



2008 Western Turbine Users, Inc. (WTUI) Conference

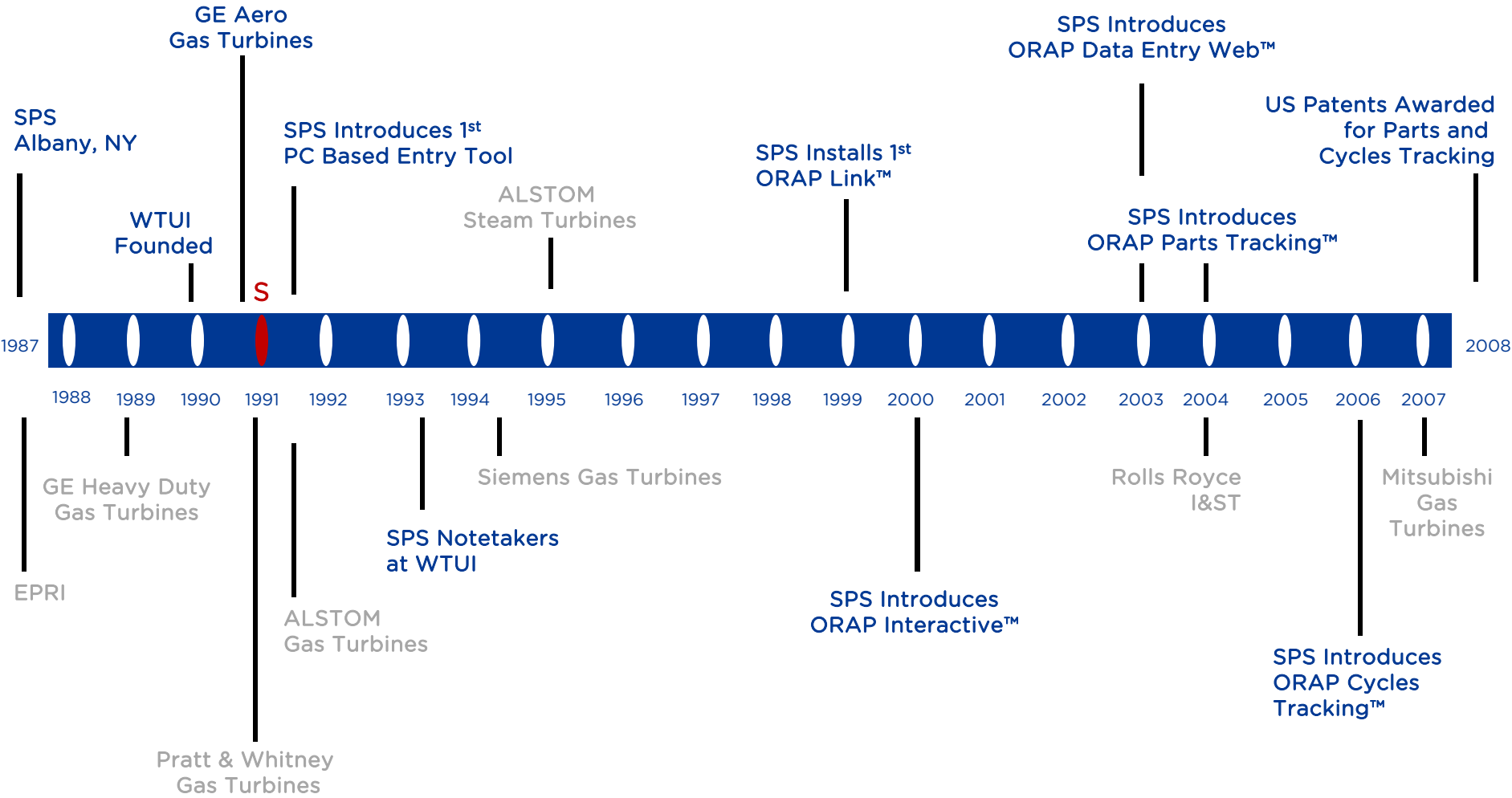
ORAP®

Adding Value Through Change...
2009 and Beyond

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Larry Wilson - Diamond Generating Corporation

