



## Case Study: Remote monitoring and control of a widely dispersed estate of gensets

Based in Ramsgate, UK, Cummins Energy Solution Business (**CESB**) is part of Cummins Inc., a Fortune 500 corporation and the world's largest manufacturer of diesel and gas powered engines.

CESB's Operations & Maintenance team is responsible for managing after-sales requirements, ensuring that CESB can support all their customers throughout their territory in Europe, the Middle East and Africa.

CESB needed a flexible, scalable and secure remote monitoring system that would address their requirements, including the facility to:

- see a consolidated view of their entire estate of genset from a single login;
- rapidly log large numbers of parameters;
- view the live performance of any one of their sites;
- compare and chart large numbers of parameters;
- carry out correlation analysis; and
- execute the remote start and stop of an asset.

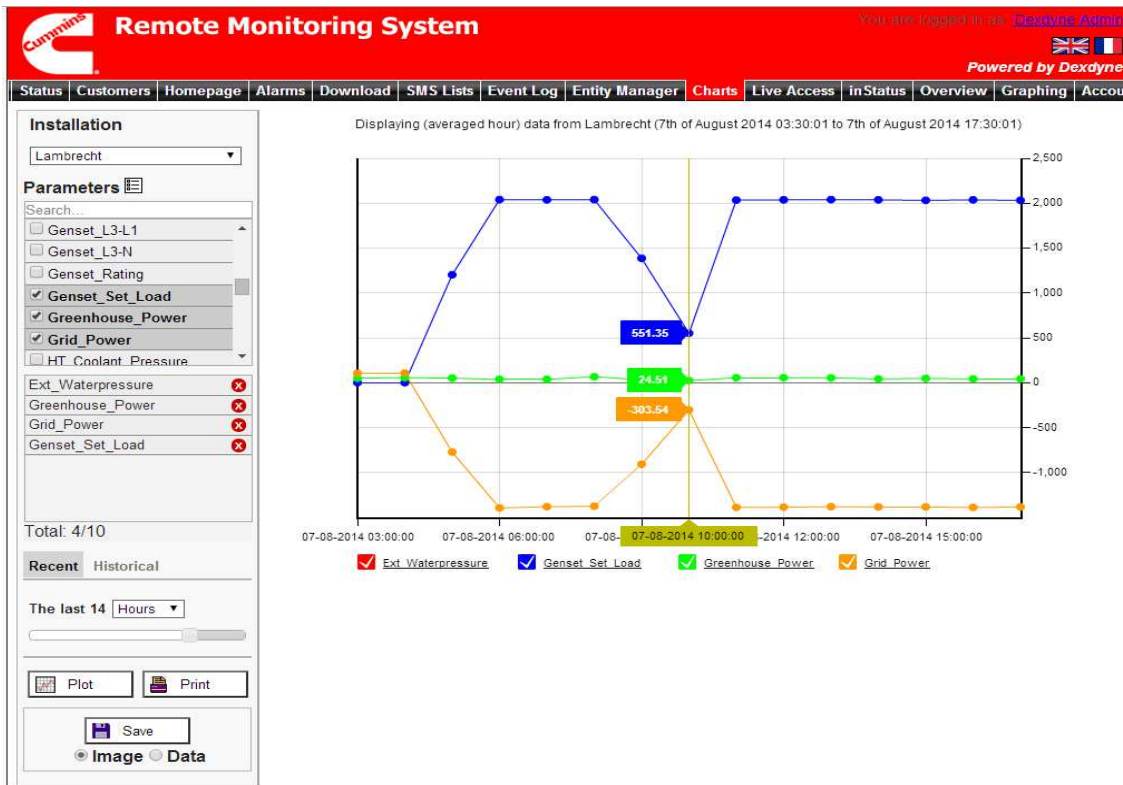
Having considered other products on the market, CESB chose Dexdyne's remote management system (RMS) because it ticked the most boxes off-the-shelf for their requirements.

Installation	Rating	Last Contact	Status	KW	Run Hrs	MWH
Palafolls	995	Today @ 16:57	ONLINE	1029	10453	10464
Nevens	1400	Today @ 17:12	ONLINE	1391	36733	50135
Hamerlinck	1400	Today @ 16:59	ONLINE	1401	22350	30580
Groentuin_2	1400	Today @ 17:00	ONLINE	1401	8927	14328
Patoma	2040	Today @ 17:06	ONLINE	1972	29688	58766
Pittors	2000	Today @ 17:17	ONLINE	2037	42219	18347
VGT_2	2000	Today @ 17:09	ONLINE	2030	35318	64383
VGT_1	2000	Today @ 17:09	ONLINE	2032	17767	35887
Snoeys	1400	Today @ 17:17	ONLINE	1394	39437	5477
Rutoma	2040	Today @ 17:10	ONLINE	2050	28644	57201
Erimley Park	1370	Today @ 17:10	ONLINE	1370	35151	43733
Lambrecht	2040	Today @ 17:18	ONLINE	2028	34697	3041
Den Breyn_3	2040	Today @ 17:05	ONLINE	2016	22080	44260
OTA Nigeria	1750	11-Jun-2012 @ 16:59	OFFLINE			
Vermeir	1400	30-Oct-2013 @ 22:29	OFFLINE	0	0	0
Daventry	2000	31-Aug-2012 @ 16:22	OFFLINE			
De Munck	2000	04-Jun-2014 @ 13:18	OFFLINE	0	0	0
Haagendoorn_2	2040	06-Aug-2014 @ 15:10	OFFLINE	1	15497	31032
GWF	2000	26-Jul-2012 @ 09:39	OFFLINE			
Romiley	1400	Today @ 17:20	WARNING	1396	28481	15709
Den Breyn_2	1400	Today @ 17:01	WARNING	1398	67874	17083220
Den Breyn_1	1400	Today @ 17:00	WARNING	1404	68253	17619276
Albury	1540	Today @ 17:15	WARNING	809	10625	9832
Varegro	2040	Today @ 17:16	STOPPED	0	29563	58301
Van de Waeters	1050	Today @ 17:01	STOPPED	0	69527	3188464

