedded network child code within MSATS are excluded from the profile calculation.

Appendix B – NSLP where there is a CLP (NSW, QLD & SA)

The following information was extracted from the Metrology Procedure: Part B Metering Data Validation, Substitution and Estimation Procedure for Metering Types 1 – 7 (Section 13), and shows the formula for calculating the NSLP for a profile area.
NSLP for NSW and SA

$$= \sum_{i=1}^{j} (\text{Energy inflows to profile area at the TNI level})\mathbf{i} * \text{MLF}\mathbf{i}$$ (equates to wholesale boundary energy * MLF)

$$+ \sum_{m=1}^{n} (\text{Energy generated within profile area from embedded generation})\mathbf{m} * \text{MLF}\mathbf{m} * \text{DLF}\mathbf{m}$$

$$- \sum_{s=1}^{t} (\text{Half hourly load in profile area})\mathbf{s} * \text{MLF}\mathbf{s} * \text{DLF}\mathbf{s}$$ (interval meter load)

where

Mathematical Representation
$\sum$ = the sum of given terms
j = represents the upper limit value
i = is a set initialised value e.g. $\sum_{i=1}^{j} X_i$ where $(j = 10, \text{result will be } X_1 + X_2 + X_3 ... X_{10})$

n = represents the upper limit value
m = is a set initialised value
t = represents the upper limit value
s = is a set initialised value

Terminology
MLF = Marginal Loss Factor applicable for the TNI associated with that NMI that is stored in Market Settlements and Transfer Solutions (MSATS)
DLF = Distribution Loss Factor applicable for the NMI that is stored in MSATS
i = Each Transmission Node Identifier (TNI) with energy inflows to LNSP area
m = Each embedded generator with energy generated within LNSP area
s = Half hourly loads in LNSP area, which include:

- Interval metered second-tier loads
- Interval metered first-tier loads
- Profiled controlled load energy

Interval metered loads registered with an embedded network child code within MSATS are excluded from the profile calculation.

Appendix C - Controlled Load Profile Calculation

The following information was extracted from the Metrology Procedure: Part B Metering Data Validation, Substitution and Estimation Procedure for Metering Types 1 – 7 (Section 13)
CLP for a profile area for a trading interval j

$$= \sum_{n=1}^{N} (\text{sample meter load in trading interval j})_n * (\text{weighting factor})_n$$

Terminology
n represents the set of sample NMI's in the profile area
Weighting factor is the weighting factor associated with the sample meter NMI

Appendix D – Application of the NSLP (Basic Meter Profile Function)

The following information was extracted from the Metrology Procedure: Part B Metering Data Validation, Substitution and Estimation Procedure for Metering Types 1 – 7 (Section 13)
AEMO applies the NSLP to the basic meter in the corresponding profile area as follows:

Half-hourly energy data for trading interval j for a NMI data stream =

Consumption energy data between start date and end date * $\frac{NSLP_j}{\sum_{i=startdate}^{enddate} NSLP_i}$

Appendix E – Application of the CLP – Basic Meter Profile Function

The following information was extracted from the Metrology Procedure: Part B Metering Data Validation, Substitution and Estimation Procedure for Metering Types 1 – 7 (Section 13).
AEMO applies the CLP to the to the controlled load basic meter reading as follows:

Half-hourly energy data for trading interval j for a NMI data stream =

Consumption energy data between start date and end date * $\frac{CLP_j}{\sum_{i=startdate}^{enddate} CLP_i}$

Appendix F - Sample Output from RM20_PPS Report

The following sample is the output from an PPS Report, submitted for settlement week twenty seven. (01 July 2007 to 7 July 2007) The Report has been edited to remove repetitive data for days 2 July 2007 to 7 July 2007. The profile data is in CSV data blocks contained within an aseXML wrapper.