April 9, 2008

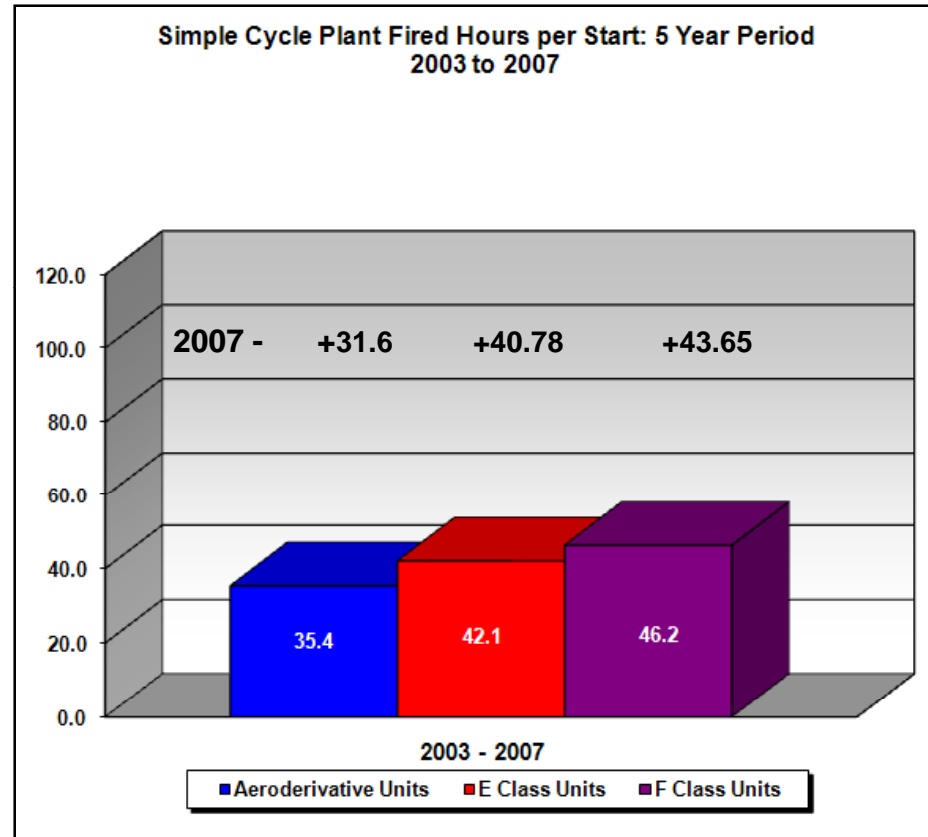
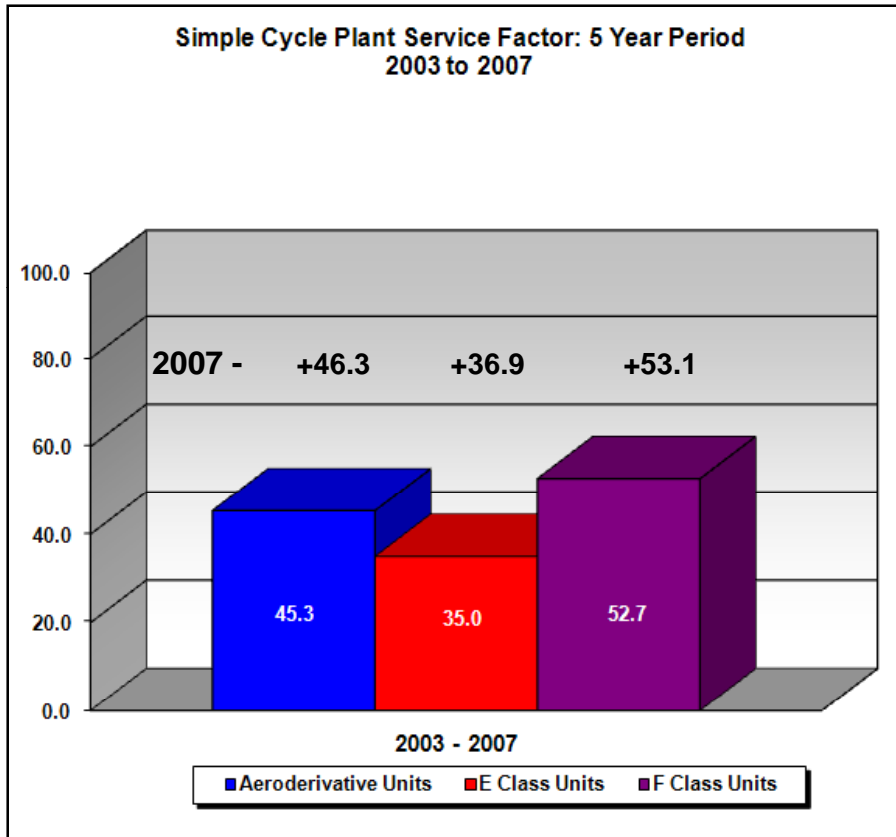
WTUI and ORAP...An Overview