Fig.1 - A Complete Overview of the Estate

Dexdyne rose to the challenge and, within six weeks of the initial agreement, provided a configured system for CESB to trial at a nearby hospital site. This successful trial led to CESB rolling out Dexdyne's RMS solution to all their sites in the UK, Belgium, Spain, Sweden and Nigeria.

Dexdyne’s innovative web-based solution securely delivers detailed operating information about the generator sets in real time 24/7 to both engineering staff and management, wherever they happen to be. This real-time information also enables users to react rapidly to SMS alarms and other exceptions and thus helps to optimise the performance and efficiency of their operations.



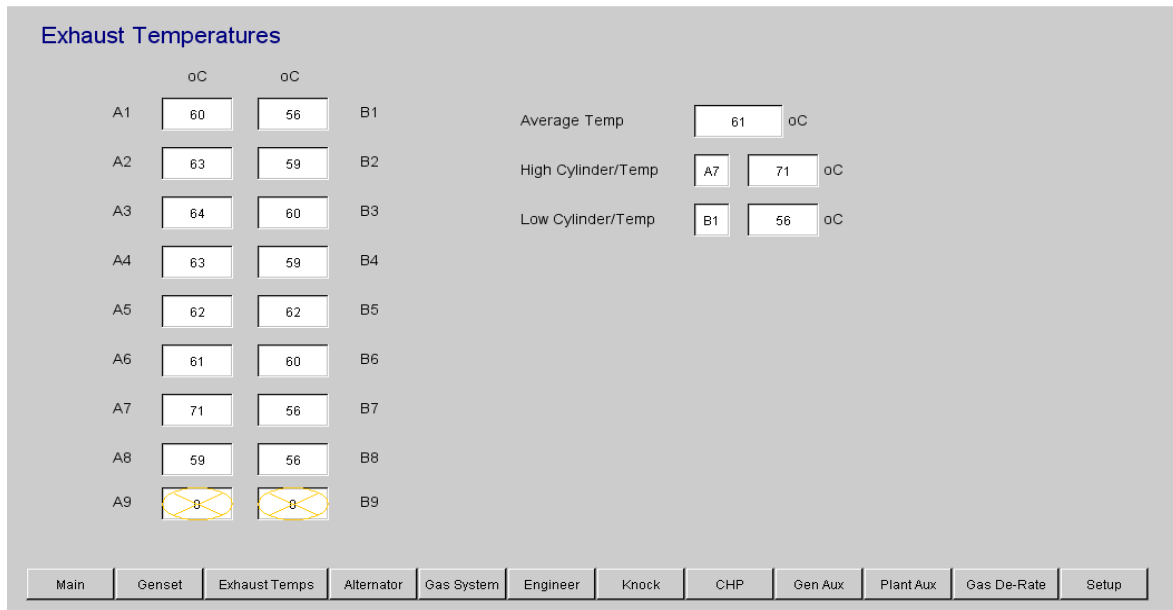
**Fig. 2..Analysis using Charting**

Dexdyne’s RMS solution not only provides remote monitoring but also remote control (including restart) of generator sets. In addition to delivering very detailed real-time engineering data, it can also generate and deliver a higher level reports that business managers need to monitor, viz. historic power output, generator downtime, etc.

