

1.1 Reporting 04.2008

Wind farm:	LEHAUCOURT	Customer:	SNET	Business year:	04.2008 - 03.2009
Type of turbine:	N90	Number of wind turbines:	4	Reporting period:	04.2008
Content of report:					
	1.1 Cover	3.1 Production			
	2.1 Av Wind farm	3.2 Amount			
	2.2 Av Windturbine	4.1 Error analysis			
	2.3 Error list	5.1 Powercurve			

Basic Data:

Park availability in reporting period	96.12%
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Park availability of operating business year:	96.12%
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Production wind farm according to control in reporting period	1.395.112 kWh
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Comments / remarks, additional data:

DEILLE W
Nordex Energy GmbH
Nordex Service

Signature Customer

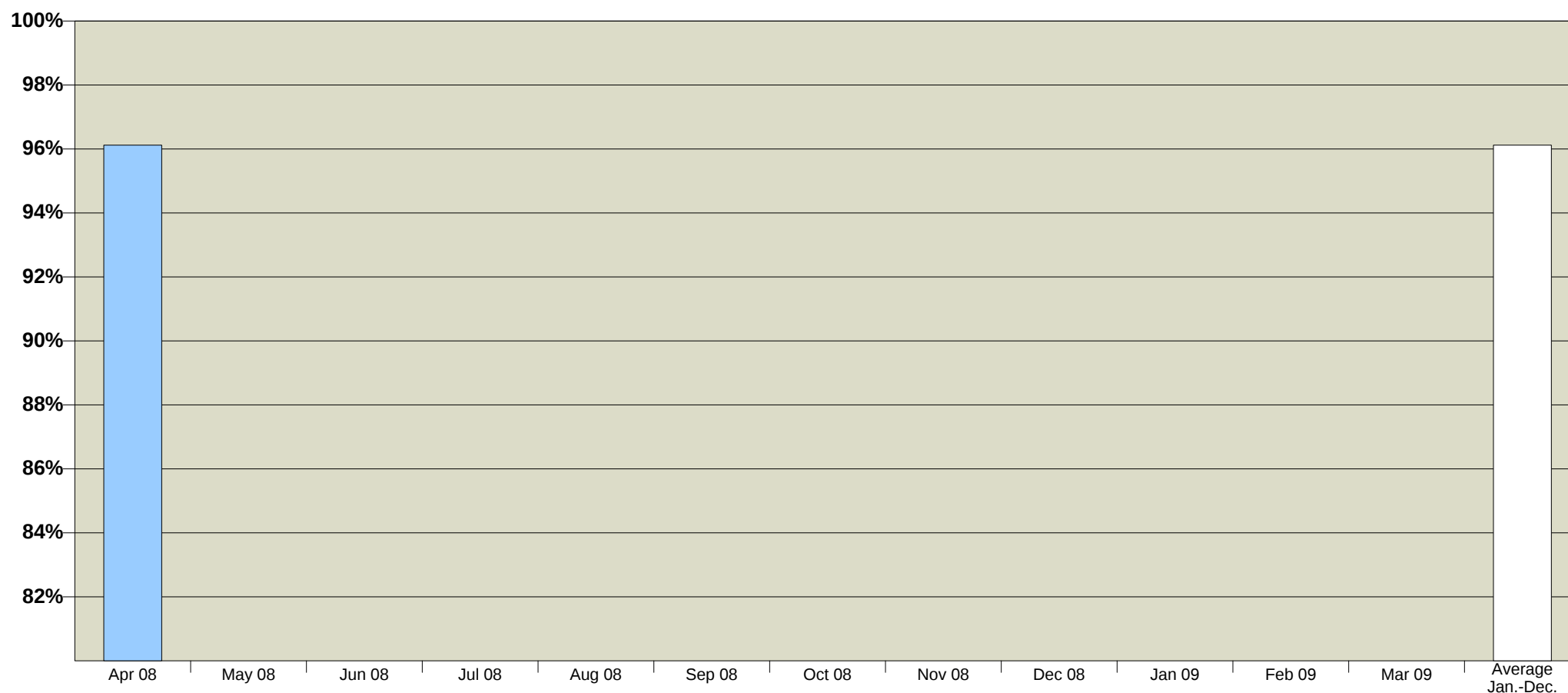
2.1 Availability Wind Farm

Wind farm: **LEHAUCOURT**
Type of turbine: **N90**

Customer: **SNET**
Number of wind turbines: **4**

Business year: **04.2008 - 03.2009**
Reporting period: **04.2008**

Period	Apr 08	May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08	Nov 08	Dec 08	Jan 09	Feb 09	Mar 09	Average Apr.-Mar.
Availability	96.12%												96.12%