<?xml version="1.0" ?>
<ase:aseXML xmlns:ase="urn:aseXML:r10" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:aseXML:r10 http://www.nemmco.com.au/aseXML/schemas/r10/aseXML_r10.xsd">
<Header>
<From description="NEMMCO">NEMMCO</From>
<To description="NEMMCO">NEMMCO</To>
<MessageID>NEMMCO-MSG-230514778</MessageID>
<MessageDate>2007-07-19T09:34:44+10:00</MessageDate>
<TransactionGroup>MDMT</TransactionGroup>
<Priority>Medium</Priority>
<SecurityContext>NEMMCOBATCH</SecurityContext>
<Market>NEM</Market>
</Header>
<Transactions>
<Transaction transactionID="MDMT-230514778" transactionDate="2007-07-19T09:34:44+10:00" initiatingTransactionID="4129645">
<ReportResponse version="r10">
<ReportParameters xsi:type="ase:MDMTPPSReportParameters">
<ReportName>PPS</ReportName>
<SettlementCase>1884</SettlementCase>
<FromDate>2007-07-01</FromDate>
<ToDate>2007-07-07</ToDate>
<LastSequenceNumber>0</LastSequenceNumber>
</ReportParameters>
<ReportResults xsi:type="ase:CSVReportFormat">
<CSVData>ProfileName,ProfileArea,SettlementDate,CreationDT,Period01,Period02,Period03,Period04,Period05,Period06,Period07,Period08,Period09,Period10,Period11,Period12,Period13,Period14,Period15,Period16,Period17,Period18,Period19,Period20,Period21,Period22,Period23,Period24,Period25,Period26,Period27,Period28,Period29,Period30,Period31,Period32,Period33,Period34,Period35,Period36,Period37,Period38,Period39,Period40,Period41,Period42,Period43,Period44,Period45,Period46,Period47,Period48,SeqNo,Locked,SettlementCase

CLOADNSWCE,COUNTRYENERGY,2007/07/01,2007/07/18
22:27:35,56.821,58.439,73.546,70.739,77.613,68.242,59.787,51.008,47.133,45.096,42.962,50.020,43.759,35.125,44.481,48.768,46.892,74.168,89.297,85.149,89.577,88.084
,70.591,52.158,50.579,48.965,49.748,52.555,48.064,52.991,45.032,51.999,51.441,51.137,23.784,20.257,25.119,26.061,34.190,44.153,47.662,45.562,57.258,72.136,78.469,
75.494,61.180,64.684,1,N,1884
CLOADNSWEA,ENERGYAUST,2007/07/01,2007/07/18
23:01:28,179.479,181.720,187.432,156.867,124.900,104.238,80.394,48.231,49.868,33.136,28.202,26.100,27.270,28.228,18.339,22.836,24.439,40.438,58.577,47.157,43.254
,46.728,49.701,46.406,38.292,29.950,35.368,33.018,23.833,25.138,19.374,20.845,21.056,16.144,14.953,11.622,9.931,13.694,13.514,15.073,20.062,22.911,19.755,33.951,6
4.558,96.998,129.800,184.508,22,N,1884
CLOADNSWIE,INTEGRAL,2007/07/01,2007/07/18
23:12:08,92.758,79.066,60.330,69.724,49.415,38.861,40.461,37.329,29.289,22.895,33.096,17.714,21.134,27.350,41.694,55.311,59.355,52.878,68.699,73.546,72.991,71.927
,71.986,59.439,53.313,53.092,56.657,37.067,43.310,36.386,39.572,47.761,45.510,36.884,15.583,13.463,14.679,14.938,11.884,15.459,15.554,12.045,21.044,18.609,50.674,
81.528,124.992,117.318,29,N,1884
NSLP,ACTEWAGL,2007/07/01,2007/07/18
22:02:52,108333.495,98116.974,90412.116,85338.425,81764.418,78789.496,76946.179,75730.761,75336.777,75691.397,76675.563,78748.829,80530.485,82725.555,8929
8.699,103433.218,117035.541,128572.381,141538.969,146107.569,153539.828,156573.305,152370.199,149558.790,152423.497,149343.296,142357.042,137034.843,1368
39.963,137017.766,137360.164,139349.790,147688.341,157713.355,170661.421,178003.666,180073.123,177757.186,171297.135,166455.051,161687.815,156071.788,148
442.758,140970.773,142262.454,137473.490,125317.801,108576.514,36,N,1884
NSLP,CITIPOWER,2007/07/01,2007/07/18
22:02:52,134521.276,127780.129,139143.407,129532.862,120153.747,112107.229,105361.617,100201.764,95615.117,93342.006,92304.466,92223.951,94035.770,95805.3
50,96667.833,104546.085,112930.946,121004.291,129566.197,136619.529,142361.298,145271.153,145812.239,144471.657,146064.723,146781.074,148108.485,148767.9
44,149734.969,149888.367,148312.926,150195.150,152814.312,159380.760,173823.716,189895.380,198736.054,201842.869,200449.048,197025.768,194288.715,190422.
430,184527.620,175819.589,163086.340,147760.128,138299.122,125791.178,43,N,1884
NSLP,COUNTRYENERGY,2007/07/01,2007/07/18
22:02:52,393736.874,370044.280,324116.717,312974.388,278383.017,270540.842,267996.510,271485.907,271815.904,273599.809,283383.577,281046.779,311366.578,3
55313.138,379803.266,429902.707,484227.076,472237.176,458880.133,463571.851,438830.226,420976.428,433496.204,454306.908,441251.432,431174.408,412513.785,
393753.785,400563.683,389444.524,412236.171,410876.036,435310.271,474923.711,594346.207,672318.787,683857.104,666035.809,628586.316,596507.297,576147.88
2,558129.132,503969.677,440343.845,411378.701,378112.167,374166.749,348316.145,50,N,1884
NSLP,ENERGEX,2007/07/01,2007/07/18
22:02:52,389429.118,320048.665,287458.987,289027.947,280024.690,286512.024,291620.952,313328.478,310712.293,306614.982,318357.197,317103.479,367989.599,3
97465.183,469921.013,508230.255,533492.867,516748.986,516286.506,521461.088,501336.075,462246.897,459621.570,438007.834,432965.773,419607.084,419712.579,
419103.603,404687.094,408912.725,431091.601,434467.184,492619.256,589426.600,742128.955,894387.589,914705.559,891398.140,856312.858,856680.444,817764.69
9,755997.499,600960.033,584237.419,556042.754,492640.817,384812.796,339389.492,57,N,1884
NSLP,ENERGEX,2007/07/07,2007/07/18
22:02:52,378049.424,317640.817,304270.808,311372.424,303042.263,297338.979,317104.360,336834.228,338006.220,337745.041,339781.616,359278.063,430065.951,4
61369.094,532178.490,586272.804,604036.581,620339.452,560391.190,553302.542,515586.882,480984.364,434425.783,457533.822,457677.819,436963.471,415708.408,
424697.037,426599.932,419994.623,433354.452,440434.434,498519.110,559298.284,687997.090,851893.428,898618.386,838544.481,817462.790,780688.344,737183.79
8,696581.006,594182.912,591586.166,555019.846,528335.776,434787.387,392049.244,63,N,1884

