

- 1 Q. **Re Upgrade Gas Turbine Plant Life Extension - Hardwoods, page B-2**
- 2 Give particulars of all unplanned outages arising from failures of the Hardwoods gas
- 3 turbine.
- 4
- 5
- 6 A. Available data from 1991 until present is attached.

Hardwoods Forced Outages 1991 - Present
Information Supplied by ECC Aug 27/09

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Unit	Start Date	Finish Date	CEA State Code	CEA Outage Code	Comment
HWDT	1991/04/26 15:04	1991/04/29 10:18	21 (1)-FO-1 : Forced Outage - Sudden	(49243) Clutch	
HWDT	1991/10/30 15:50	1991/10/30 16:34	21 (1)-FO-1 : Forced Outage - Sudden	(49243) Clutch	
HWDT	2007/10/12 12:40	2007/10/12 13:06	21 (1)-FO-1 : Forced Outage - Sudden	(49270) Starting System	Tripped during start.
HWDT	2007/12/03 0:16	2007/12/03 8:21	21 (1)-FO-1 : Forced Outage - Sudden	(49100) Combustion Turbine	UNIT TRIPPED AT 20MW.
HWDT	1998/10/27 8:29	1998/10/27 8:40	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1991/10/30 16:40	1991/10/30 16:54	21 (1)-FO-1 : Forced Outage - Sudden	(49243) Clutch	
HWDT	1992/06/10 15:32	1992/06/10 15:43	21 (1)-FO-1 : Forced Outage - Sudden	(49243) Clutch	
HWDT	2008/04/11 14:19	2008/04/11 16:23	21 (1)-FO-1 : Forced Outage - Sudden	(49270) Starting System	
HWDT	1996/07/12 18:31	1996/07/12 20:39	21 (1)-FO-1 : Forced Outage - Sudden	(49100) Combustion Turbine	
HWDT	1991/11/26 10:42	1991/11/26 11:56	21 (1)-FO-1 : Forced Outage - Sudden	(49243) Clutch	
HWDT	2008/07/01 0:16	2008/07/01 1:26	21 (1)-FO-1 : Forced Outage - Sudden	(49101) Combustion Turbine © Exhaust Emission	
HWDT	2008/04/24 7:20	2008/04/24 7:30	21 (1)-FO-1 : Forced Outage - Sudden	(49270) Starting System	GGA Failed to start.
HWDT	2002/07/22 11:11		21 (1)-FO-1 : Forced Outage - Sudden	(49890) Electrical Distribution System	
HWDT	1997/04/02 10:47	1997/04/02 11:09	21 (1)-FO-1 : Forced Outage - Sudden	(49321) External Cooling Air System	
HWDT	1991/11/26 8:18	1991/11/26 9:19	21 (1)-FO-1 : Forced Outage - Sudden	(49800) Generator	
HWDT	2008/04/14 15:23	2008/04/14 21:32	21 (1)-FO-1 : Forced Outage - Sudden	(49800) Generator	Mech seal Fuel pump.
HWDT	2007/12/14 15:45	2007/12/14 15:54	21 (1)-FO-1 : Forced Outage - Sudden	(99999) Other	Fuel Valve Closed
HWDT	1998/01/14 9:44	1998/01/14 10:30	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	2008/02/29 22:34	2008/02/29 23:04	21 (1)-FO-1 : Forced Outage - Sudden	(49311) Internal Cooling and Seal Air System and Seals	Oil/bearing high temp alarm
HWDT	2002/03/18 14:58	2002/03/18 19:38	21 (1)-FO-1 : Forced Outage - Sudden	(49280) Battery and Charger System	DC Ground.