2.2 Availability wind turbine

Wind farm: **LEHAUCOURT**

Type of turbine: **N90**

Customer: **SNET**

Number of wind turbines: **4**

Business year: **04.2008 - 03.2009**

Reporting period: **04.2008**

	W E A	failure hours (T stop)	Wind turbine in improper operating condition (T fm)	max. possible h of operation (T total)	Availability of single wind turbine	Availability of all wind turbines
April 08	01WEA8383	27.68	27.29	720	96.21%	96.12%
	02WEA8384	24.16	23.39	720	96.75%	
	03WEA8385	58.11	57.73	720	91.98%	
	04WEA8386	4.19	3.42	720	99.53%	

Data business year / wind turbine; status: reporting period

	01WEA8383	27.68	27.29	720	96.21%	96.12%
	02WEA8384	24.16	23.39	720	96.75%	
	03WEA8385	58.11	57.73	720	91.98%	
	04WEA8386	4.19	3.42	720	99.53%	
Σ Park		114.14	111.82	2880		

2.3 Errorlist

Wind farm: **LEHAUCOURT**

Type of turbine: **N90**

Customer: **SNET**

Number of wind turbines: **4**

Business year: **04.2008 - 03.2009**

Reporting period: **04.2008**

Status start	Status end	Status code	Error identification according to turbine controller	memo	A-Code	Duration	T _{stop}	T _{fm}	T _{fm Grid}	T _{fm Maintenance}
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01WEA8383

11.04.08 12:52:21	11.04.08 12:53:40	FM411	Wind DirSlanting Stop		AF	00:01:19	00:01:19			
17.04.08 10:27:48	17.04.08 10:29:06	FM411	Wind DirSlanting Stop		AF	00:01:18	00:01:18			
17.04.08 11:32:41	17.04.08 11:33:58	FM411	Wind DirSlanting Stop		AF	00:01:17	00:01:17			
17.04.08 13:50:27	17.04.08 13:51:43	FM411	Wind DirSlanting Stop		AF	00:01:16	00:01:16			
17.04.08 13:57:19	17.04.08 13:58:37	FM411	Wind DirSlanting Stop		AF	00:01:19	00:01:19			
17.04.08 14:17:21	17.04.08 14:18:39	FM411	Wind DirSlanting Stop		AF	00:01:18	00:01:18			
18.04.08 13:41:52	18.04.08 13:54:30	FM6	WTG Manual Stop	control flashlight	AF	00:12:39	00:12:39			
21.04.08 03:36:47	21.04.08 03:37:55	FM411	Wind DirSlanting Stop		AF	00:01:08	00:01:08			
23.04.08 05:13:41	23.04.08 05:36:50	FM1003	Yaw CableRewind		NAF	00:23:10		00:23:10		
24.04.08 08:02:30	24.04.08 10:24:53	FM6	WTG Manual Stop	control haca rail	AF	02:22:23	02:22:23			
25.04.08 12:15:59	25.04.08 12:17:17	FM411	Wind DirSlanting Stop		AF	00:01:17	00:01:17			
26.04.08 01:52:46	26.04.08 02:08:11	FM1161	Pitch2 battery charger defect		AF	00:15:26	00:15:26			
28.04.08 13:57:02	28.04.08 14:26:14	FM400	Wind DirSlanting Stop(due YP50)		AF	00:29:12	00:29:12			
28.04.08 14:30:04	28.04.08 14:52:52	FM400	Wind DirSlanting Stop(due YP50)		AF	00:22:48	00:22:48			
28.04.08 17:26:23	28.04.08 17:31:46	FM400	Wind DirSlanting Stop(due YP50)		AF	00:05:23	00:05:23			
28.04.08 18:49:41	29.04.08 06:38:51	FM400	Wind DirSlanting Stop(due YP50)		AF	11:49:10	11:49:10			
29.04.08 06:38:51	29.04.08 06:41:05	FM6	WTG Manual Stop		AF	00:02:14	00:02:14			
29.04.08 07:59:25	29.04.08 08:56:01	FM400	Wind DirSlanting Stop(due YP50)		AF	00:56:36	00:56:36			
29.04.08 09:04:31	29.04.08 13:25:51	FM6	WTG Manual Stop		AF	04:21:20	04:21:20			
29.04.08 13:29:26	29.04.08 13:41:25	FM6	WTG Manual Stop		AF	00:11:58	00:11:58			
29.04.08 14:53:03	29.04.08 15:42:21	FM400	Wind DirSlanting Stop(due YP50)		AF	00:49:18	00:49:18			
29.04.08 20:26:57	30.04.08 01:30:59	FM400	Wind DirSlanting Stop(due YP50)		AF	05:04:03	05:04:03			
30.04.08 16:53:05	30.04.08 16:57:45	FM400	Wind DirSlanting Stop(due YP50)		AF	00:04:40	00:04:40			