1	A1											
2	Start Period	2014-08-04 00:00		Max Hrs	168		End Period	2014-08-11 00:00				
3												
4	Region	Installation	Rating	Start Datestamp	Start MWh	Start Run Hours	End Datestamp	End MWh	End Run Hours	Active Load	State	
5	Belgium-North	Adriplant	1200	2014-08-04 00:00:00+00	36919	30345	2014-08-11 00:00:00+00	36919	30345	0	Stopped	
6	Belgium-North	Coghe	2040	2014-08-04 00:00:00+00	5844	36453	2014-08-11 00:00:00+00	5912	36487	2007	Running	
7	Belgium-North	De Muncx	2000		0	0		0	0	0	Stopped	
8	Belgium-North	Doclx	1200	2014-08-04 00:00:00+00	24448	19968	2014-08-11 00:00:00+00	24523	20028	1238	Running	
9	Belgium-North	Lambrecht	2040	2014-08-04 00:00:00+00	2956	34655	2014-08-11 00:00:00+00	3120	34737	2034	Running	
10	Belgium-South	Desmet	1400	2014-08-04 00:00:00+00	58681	29645	2014-08-11 00:00:00+00	58820	29716	2016	Running	
11	Belgium-North	Pittors	2000	2014-08-04 00:00:00+00	18265	42172	2014-08-11 00:00:00+00	18376	42234	1614	Running	
12	Belgium-North	Van Bortel Ludo	2040	2014-08-04 00:00:00+00	59808	29904	2014-08-11 00:00:00+00	59895	29947	2041	Running	
13	Belgium-North	Van Bortel Marcel	2040	2014-08-04 00:00:00+00	64033	31917	2014-08-11 00:00:00+00	64033	31917	0	Stopped	
14	Belgium-North	Varegro	2040	2014-08-04 00:00:00+00	58229	29524	2014-08-11 00:00:00+00	58336	29582	2031	Running	
15	Belgium-North	Vermeir	1400		0	0		0	0	0	Stopped	
16	Belgium-North	Vlaemynck	2040	2014-08-04 00:00:00+00	64290	33786	2014-08-11 00:00:00+00	64418	33853	1931	Running	
17	Belgium-South	Den Breyn 1	1400	2014-08-04 00:00:00+00	17554693	68206	2014-08-11 00:00:00+00	17676808	68295	1410	Running	
18	Belgium-South	Den Breyn 2	1400	2014-08-04 00:00:00+00	17011062	67821	2014-08-11 00:00:00+00	17140764	67915	1392	Running	
19	Belgium-South	Den Breyn 3	2040	2014-08-04 00:00:00+00	44158	22029	2014-08-11 00:00:00+00	44337	22119	2027	Running	
20	Belgium-South	Desmet	1400	2014-08-04 00:00:00+00	6919	12462	2014-08-11 00:00:00+00	7046	12528	1990	Running	
21	Belgium-South	Groentuin 1	1400	2014-08-04 00:00:00+00	1072	7676	2014-08-11 00:00:00+00	1144	7728	1398	Running	
22	Belgium-South	Groentuin 2	1400	2014-08-04 00:00:00+00	14270	8885	2014-08-11 00:00:00+00	14379	8964	1406	Running	
23	Belgium-South	Haagendoorn	2000	2014-08-04 00:00:00+00	41649	20887	2014-08-11 00:00:00+00	41730	20928	2019	Running	
24	Belgium-South	Haagendoorn 2	2040	2014-08-04 00:00:00+00	30988	15475	2014-08-06 15:10:00+00	31032	15497	0	Stopped	
25	Belgium-South	Hamerlinck	1400	2014-08-04 00:00:00+00	30518	22306	2014-08-11 00:00:00+00	30598	22363	1398	Running	
26	Belgium-South	Neyens	1400	2014-08-04 00:00:00+00	50068	36685	2014-08-11 00:00:00+00	50190	36772	1390	Running	
27	Belgium-South	Rutoma	2040	2014-08-04 00:00:00+00	57109	28598	2014-08-11 00:00:00+00	57260	28674	2051	Running	
28	Belgium-South	Snoeys	1400	2014-08-04 00:00:00+00	5412	39390	2014-08-11 00:00:00+00	5504	39456	1384	Running	
29	Belgium-South	Van De Ven	1400	2014-08-04 00:00:00+00	55584	40964	2014-08-11 00:00:00+00	55656	41016	1390	Running	
30	Belgium-South	Van de Waetere	1050	2014-08-04 00:00:00+00	3125480	69485	2014-08-11 00:00:00+00	3194101	69552	1041	Running	
31	Belgium-South	VGT 1	2000	2014-08-04 00:00:00+00	35798	17720	2014-08-11 00:00:00+00	36002	17824	2029	Running	
32	Belgium-South	VGT 2	2000	2014-08-04 00:00:00+00	64281	35266	2014-08-11 00:00:00+00	64495	35374	2027	Running	

**Fig. 3 – Example Report**

The Dexdyne RMS solution is a fully scalable and customisable system, enabling multiple generators and multiple sites to be managed through a single dashboard to suit the operational needs of any organisation. In short, it makes it possible to manage a dispersed infrastructure efficiently and with ease. In terms of user architecture, there is no limit on the number of authorised users of the system. The RMS can be easily configured to enable any number of different authorised users within an organisation to have access to the information that is relevant to them only. The system has been further enhanced for CESB to allow failure event analysis by capturing rapidly changing pre- and post-event data.



**Fig. 4 – Visibility of live site**

*“We are now using Dexdyne’s RMS system successfully at several of our UK and international locations. It makes it much easier to manage multiple engines”,* said Will Stumpf, Aftermarket & Strategic Project Leader at CESB. *“The Dexdyne Enterprise dashboard is intuitive and helps us support our customers better and keep our engines operating at peak performance without needing somebody on site all the time.”*