HWDT	1998/04/29 12:03	1998/04/29 12:35	21 (1)-FO-1 : Forced Outage - Sudden	(49101) Combustion Turbine © Exhaust Emission	
HWDT	1991/10/30 16:56	1991/10/30 17:37	21 (1)-FO-1 : Forced Outage - Sudden	(49243) Clutch	
HWDT	2007/08/21 17:45	2007/08/21 22:06	21 (1)-FO-1 : Forced Outage - Sudden	(49100) Combustion Turbine	GGA TRIP DURING TEST
HWDT	2000/12/24 11:48	2000/12/24 12:56	21 (1)-FO-1 : Forced Outage - Sudden	(49811) Generator Bearings	
HWDT	1991/10/06 14:07	1991/10/06 14:45	21 (1)-FO-1 : Forced Outage - Sudden	(49243) Clutch	
HWDT	2007/03/09 6:30	2007/03/09 6:58	21 (1)-FO-1 : Forced Outage - Sudden	(49314) Fuel Supply System to Unit	GGB trip.
HWDT	1991/10/29 21:45	1991/10/29 23:00	21 (1)-FO-1 : Forced Outage - Sudden	(49243) Clutch	
HWDT	1999/12/01 1:49	1999/12/01 2:09	21 (1)-FO-1 : Forced Outage - Sudden	(49319) Cooling Water System	
HWDT	1999/12/07 2:21	1999/12/07 3:30	21 (1)-FO-1 : Forced Outage - Sudden	(49317) Lubrication System	
HWDT	2007/02/14 11:09	2007/02/15 23:31	21 (1)-FO-1 : Forced Outage - Sudden	(49314) Fuel Supply System to Unit	
HWDT	2000/03/11 9:12	2000/03/11 9:13	21 (1)-FO-1 : Forced Outage - Sudden	(49243) Clutch	
HWDT	1999/09/20 21:51	1999/09/20 23:06	21 (1)-FO-1 : Forced Outage - Sudden	(49870) Automatic Synchronizing Equipment	
HWDT	2006/11/29 15:10	2006/11/29 16:09	21 (1)-FO-1 : Forced Outage - Sudden	(49314) Fuel Supply System to Unit	
HWDT	2000/06/20 8:44	2000/06/20 10:14	21 (1)-FO-1 : Forced Outage - Sudden	(49253) Intercoolers	
HWDT	2000/12/15 18:58	2000/12/16 11:50	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1992/11/01 9:03	1992/11/01 11:02	21 (1)-FO-1 : Forced Outage - Sudden	(49294) Exhaust Hood/Doors	
HWDT	1992/10/01 14:25	1992/10/01 18:44	21 (1)-FO-1 : Forced Outage - Sudden	(49294) Exhaust Hood/Doors	
HWDT	2000/11/07 1:25	2000/11/07 3:13	21 (1)-FO-1 : Forced Outage - Sudden	(49900) Controls and Instrumentation	
HWDT	1991/10/28 13:59	1991/10/28 15:01	21 (1)-FO-1 : Forced Outage - Sudden	(49243) Clutch	
HWDT	2000/03/03 11:24	2000/03/03 11:25	21 (1)-FO-1 : Forced Outage - Sudden	(49243) Clutch	
HWDT	2007/07/20 22:31	2007/07/21 11:54	21 (1)-FO-1 : Forced Outage - Sudden	(49100) Combustion Turbine	GGB Trip alarm
HWDT	2007/07/19 9:09	2007/07/20 21:47	21 (1)-FO-1 : Forced Outage - Sudden	(49800) Generator	Vibration
HWDT	2006/09/20 13:22	2006/09/20 21:22	21 (1)-FO-1 : Forced Outage - Sudden	(49253) Intercoolers	Glycol System
HWDT	1999/04/08 14:15	1999/04/08 22:06	21 (1)-FO-1 : Forced Outage - Sudden	(49316) Ignition System	

Hardwoods Forced Outages 1991 - Present

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Unit	Start_Date	Finish_Date	CEA State Code	CEA Outage Code	Comment
HWDT	1999/04/09 14:17	1999/04/09 14:42	21 (1)-FO-1 : Forced Outage - Sudden	(99999) Other	
HWDT	2007/03/10 9:12	2007/03/10 9:47	21 (1)-FO-1 : Forced Outage - Sudden	(49314) Fuel Supply System to Unit	GGB Trip