27.68

Sum	1d03:17:21	00:23:10	00:00:00	00:00:00
	27.29	0.39	0	0

02WEA8384

01.04.08 17:41:49	01.04.08 17:46:55	FM60	Vib Z-direction filtered Stop		AF	00:05:06	00:05:06			
06.04.08 12:29:13	06.04.08 12:52:53	FM1161	Pitch2 battery charger defect		AF	00:23:40	00:23:40			

	Status start	Status end	Status code	Error identification according to turbine controller	memo	A-Code	Duration	T _{stop}	T _{fm}	T _{fm Grid}	T _{fm Maintenance}
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02WEA8384

06.04.08 13:26:04	06.04.08 13:49:13	FM1003	Yaw CableRewind		NAF	00:23:10		00:23:10		
11.04.08 14:38:37	11.04.08 14:39:52	FM411	Wind DirSlanting Stop		AF	00:01:15	00:01:15			
12.04.08 12:02:15	12.04.08 12:03:34	FM411	Wind DirSlanting Stop		AF	00:01:19	00:01:19			
15.04.08 12:11:24	15.04.08 12:12:44	FM411	Wind DirSlanting Stop		AF	00:01:20	00:01:20			
15.04.08 15:05:58	15.04.08 15:07:16	FM411	Wind DirSlanting Stop		AF	00:01:18	00:01:18			
17.04.08 11:15:38	17.04.08 11:17:01	FM411	Wind DirSlanting Stop		AF	00:01:23	00:01:23			
17.04.08 11:31:38	17.04.08 11:32:53	FM411	Wind DirSlanting Stop		AF	00:01:15	00:01:15			
17.04.08 12:11:44	17.04.08 12:12:58	FM411	Wind DirSlanting Stop		AF	00:01:13	00:01:13			
17.04.08 12:51:21	17.04.08 12:52:39	FM411	Wind DirSlanting Stop		AF	00:01:19	00:01:19			
17.04.08 13:18:53	17.04.08 13:20:04	FM411	Wind DirSlanting Stop		AF	00:01:11	00:01:11			
17.04.08 13:48:32	17.04.08 13:49:49	FM411	Wind DirSlanting Stop		AF	00:01:17	00:01:17			
17.04.08 14:00:23	17.04.08 14:01:39	FM411	Wind DirSlanting Stop		AF	00:01:16	00:01:16			
17.04.08 14:16:59	17.04.08 14:18:09	FM411	Wind DirSlanting Stop		AF	00:01:11	00:01:11			
18.04.08 11:11:15	18.04.08 12:46:11	FM6	WTG Manual Stop	changed GPS modul	AF	01:34:56	01:34:56			
18.04.08 13:21:58	18.04.08 13:31:46	FM6	WTG Manual Stop	reset flashlight	AF	00:09:49	00:09:49			
18.04.08 15:58:03	19.04.08 10:31:09	FM419	Yaw HydBrk not closed		AF	18:33:05	18:33:05			
19.04.08 10:31:09	19.04.08 10:31:44	FM11	PLC Reboot active		AF	00:00:35	00:00:35			
19.04.08 10:40:50	19.04.08 10:48:04	FM6	WTG Manual Stop	changed yaw converter	AF	00:07:14	00:07:14			
21.04.08 03:35:15	21.04.08 03:37:32	FM411	Wind DirSlanting Stop		AF	00:02:17	00:02:17			
22.04.08 22:32:19	22.04.08 22:55:29	FM1003	Yaw CableRewind		NAF	00:23:10		00:23:10		
24.04.08 10:39:03	24.04.08 12:45:09	FM6	WTG Manual Stop	Control HACA rail	AF	02:06:07	02:06:07			
25.04.08 12:17:15	25.04.08 12:18:34	FM411	Wind DirSlanting Stop		AF	00:01:19	00:01:19			
25.04.08 13:30:45	25.04.08 13:32:05	FM411	Wind DirSlanting Stop		AF	00:01:21	00:01:21			
28.04.08 15:55:24	28.04.08 15:56:40	FM411	Wind DirSlanting Stop		AF	00:01:16	00:01:16			
30.04.08 01:17:18	30.04.08 01:18:34	FM411	Wind DirSlanting Stop		AF	00:01:17	00:01:17			
						24.16				
						Sum	23:23:17	00:46:20	00:00:00	00:00:00
							23.39	0.77	0	0