Some Current Statistics

Table 1-3: Simple Cycle Plant Running Reliability: LM2500 & 20 MW to 40 MW Units				
	LM2500		20 MW to 40 MW	
	Last 12 Mos.	Last 5 Years	Last 12 Mos.	Last 5 Years
	Jan 07 - Dec 07	Jan 03 - Dec 07	Jan 07 - Dec 07	Jan 03 - Dec 07
Standby/Peaking Duty Units				
Service Hours/Start (Hrs.)	17.60	26.79	5.36	4.55
Average Starts/Year	198	85	155	108
Mean Time Between Failure (Hrs.)	255.01	272.25	104.42	165.28
Failure Rate per Million Fired Hours	3,921.34	3,673.15	9,576.63	6,050.43
Mission Reliability - Mission (%)	93.33	90.63	95.00	97.29
Mission Reliability - Full Year (%)	0.00	.02	.04	5.12
Cycling Duty Units				
Service Hours/Start (Hrs.)	42.34	23.95	25.65	19.07
Average Starts/Year	68	80	77	100
Mean Time Between Failure (Hrs.)	265.17	472.49	332.23	488.92
Failure Rate per Million Fired Hours	3,771.22	2,116.43	3,009.93	2,045.30
Mission Reliability - Mission (%)	85.24	95.06	92.57	96.17
Mission Reliability - Full Year (%)	0.00	1.82	.26	2.10
Baseload/Continuous Duty Units				
Service Hours/Start (Hrs.)	202.42	132.93	141.18	107.36
Average Starts/Year	33	37	39	36
Mean Time Between Failure (Hrs.)	982.47	800.46	791.82	678.67
Failure Rate per Million Fired Hours	1,017.85	1,249.29	1,262.91	1,473.47
Mission Reliability - Mission (%)	81.38	84.70	83.67	85.37
Mission Reliability - Full Year (%)	0.11	.21	.10	0.34
Mission Reliability is the Probability of Successfully completing the Given Mission				

Some Current Statistics



Why Participate? Perceived Value

- **Aligning multiple plants** into common culture
 - **Identical RAM metrics**, calculations and report formats
- **Indisputable** performance data
- **Benchmarking** against pro forma & industry expectations
- Developing scalable process that **fosters a “best in class”** culture across a growing portfolio
- Establishing process for identifying **critical spares**
- Ensuring **parts life and inspection plans** follow OEM recommendations profitably

Why Participate? Perceived Value

- **Unbiased, Third-Party Data**
 - Plant vs. Fleet Benchmarking
 - Visually understand how you compare against a fleet...**ranking**
 - **Identify** Fleet issues to owner/operators and OEMs on continuous basis
- Best Practices
- Level of Predictive Maintenance
 - Based on **fleet trends**
- **Time to Repair** Statistics
- Fleet Based Inspection Intervals
- **Uniform Method** to Track
 - Equipment issues
 - Corrective actions performed
 - Root cause analysis

An Eye Opening Experience...



“oops!!”



An Eye Opening Experience...