HWDT	1999/04/16 13:00	1999/04/16 13:18	21 (1)-FO-1 : Forced Outage - Sudden	(49316) Ignition System	
HWDT	2007/08/09 14:10	2007/08/10 12:51	21 (1)-FO-1 : Forced Outage - Sudden	(49314) Fuel Supply System to Unit	Fuel Leak GGA/GGB U/A
HWDT	1993/08/19 9:14	1993/08/19 14:29	21 (1)-FO-1 : Forced Outage - Sudden	(49317) Lubrication System	
HWDT	1999/06/01 15:03	1999/06/01 15:35	21 (1)-FO-1 : Forced Outage - Sudden	(49317) Lubrication System	
HWDT	2007/04/04 14:41	2007/04/04 14:54	21 (1)-FO-1 : Forced Outage - Sudden	(49800) Generator	
HWDT	2001/08/22 11:36	2001/08/22 11:46	21 (1)-FO-1 : Forced Outage - Sudden	(49900) Controls and Instrumentation	Unknown which Aux code to use
HWDT	2007/03/15 18:30	2007/03/16 14:00	21 (1)-FO-1 : Forced Outage - Sudden	(49314) Fuel Supply System to Unit	
HWDT	2001/07/25 10:03	2001/07/25 11:21	21 (1)-FO-1 : Forced Outage - Sudden	(49317) Lubrication System	
HWDT	1999/04/16 10:25	1999/04/16 10:43	21 (1)-FO-1 : Forced Outage - Sudden	(49314) Fuel Supply System to Unit	
HWDT	1994/08/22 10:04	1994/08/22 10:12	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	2006/01/23 13:59	2006/01/23 14:30	21 (1)-FO-1 : Forced Outage - Sudden	(49101) Combustion Turbine @ Exhaust Emission	
HWDT	1994/08/16 7:05	1994/08/16 10:48	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/08/16 12:06	1994/08/16 12:16	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/08/16 12:17	1994/08/16 12:34	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/08/19 10:29	1994/08/19 11:52	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/08/20 12:06	1994/08/20 12:34	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/08/21 5:38	1994/08/21 5:48	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/08/21 5:49	1994/08/21 7:14	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/08/15 21:35	1994/08/15 21:44	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/08/22 1:57	1994/08/22 2:08	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/08/15 9:48	1994/08/15 14:03	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/08/22 10:35	1994/08/22 10:43	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/08/23 6:55	1994/08/23 7:02	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/08/24 14:26	1994/08/24 14:38	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/08/25 19:55	1994/08/25 20:10	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/08/29 20:06	1994/08/29 22:22	21 (1)-FO-1 : Forced Outage - Sudden	(49910) Governing Systems	
HWDT	1994/09/06 9:36	1994/09/06 9:48	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/10/12 13:46	1994/10/12 16:18	21 (1)-FO-1 : Forced Outage - Sudden	(49243) Clutch	
HWDT	1993/08/17 10:13	1993/08/17 17:01	21 (1)-FO-1 : Forced Outage - Sudden	(49317) Lubrication System	