03WEA8385

01.04.08 17:44:57	01.04.08 17:47:10	FM1175	Pitch3 Batt.contactor Error		AF	00:02:13	00:02:13			
01.04.08 17:47:37	01.04.08 18:07:15	FM261	RotBrk Brakepressure Fault		AF	00:19:38	00:19:38			
01.04.08 18:07:33	02.04.08 06:15:57	FM261	RotBrk Brakepressure Fault		AF	12:08:25	12:08:25			
02.04.08 06:15:57	02.04.08 06:16:02	FM6	WTG Manual Stop	check pressure	AF	00:00:05	00:00:05			
02.04.08 06:16:27	02.04.08 06:16:35	FM261	RotBrk Brakepressure Fault		AF	00:00:08	00:00:08			
02.04.08 06:19:13	02.04.08 06:20:10	FM1175	Pitch3 Batt.contactor Error		AF	00:00:57	00:00:57			
09.04.08 06:20:17	09.04.08 06:21:51	FM1175	Pitch3 Batt.contactor Error		AF	00:01:34	00:01:34			
09.04.08 06:22:15	09.04.08 06:22:29	FM261	RotBrk Brakepressure Fault		AF	00:00:15	00:00:15			
09.04.08 11:54:58	09.04.08 11:56:22	FM411	Wind DirSlanting Stop		AF	00:01:24	00:01:24			
11.04.08 12:49:13	11.04.08 12:50:30	FM411	Wind DirSlanting Stop		AF	00:01:17	00:01:17			