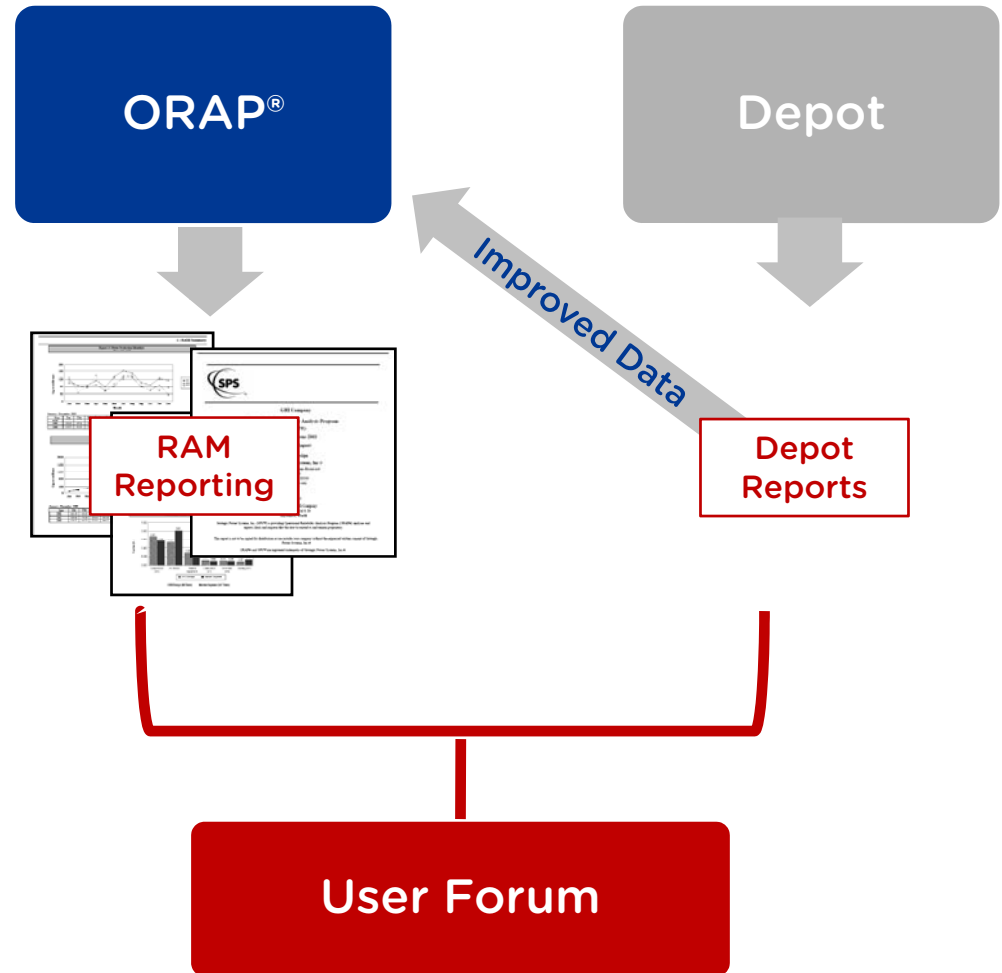
Issues - Diamond Generating Corporation

- ORAP to NERC-GADS translation is a problem
- Fleet for comparison should be
 - Similar in configuration...model
 - Similar in duty & fuel
 - Maintenance program followed
- Comparison driven to higher, more descriptive level
- EBS structure to be reviewed
- Value would be added if open access to other participants
- Training - more needed
- Changes to the input process need to be addressed

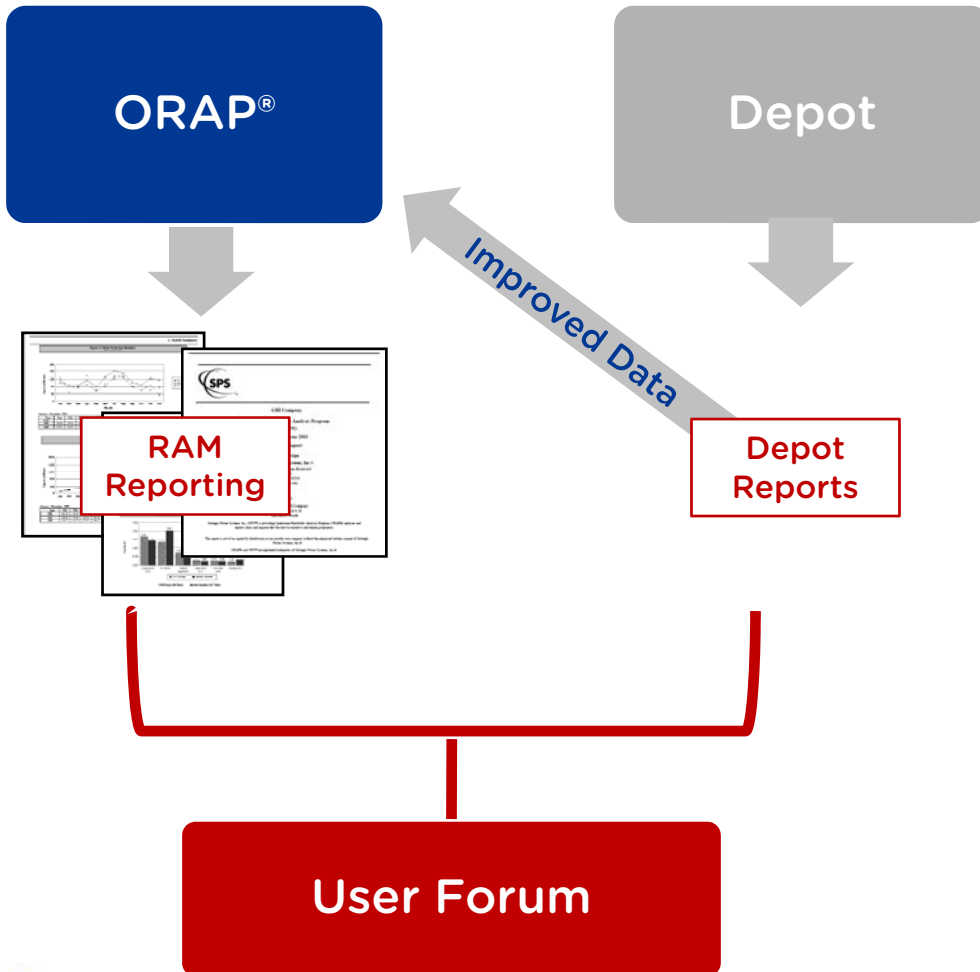


Meeting Your Needs...

- Report Delivery is Changing
- Depot Reporting
- User Forum
- User Parts Tracking



Meeting Your Needs...



- Outage & Work Detail
- Forecasts...
- Workscopes...



We Want to Hear You

SPS Information Session This Afternoon

Focused on sharing information and listening to your needs





Thank you
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