HWDT	1994/08/22 1:34	1994/08/22 1:47	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	2006/01/23 10:48	2006/01/23 11:36	21 (1)-FO-1 : Forced Outage - Sudden	(49317) Lubrication System	
HWDT	1994/03/01 8:15	1994/03/01 15:19	21 (1)-FO-1 : Forced Outage - Sudden	(49318) Lubrication System @ Power Turbine (If Separate)	
HWDT	2005/09/16 9:58	2005/09/16 10:25	21 (1)-FO-1 : Forced Outage - Sudden	(49920) Combustion Turbine Controls and Instrumentation	TRIPPED/MASTER CONTROL SWITCH
HWDT	2005/09/20 15:33	2005/09/20 15:46	21 (1)-FO-1 : Forced Outage - Sudden	(49920) Combustion Turbine Controls and Instrumentation	G1T5 TRIPPED/ALARM AT 19MW
HWDT	2009/04/30 17:07	2009/04/30 21:11	21 (1)-FO-1 : Forced Outage - Sudden	(49322) Service Air Systems	
HWDT	1994/02/09 7:15	1994/02/09 8:36	21 (1)-FO-1 : Forced Outage - Sudden	(49294) Exhaust Hood/Doors	
HWDT	1994/04/02 22:21	1994/04/03 9:30	21 (1)-FO-1 : Forced Outage - Sudden	(49243) Clutch	
HWDT	2006/01/13 13:19	2006/01/16 16:36	21 (1)-FO-1 : Forced Outage - Sudden	(49950) Fuel Management Controls and Instrumentation	GGA U/A - FUEL LEAK
HWDT	1994/05/10 10:15	1994/05/10 10:46	21 (1)-FO-1 : Forced Outage - Sudden	(49980) Auxiliaries Controls and Instrumentation	
HWDT	1994/08/16 0:31	1994/08/16 7:04	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/10/24 9:12	1994/11/04 12:28	21 (1)-FO-1 : Forced Outage - Sudden	(49100) Combustion Turbine	
HWDT	1994/07/25 11:33	1994/07/25 15:39	21 (1)-FO-1 : Forced Outage - Sudden	(49820) Generator Stator	
HWDT	1994/08/03 7:59	1994/08/03 8:20	21 (1)-FO-1 : Forced Outage - Sudden	(49800) Generator	

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Unit	Start_Date	Finish_Date	CEA State Code	CEA Outage Code	Comment
HWDT	1994/08/11 6:55	1994/08/11 8:18	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/08/11 10:08	1994/08/11 10:15	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/08/12 20:11	1994/08/12 22:58	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/08/12 23:01	1994/08/13 0:38	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/08/14 20:58	1994/08/14 21:47	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	1994/08/15 4:22	1994/08/15 7:08	21 (1)-FO-1 : Forced Outage - Sudden	(49940) Generator Controls and Instrumentation	
HWDT	2008/09/18 10:25	2008/09/18 20:28	21 (1)-FO-1 : Forced Outage - Sudden	(49243) Clutch	
HWDT	2008/11/25 13:32	2008/11/25 15:44	21 (1)-FO-1 : Forced Outage - Sudden	(49100) Combustion Turbine	
HWDT	2006/02/23 19:43	2006/02/24 0:34	21 (1)-FO-1 : Forced Outage - Sudden	(49900) Controls and Instrumentation	
HWDT	2008/11/10 16:22	2008/11/10 21:32	21 (1)-FO-1 : Forced Outage - Sudden	(49811) Generator Bearings	
HWDT	2008/10/21 23:50	2008/10/22 20:12	21 (1)-FO-1 : Forced Outage - Sudden	(49280) Battery and Charger System	DC GROUND
HWDT	1992/04/12 16:32	1992/04/12 17:34	21 (1)-FO-1 : Forced Outage - Sudden	(49243) Clutch	