	Status start	Status end	Status code	Error identification according to turbine controller	memo	A-Code	Duration	T _{stop}	T _{fm}	T _{fm Grid}	T _{fm Maintenance}
03WEA8385											
	11.04.08 12:50:51	11.04.08 13:16:46	FM261	RotBrk Brakepressure Fault		AF	00:25:55	00:25:55			
	11.04.08 13:17:34	12.04.08 06:13:57	FM261	RotBrk Brakepressure Fault		AF	16:56:23	16:56:23			
	12.04.08 06:13:57	12.04.08 06:14:02	FM6	WTG Manual Stop	Reset WTG	AF	00:00:05	00:00:05			
	12.04.08 06:14:22	12.04.08 06:18:09	FM261	RotBrk Brakepressure Fault		AF	00:03:47	00:03:47			
	12.04.08 06:18:29	12.04.08 06:18:34	FM261	RotBrk Brakepressure Fault		AF	00:00:04	00:00:04			
	12.04.08 12:02:34	12.04.08 12:03:54	FM411	Wind DirSlanting Stop		AF	00:01:20	00:01:20			
	14.04.08 12:27:58	14.04.08 12:29:09	FM411	Wind DirSlanting Stop		AF	00:01:11	00:01:11			
	14.04.08 12:29:25	14.04.08 12:41:28	FM261	RotBrk Brakepressure Fault		AF	00:12:03	00:12:03			
	14.04.08 12:41:41	15.04.08 05:45:30	FM261	RotBrk Brakepressure Fault		AF	17:03:49	17:03:49			
	15.04.08 05:45:30	15.04.08 05:45:37	FM6	WTG Manual Stop	Reset WTG	AF	00:00:07	00:00:07			
	15.04.08 05:45:58	15.04.08 05:46:06	FM261	RotBrk Brakepressure Fault		AF	00:00:08	00:00:08			
	17.04.08 11:15:00	17.04.08 11:16:25	FM411	Wind DirSlanting Stop		AF	00:01:25	00:01:25			
	17.04.08 11:17:06	17.04.08 11:20:11	FM261	RotBrk Brakepressure Fault		AF	00:03:04	00:03:04			
	17.04.08 11:20:45	17.04.08 11:21:01	FM261	RotBrk Brakepressure Fault		AF	00:00:16	00:00:16			
	19.04.08 16:32:14	19.04.08 16:55:24	FM1003	Yaw CableRewind		NAF	00:23:10		00:23:10		
	19.04.08 16:56:00	19.04.08 17:08:21	FM261	RotBrk Brakepressure Fault		AF	00:12:22	00:12:22			
	19.04.08 17:08:35	19.04.08 17:08:43	FM261	RotBrk Brakepressure Fault		AF	00:00:08	00:00:08			
	21.04.08 03:35:18	21.04.08 03:37:39	FM411	Wind DirSlanting Stop		AF	00:02:21	00:02:21			
	21.04.08 03:38:16	21.04.08 03:46:18	FM261	RotBrk Brakepressure Fault		AF	00:08:02	00:08:02			
	21.04.08 03:46:32	21.04.08 03:50:47	FM261	RotBrk Brakepressure Fault		AF	00:04:15	00:04:15			
	21.04.08 03:51:00	21.04.08 06:03:36	FM261	RotBrk Brakepressure Fault		AF	02:12:36	02:12:36			
	21.04.08 06:03:36	21.04.08 06:03:47	FM6	WTG Manual Stop		AF	00:00:11	00:00:11			
	21.04.08 06:04:00	21.04.08 06:05:01	FM261	RotBrk Brakepressure Fault		AF	00:01:01	00:01:01			
	21.04.08 06:05:19	21.04.08 06:05:23	FM261	RotBrk Brakepressure Fault		AF	00:00:04	00:00:04			
	21.04.08 06:06:30	21.04.08 06:07:20	FM6	WTG Manual Stop		AF	00:00:49	00:00:49			
	21.04.08 06:07:37	21.04.08 06:09:58	FM261	RotBrk Brakepressure Fault		AF	00:02:21	00:02:21			
	21.04.08 06:10:39	21.04.08 06:10:43	FM261	RotBrk Brakepressure Fault		AF	00:00:03	00:00:03			
	25.04.08 07:40:42	25.04.08 09:50:11	FM6	WTG Manual Stop	Control HACA rail	AF	02:09:30	02:09:30			
	25.04.08 09:50:12	25.04.08 09:50:47	FM11	PLC Reboot active		AF	00:00:35	00:00:35			
	25.04.08 10:44:25	25.04.08 11:06:09	FM50	SafetyChain Activated		AF	00:21:44	00:21:44			
	25.04.08 11:06:09	25.04.08 11:06:11	FM253	RotBrk AccuR_Press L Stopp		AF	00:00:02	00:00:02			
	25.04.08 11:08:06	25.04.08 11:10:50	FM4	WTG Maintenance		AF	00:02:43	00:02:43			
	25.04.08 11:10:50	25.04.08 11:19:55	FM1175	Pitch3 Batt.contactor Error		AF	00:09:05	00:09:05			
	30.04.08 01:17:13	30.04.08 01:18:28	FM411	Wind DirSlanting Stop		AF	00:01:15	00:01:15			
	30.04.08 01:19:04	30.04.08 01:39:44	FM261	RotBrk Brakepressure Fault		AF	00:20:40	00:20:40			
	30.04.08 01:40:06	30.04.08 01:40:35	FM261	RotBrk Brakepressure Fault		AF	00:00:30	00:00:30			
	30.04.08 01:41:35	30.04.08 06:08:14	FM261	RotBrk Brakepressure Fault		AF	04:26:40	04:26:40			
	30.04.08 06:08:31	30.04.08 06:08:32	FM261	RotBrk Brakepressure Fault		AF	00:00:01	00:00:01			
	30.04.08 11:49:22	30.04.08 11:50:34	FM411	Wind DirSlanting Stop		AF	00:01:13	00:01:13			
							58.11				