NSLP,ENERGYAUST,2007/07/01,2007/07/18
22:02:52,441582.827,381619.864,340809.158,339483.073,340424.226,325883.296,327402.828,355495.810,332144.791,357303.436,371600.994,391264.034,416627.455,452763.943,541098.485,629642.643,713186.325,741914.868,741337.866,770037.135,757179.742,708755.897,667690.070,663166.599,684888.443,710726.480,696463.637,687964.401,689100.008,677430.473,694705.390,734283.741,847276.260,971812.277,1098669.780,1218684.014,1259387.387,1253592.747,1226020.006,1194112.069,1157860.769,1114861.236,1053127.133,942550.551,817767.067,686181.330,559374.938,393856.874,64,N,1884
NSLP,ERGON1,2007/07/01,2007/07/18
22:02:52,481940.771,453618.328,421976.966,395166.166,385294.512,382100.370,368880.544,364909.046,373075.156,374788.205,390353.054,403486.468,412274.164,440375.348,479781.523,509798.172,544447.482,559736.520,561828.151,558371.101,547325.488,526019.647,520023.182,513229.460,502776.345,492891.121,483402.098,477522.022,468634.926,459493.463,465540.496,480842.576,494917.710,531644.622,586703.521,647109.600,682801.819,692204.936,682996.429,680362.711,668025.633,646353.322,607306.322,559970.414,544398.137,534482.868,527846.876,510161.507,71,N,1884
NSLP,INTEGRAL,2007/07/01,2007/07/18
22:02:52,385025.290,373910.724,349766.221,320922.326,300704.908,282575.204,254233.178,253657.931,257607.836,266358.476,255342.172,295070.613,310387.647,332087.268,367062.333,422330.289,493403.259,572052.209,599860.496,601125.658,580913.525,560555.856,534076.144,536381.871,532437.439,512499.375,479171.583,484237.182,457962.461,461295.496,467210.275,498606.181,571649.939,664026.012,738217.736,798910.202,810996.910,798942.245,780881.864,758399.298,742920.534,714510.002,663968.014,612344.226,540158.635,425920.888,341971.368,308148.709,78,N,1884
NSLP,POWERCOR,2007/07/01,2007/07/18
22:02:52,427633.006,407131.945,475235.253,457173.933,416909.375,381776.833,353813.750,328058.216,303472.869,288444.156,279773.204,276712.888,280826.172,284736.317,260839.465,279727.245,307922.860,328869.861,339347.756,342617.255,342572.163,340281.626,339108.805,341368.330,344319.822,342614.149,361101.712,359745.932,356860.033,355323.010,359904.986,366925.824,366173.738,390379.599,429597.533,472065.292,482253.756,468388.647,449370.813,436183.235,426527.663,417265.472,397701.632,372616.975,346218.730,328835.850,397753.794,390859.673,85,N,1884
NSLP,TXU,2007/07/01,2007/07/18
22:02:52,313240.055,301931.777,346236.789,335120.863,310118.839,283922.261,262931.519,243854.349,229416.424,218972.873,212459.816,209644.109,211076.857,214474.257,205330.872,227138.361,251151.811,274442.661,291363.385,301011.862,304796.921,303263.478,299593.584,295358.476,290794.589,287156.994,298681.527,297065.453,296428.521,297875.563,301189.397,308030.784,313671.196,334952.467,366509.362,404538.311,410296.859,398700.708,382274.432,372734.915,362039.596,349937.023,331385.557,309859.989,290078.048,271473.959,288240.297,282007.815,92,N,1884
NSLP,UMPLP,2007/07/01,2007/07/18
22:02:52,218941.800,212232.513,191683.994,195618.311,207588.119,211383.393,204633.979,216803.142,208206.334,203869.683,210743.886,225744.809,235975.701,248984.092,262126.727,283547.415,323270.940,350384.193,383326.049,404746.539,416127.726,427463.727,406959.303,408022.878,402445.855,393955.624,384930.983,373143.606,368653.702,360207.181,356761.993,360327.298,374719.136,399328.923,447041.096,517352.922,588691.790,614890.306,606241.285,596720.035,585695.804,564595.790,535962.631,489372.433,433219.071,346604.990,221636.176,203973.183,99,N,1884
NSLP,UNITED,2007/07/01,2007/07/18
22:02:52,248880.074,231586.706,225561.085,211631.790,196568.750,184823.381,176428.604,169253.440,163972.418,160733.545,159821.309,160172.446,164420.132,168401.072,173303.063,193515.142,215570.168,235417.892,250394.525,260819.465,265159.825,266272.894,263098.035,257158.996,255568.903,257221.933,257126.436,256768.920,259492.163,264136.809,267567.360,271713.576,276470.145,292695.383,325380.697,362326.951,374504.874,370850.336,361582.969,352739.920,344220.619,334193.218,319147.040,301751.305,279960.469,256921.427,252685.297,237021.699,106,N,1884
NSLP,VICAGL,2007/07/01,2007/07/18
22:02:52,114269.792,106626.599,103354.969,96382.686,90314.766,85255.200,81078.497,77552.736,75171.492,74117.194,73695.154,74257.898,75842.816,77470.433,78415.446,86991.797,95693.374,103708.356,111043.084,114786.959,117859.480,118649.926,117628.541,116974.283,116127.910,115773.444,114893.667,115886.157,117600.319,117495.284,118280.506,121940.691,124982.781,131720.972,145776.376,161518.132,166875.698,167196.136,164527.836,161755.489,158458.289,153994.048,147532.157,140134.683,129649.514,117601.343,118943.419,109395.527,113,N,1884