HWDT	2006/02/25 17:19	2006/02/25 17:30	21 (1)-FO-1 : Forced Outage - Sudden	(49850) Synchronous Condenser Equipment	Condenser Trip
HWDT	1993/09/13 11:09	1993/09/14 13:35	21 (1)-FO-1 : Forced Outage - Sudden	(49321) External Cooling Air System	
HWDT	1991/11/26 15:00	1991/11/27 13:34	21 (1)-FO-1 : Forced Outage - Sudden	(49293) Exhaust Stack and Silencer	
HWDT	2006/02/23 17:32	2006/02/25 17:52	21 (1)-FO-1 : Forced Outage - Sudden	(49850) Synchronous Condenser Equipment	Condenser Trip
HWDT	2008/12/04 20:54	2008/12/04 21:14	21 (1)-FO-1 : Forced Outage - Sudden	(49270) Starting System	Gen Trip Alarm
HWDT	1999/02/20 13:13	1999/02/21 20:46	21 (1)-FO-1 : Forced Outage - Sudden	(49280) Battery and Charger System	DC GROUND
HWDT	2006/02/25 19:24	2006/02/26 15:20	21 (1)-FO-1 : Forced Outage - Sudden	(49243) Clutch	
HWDT	2006/11/16 16:00	2006/11/16 21:24	21 (1)-FO-1 : Forced Outage - Sudden	(49293) Exhaust Stack and Silencer	Deflector ring
HWDT	2006/03/16 13:32	2006/03/16 15:10	21 (1)-FO-1 : Forced Outage - Sudden	(49850) Synchronous Condenser Equipment	sync condense tripped
HWDT	1993/08/12 8:15	1993/08/16 15:09	21 (1)-FO-1 : Forced Outage - Sudden	(49317) Lubrication System	
HWDT	1991/12/11 16:43	1991/12/11 18:15	21 (1)-FO-1 : Forced Outage - Sudden	(49243) Clutch	
HWDT	2006/03/18 22:06	2006/03/20 18:03	21 (1)-FO-1 : Forced Outage - Sudden	(49317) Lubrication System	
HWDT	1996/06/10 8:49	1996/06/10 9:05	21 (1)-FO-1 : Forced Outage - Sudden	(49812) Generator Lubrication System	
HWDT	2003/08/13 12:57	2003/08/13 13:22	21 (1)-FO-1 : Forced Outage - Sudden	(49243) Clutch	
HWDT	2009/02/19 6:56	2009/02/19 8:39	21 (1)-FO-1 : Forced Outage - Sudden	(99999) Other	
HWDT	2009/04/13 2:21	2009/04/13 4:56	21 (1)-FO-1 : Forced Outage - Sudden	(99999) Other	Sump Alarm
HWDT	2006/01/23 22:08	2006/01/23 22:10	21 (1)-FO-1 : Forced Outage - Sudden	(49315) Unit Fuel Controls and Conditioning	
HWDT	1993/11/24 17:34	1993/11/24 18:58	21 (1)-FO-1 : Forced Outage - Sudden	(49100) Combustion Turbine	
HWDT	1994/12/12 0:29	1994/12/12 1:36	21 (1)-FO-1 : Forced Outage - Sudden	(49811) Generator Bearings	
HWDT	2008/11/25 11:45	2008/11/25 13:12	21 (1)-FO-1 : Forced Outage - Sudden	(49100) Combustion Turbine	
HWDT	2008/12/25 17:14	2008/12/26 10:16	21 (1)-FO-1 : Forced Outage - Sudden	(49980) Auxiliaries Controls and Instrumentation	Generator Sump Alarm
HWDT	1993/11/02 16:23	1993/11/02 17:54	21 (1)-FO-1 : Forced Outage - Sudden	(49317) Lubrication System	
HWDT	2009/01/26 6:45	2009/01/26 9:26	21 (1)-FO-1 : Forced Outage - Sudden	(49100) Combustion Turbine	
HWDT	1995/04/09 8:34	1995/09/17 14:35	21 (1)-FO-1 : Forced Outage - Sudden	(49810) Generator Rotor	
HWDT	2004/11/20 22:58	2004/11/22 8:36	21 (1)-FO-1 : Forced Outage - Sudden	(49319) Cooling Water System	Cooling system fault alarm.