	Status start	Status end	Status code	Error identification according to turbine controller	memo	A-Code	Duration	T _{stop}	T _{fm}	T _{fm Grid}	T _{fm Maintenance}
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Sum	2d09:43:41	00:23:10	00:00:00	00:00:00
	57.73	0.39	0	0

04WEA8386

05.04.08 11:11:10	05.04.08 11:12:27	FM411	Wind DirSlanting Stop		AF	00:01:17	00:01:17			
06.04.08 11:16:39	06.04.08 11:39:48	FM1003	Yaw CableRewind		NAF	00:23:09		00:23:09		
11.04.08 12:23:54	11.04.08 12:25:11	FM411	Wind DirSlanting Stop		AF	00:01:17	00:01:17			
11.04.08 12:33:35	11.04.08 12:34:53	FM411	Wind DirSlanting Stop		AF	00:01:18	00:01:18			
11.04.08 13:18:32	11.04.08 13:19:48	FM411	Wind DirSlanting Stop		AF	00:01:16	00:01:16			
11.04.08 13:34:18	11.04.08 13:35:40	FM411	Wind DirSlanting Stop		AF	00:01:21	00:01:21			
12.04.08 11:29:03	12.04.08 11:30:19	FM411	Wind DirSlanting Stop		AF	00:01:15	00:01:15			
12.04.08 12:00:34	12.04.08 12:01:51	FM411	Wind DirSlanting Stop		AF	00:01:17	00:01:17			
12.04.08 13:05:45	12.04.08 13:06:59	FM411	Wind DirSlanting Stop		AF	00:01:15	00:01:15			
14.04.08 12:25:49	14.04.08 12:27:03	FM411	Wind DirSlanting Stop		AF	00:01:13	00:01:13			
15.04.08 16:05:51	15.04.08 16:07:08	FM411	Wind DirSlanting Stop		AF	00:01:18	00:01:18			
17.04.08 10:34:06	17.04.08 10:35:22	FM411	Wind DirSlanting Stop		AF	00:01:15	00:01:15			
17.04.08 11:15:04	17.04.08 11:16:24	FM411	Wind DirSlanting Stop		AF	00:01:20	00:01:20			
17.04.08 13:29:59	17.04.08 13:31:14	FM411	Wind DirSlanting Stop		AF	00:01:16	00:01:16			
18.04.08 13:12:50	18.04.08 13:42:59	FM6	WTG Manual Stop	modification on flashlight	AF	00:30:09	00:30:09			
21.04.08 03:37:46	21.04.08 03:39:22	FM411	Wind DirSlanting Stop		AF	00:01:36	00:01:36			
22.04.08 22:28:54	22.04.08 22:52:04	FM1003	Yaw CableRewind		NAF	00:23:09		00:23:09		
25.04.08 11:21:35	25.04.08 13:29:57	FM6	WTG Manual Stop	Control HACA rail	AF	02:08:22	02:08:22			
26.04.08 12:48:58	26.04.08 12:50:18	FM411	Wind DirSlanting Stop		AF	00:01:20	00:01:20			
28.04.08 16:56:23	28.04.08 16:57:39	FM411	Wind DirSlanting Stop		AF	00:01:17	00:01:17			
29.04.08 22:40:14	29.04.08 22:41:19	FM1201	MI class A Fault		AF	00:01:05	00:01:05			
29.04.08 22:41:19	29.04.08 23:03:26	FM104	Gen Rpm H Stop		AF	00:22:07	00:22:07			
30.04.08 01:17:44	30.04.08 01:18:59	FM411	Wind DirSlanting Stop		AF	00:01:15	00:01:15			
30.04.08 11:53:03	30.04.08 11:54:17	FM411	Wind DirSlanting Stop		AF	00:01:14	00:01:14			

4.19				
Sum	03:25:05	00:46:19	00:00:00	00:00:00
	3.42	0.77	0	0

NAF: non availability failure
AF: availability failure
GE: Grid Error
M: Maintenance