QLDEGXCL31,ENERGEX,2007/07/01,2007/07/18
22:49:50,148.988,162.225,134.682,97.799,69.274,58.012,41.450,29.346,23.127,24.671,20.698,26.539,19.812,15.181,19.467,9.717,11.272,6.500,3.736,4.168,6.381,1.760,2.343,1.479,1.760,2.732,0.000,1.328,0.000,0.000,0.821,0.000,0.043,0.972,0.000,0.000,1.360,2.235,4.610,3.747,3.844,4.707,73.992,76.000,102.474,115.420,191.258,188.840,120,N,1884
QLDEGXCL33,ENERGEX,2007/07/01,2007/07/18
22:49:14,24.747,30.642,33.579,27.511,29.152,20.687,20.072,13.669,17.524,20.568,21.680,26.701,21.540,29.443,27.727,44.548,53.326,69.954,70.213,59.373,56.058,61.122,48.932,46.028,41.957,40.089,34.583,29.044,32.909,31.074,27.684,37.120,35.123,31.009,26.172,15.343,23.224,36.569,52.808,44.235,65.883,75.018,92.444,63.044,42.886,39.204,38.513,37.962,127,N,1884
SACLOAD,UMPLP,2007/07/01,2007/07/18
22:18:21,206.683,205.325,185.716,148.709,109.816,82.051,66.606,45.200,41.140,36.642,29.785,19.273,14.987,9.862,7.787,1.221,0.091,2.550,2.101,1.997,3.954,2.725,15.551,14.743,10.001,7.795,5.999,15.203,10.185,9.618,6.818,4.723,3.167,0.118,1.525,1.380,1.851,1.867,3.184,1.973,3.443,6.213,12.300,24.897,38.264,78.392,136.302,185.416,134,N,1884

```
      </ReportResults>
      <Event severity="Information">
        <Code>0</Code>
  <Explanation>Success.</Explanation>
      </Event>
    </ReportResponse>
  </Transaction>
 </Transactions>
</ase:aseXML>
```