HWDT	1993/10/26 17:49	1993/10/26 19:23	21 (1)-FO-1 : Forced Outage - Sudden	(49243) Clutch	
HWDT	2006/02/08 23:49	2006/02/10 16:08	21 (1)-FO-1 : Forced Outage - Sudden	(49322) Service Air Systems	
HWDT	2006/02/20 13:06	2006/02/20 16:17	21 (1)-FO-1 : Forced Outage - Sudden	(49314) Fuel Supply System to Unit	Tripped at 9 MW
HWDT	2006/02/21 13:10	2006/02/21 13:51	21 (1)-FO-1 : Forced Outage - Sudden	(49314) Fuel Supply System to Unit	
HWDT	1995/02/13 18:56	1995/02/14 3:44	21 (1)-FO-1 : Forced Outage - Sudden	(49252) Air Filters	
HWDT	2001/03/08 20:48	2001/03/09 4:51	Deferrable	(49317) Lubrication System	
HWDT	2003/02/14 16:55	2003/02/14 17:03	Deferrable	(49311) Internal Cooling and Seal Air System and Seals	GG"A" FAIL SHUTDOWN
HWDT	2006/09/21 14:45	2006/09/22 0:39	Deferrable	(49811) Generator Bearings	

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Unit	Start_Date	Finish_Date	CEA State Code	CEA Outage Code	Comment
HWDT	1996/01/01 0:00	1996/01/01 19:31	Deferrable	(49910) Governing Systems	
HWDT	1995/11/23 6:39	1995/11/23 9:18	Deferrable	(49800) Generator	
HWDT	1999/02/22 21:48		Deferrable	(49280) Battery and Charger System	
HWDT	2005/08/23 12:49	2005/08/23 18:01	Deferrable	(49820) Generator Stator	Check Stator Ground.
HWDT	1995/12/30 19:29	1995/12/31 23:59	Deferrable	(49910) Governing Systems	
HWDT	2008/07/11 16:45	2008/07/11 17:43	Deferrable	(49800) Generator	
HWDT	1993/11/30 10:06	1993/11/30 18:51	21 (3)-FO-3 : Forced Outage - Deferrable	(49900) Controls and Instrumentation	
HWDT	1994/07/24 2:37	1994/07/24 3:24	21 (3)-FO-3 : Forced Outage - Deferrable	(49880) Voltage Control Equipment	
HWDT	1994/07/24 12:43	1994/07/24 14:36	21 (3)-FO-3 : Forced Outage - Deferrable	(49880) Voltage Control Equipment	
HWDT	2007/11/08 13:06	2007/11/08 13:28	21 (3)-FO-3 : Forced Outage - Deferrable	(49314) Fuel Supply System to Unit	
HWDT	1994/07/19 13:48	1994/07/21 22:45	21 (3)-FO-3 : Forced Outage - Deferrable	(49840) Excitation System	
HWDT	2007/06/02 9:34	2007/06/02 18:45	21 (3)-FO-3 : Forced Outage - Deferrable	(49316) Ignition System	Check Burners
HWDT	2002/05/22 13:26	2002/05/22 14:22	21 (4)-FO-4 : Forced Outage - Starting Failure	(49270) Starting System	
HWDT	1992/02/13 7:56	1992/02/13 9:47	21 (4)-FO-4 : Forced Outage - Starting Failure	(49243) Clutch	
HWDT	1997/01/22 16:41	1997/01/22 19:18	21 (4)-FO-4 : Forced Outage - Starting Failure	(49910) Governing Systems	
HWDT	2000/12/04 16:39	2000/12/04 17:19	21 (4)-FO-4 : Forced Outage - Starting Failure	(49316) Ignition System	
HWDT	1998/06/30 22:42	1998/07/01 1:41	21 (4)-FO-4 : Forced Outage - Starting Failure	(49811) Generator Bearings	
HWDT	1993/05/03 8:06	1993/05/03 9:00	21 (4)-FO-4 : Forced Outage - Starting Failure	(49294) Exhaust Hood/Doors	
HWDT	1994/05/09 17:25	1994/05/09 19:04	21 (4)-FO-4 : Forced Outage - Starting Failure	(49243) Clutch	
HWDT	1996/12/31 10:10	1996/12/31 17:00	21 (4)-FO-4 : Forced Outage - Starting Failure	(49910) Governing Systems	