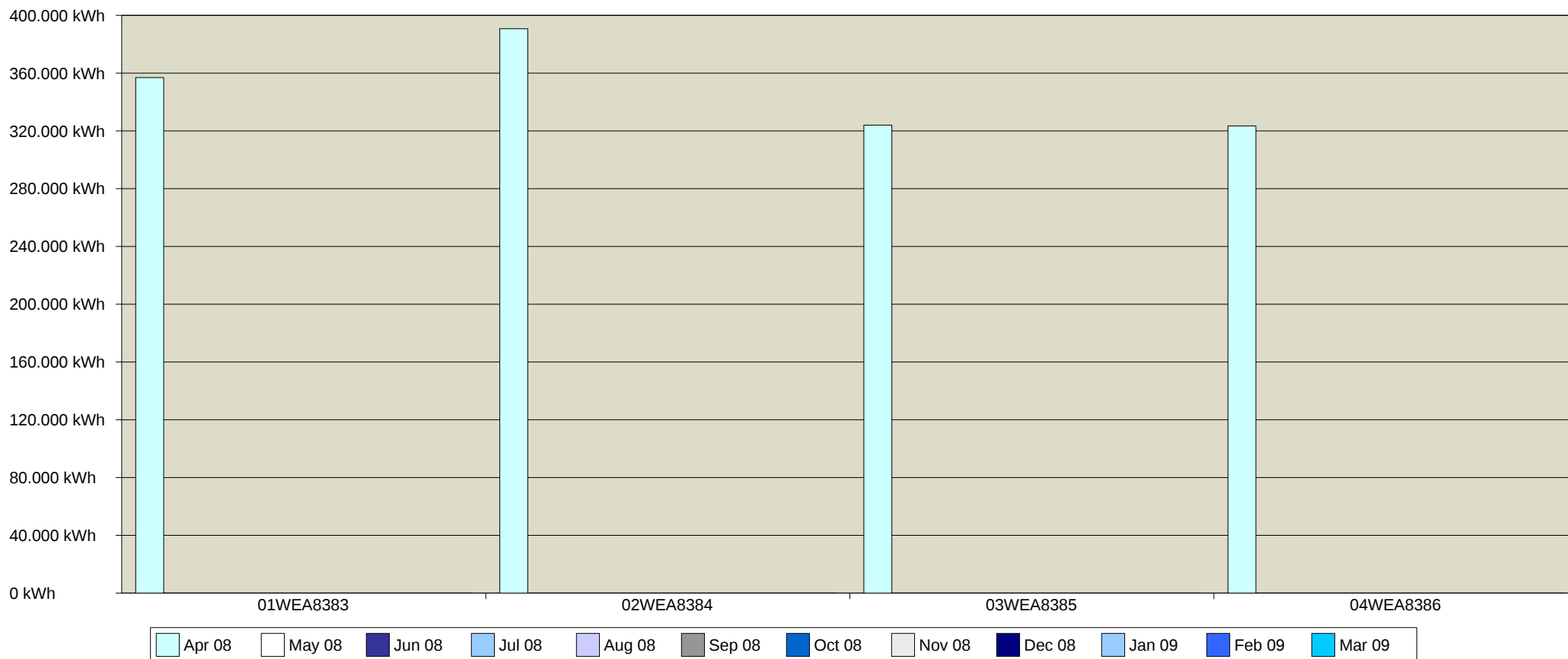
3.1 Production: WTG / month in kWh

Wind farm: **LEHAUCOURT**
Type of turbine: **N90**

Customer: **SNET**
Number of wind turbines: **4**

Business year: **04.2008 - 03.2009**
Reporting period: **04.2008**

	Apr 08	May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08	Nov 08	Dec 08	Jan 09	Feb 09	Mar 09	Σ Apr-Mar
01WEA8383	356.920 kWh												356.920
02WEA8384	390.742 kWh												390.742
03WEA8385	323.995 kWh												323.995
04WEA8386	323.455 kWh												323.455
Σ WTG	1.395.112												1.395.112



3.2 Amount

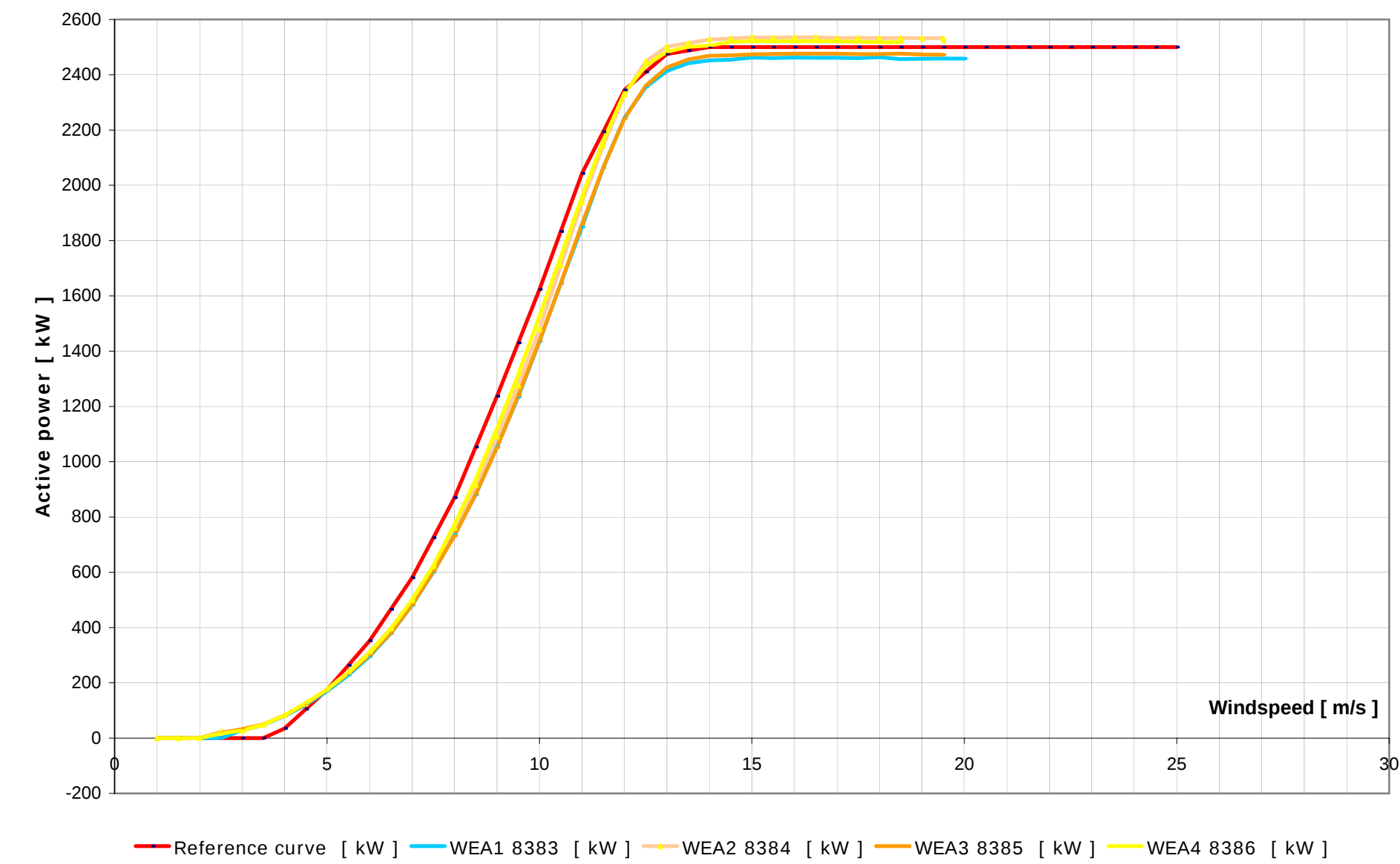
Wind farm: **LEHAUCOURT**
Type of turbine: **N90**

Customer: **SNET**
Number of wind turbines: **4**

Business year: **04.2008 - 03.2009**
Reporting period: **04.2008**

Content	Production in kWh	Net amount	Amount incl. VAT
Production wind farm according to control in reporting period	1.395.112	117.189,41 €	140.158,53 €
Production according to invoicing of energy supply company in reporting period	0	0 €	0 €
Net payment [€ / kWh]	0.084 €	Difference between data from the wind turbines and data from the energy supply company in percent	100 %

COURBE DE PUISSANCE PAR TURBINE



Source: SCADA Farm Server