HWDT	2008/07/11 15:18	2008/07/11 15:41	21 (4)-FO-4 : Forced Outage - Starting Failure	(49800) Generator	
HWDT	1996/06/11 16:24	1996/06/11 17:06	21 (4)-FO-4 : Forced Outage - Starting Failure	(49812) Generator Lubrication System	
HWDT	1996/02/26 7:01	1996/02/26 8:48	21 (4)-FO-4 : Forced Outage - Starting Failure	(49900) Controls and Instrumentation	
HWDT	1996/02/26 7:00	1996/02/26 8:48	21 (4)-FO-4 : Forced Outage - Starting Failure	(49900) Controls and Instrumentation	
HWDT	1996/02/22 6:55	1996/02/22 8:46	21 (4)-FO-4 : Forced Outage - Starting Failure	(49900) Controls and Instrumentation	
HWDT	2006/01/23 6:58	2006/01/23 7:02	21 (4)-FO-4 : Forced Outage - Starting Failure	(49316) Ignition System	
HWDT	1996/02/09 7:03	1996/02/09 8:21	21 (4)-FO-4 : Forced Outage - Starting Failure	(49840) Excitation System	
HWDT	1996/01/01 18:14	1996/01/01 19:31	21 (4)-FO-4 : Forced Outage - Starting Failure	(49980) Auxiliaries Controls and Instrumentation	SNOW DOOR FAIL TO OPEN
HWDT	1995/12/30 17:05	1995/12/30 21:31	21 (4)-FO-4 : Forced Outage - Starting Failure	(49294) Exhaust Hood/Doors	
HWDT	2009/01/08 8:12	2009/01/08 10:13	21 (4)-FO-4 : Forced Outage - Starting Failure	(49100) Combustion Turbine	
HWDT	2004/09/19 22:46	2004/09/19 23:43	21 (4)-FO-4 : Forced Outage - Starting Failure	(49319) Cooling Water System	
HWDT	1996/10/02 8:04	1996/10/02 9:19	21 (4)-FO-4 : Forced Outage - Starting Failure	(49294) Exhaust Hood/Doors	
HWDT	1991/10/16 19:31	1991/10/16 21:20	21 (4)-FO-4 : Forced Outage - Starting Failure	(49243) Clutch	
HWDT	2000/12/07 22:07	2000/12/07 22:47	21 (4)-FO-4 : Forced Outage - Starting Failure	(49316) Ignition System	
HWDT	2000/12/10 9:12	2000/12/10 11:08	21 (4)-FO-4 : Forced Outage - Starting Failure	(49317) Lubrication System	
HWDT	2000/10/10 11:52	2000/10/10 12:02	21 (4)-FO-4 : Forced Outage - Starting Failure	(49270) Starting System	
HWDT	2000/06/27 11:18	2000/06/27 11:25	21 (4)-FO-4 : Forced Outage - Starting Failure	(49270) Starting System	
HWDT	1992/11/02 8:05	1992/11/02 13:45	21 (4)-FO-4 : Forced Outage - Starting Failure	(49870) Automatic Synchronizing Equipment	
HWDT	2005/09/02 12:18	2005/09/02 13:35	21 (4)-FO-4 : Forced Outage - Starting Failure		GGA fail to start
HWDT	2000/03/11 9:18	2000/03/11 9:52	21 (4)-FO-4 : Forced Outage - Starting Failure	(49316) Ignition System	
HWDT	2000/12/24 17:00	2000/12/25 14:40	21 (4)-FO-4 : Forced Outage - Starting Failure	(49910) Governing Systems	
HWDT	2000/12/24 17:01	2000/12/25 14:40	21 (4)-FO-4 : Forced Outage - Starting Failure	(49240) Turbine Load Shaft and Bearing	END A HIGH BEARING TEMP
HWDT	2000/03/03 11:42	2000/03/03 16:23	21 (4)-FO-4 : Forced Outage - Starting Failure	(49101) Combustion Turbine © Exhaust Emission	
HWDT	1999/12/31 10:39	1999/12/31 10:49	21 (4)-FO-4 : Forced Outage - Starting Failure	(49270) Starting System	
HWDT	2002/02/13 7:36	2002/02/13 8:42	21 (4)-FO-4 : Forced Outage - Starting Failure	(49316) Ignition System	Flamed out.

Hardwoods Forced Outages 1991 - Present

Information Supplied by ECC Aug 27/09

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Attachment 1
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Unit	Start_Date	Finish_Date	CEA State Code	CEA Outage Code	Comment
HWDT	2007/03/09 4:37	2007/03/09 6:13	21 (4)-FO-4 : Forced Outage - Starting Failure	(49314) Fuel Supply System to Unit	Would not start.
HWDT	2002/01/31 8:32	2002/01/31 10:26	21 (4)-FO-4 : Forced Outage - Starting Failure	(49270) Starting System	
HWDT	1993/02/25 12:26	1993/02/25 13:35	21 (4)-FO-4 : Forced Outage - Starting Failure	(49294) Exhaust Hood/Doors	
HWDT	2007/12/21 15:11	2007/12/21 15:44	21 (4)-FO-4 : Forced Outage - Starting Failure	(49100) Combustion Turbine	UNIT FAILED TO CLUTCH IN/TRIP
HWDT	2002/01/31 8:28	2002/01/31 8:32	21 (4)-FO-4 : Forced Outage - Starting Failure	(49880) Voltage Control Equipment	
HWDT	2002/01/24 11:31	2002/01/24 13:45	21 (4)-FO-4 : Forced Outage - Starting Failure	(49270) Starting System	
HWDT	2007/11/08 12:55	2007/11/08 13:06	21 (4)-FO-4 : Forced Outage - Starting Failure	(49900) Controls and Instrumentation	
HWDT	1999/11/19 15:45	1999/11/19 15:55	21 (4)-FO-4 : Forced Outage - Starting Failure	(49940) Generator Controls and Instrumentation	
HWDT	2001/06/02 13:09	2001/06/02 17:46	21 (4)-FO-4 : Forced Outage - Starting Failure	(49317) Lubrication System	
HWDT	2007/04/03 7:19	2007/04/03 15:37	21 (4)-FO-4 : Forced Outage - Starting Failure	(49101) Combustion Turbine @ Exhaust Emission	
HWDT	1999/04/08 8:44	1999/04/08 8:45	21 (4)-FO-4 : Forced Outage - Starting Failure	(49316) Ignition System	
HWDT	1999/04/08 8:46	1999/04/08 9:10	21 (4)-FO-4 : Forced Outage - Starting Failure	(49316) Ignition System	
HWDT	1999/04/16 8:47	1999/04/16 8:56	21 (4)-FO-4 : Forced Outage - Starting Failure	(49316) Ignition System	
HWDT	2001/08/31 8:08	2001/08/31 8:17	21 (4)-FO-4 : Forced Outage - Starting Failure	(49900) Controls and Instrumentation	
HWDT	1999/06/01 16:27	1999/06/01 21:35	21 (4)-FO-4 : Forced Outage - Starting Failure	(49317) Lubrication System	
HWDT	2007/04/03 15:48	2007/04/03 15:56	21 (4)-FO-4 : Forced Outage - Starting Failure	(49101) Combustion Turbine @ Exhaust Emission	
HWDT	1999/03/15 22:08	1999/03/15 22:20	21 (4)-FO-4 : Forced Outage - Starting Failure	(49940) Generator Controls and Instrumentation	