

Q. If available, please provide the Derated Adjusted Forced Outage Rate (DAFOR - %) for the Pierre's Brook hydro plant, by year, from 2005 to 2014 Target.

A. Derated Adjusted Forced Outage Rate ("DAFOR") data for the Pierre's Brook hydro plant is not available.¹ The Canadian Electricity Association ("CEA") provides an annual report of equipment reliability information for 13 participating Canadian utilities. Newfoundland and Labrador Hydro ("Hydro") is a participating member while Newfoundland Power is not.² DAFOR data is only collected by CEA for hydroelectric units greater than 5 MW output.³

Table 1 includes the plant availability data collected by Newfoundland Power for Pierre's Brook plant.

Table 1
Pierre's Brook Plant Availability Percentages
2005 – 2014 YTD

Year	Forced Downtime	Maintenance Downtime⁴	Planned Downtime⁵	Plant Availability
2005	0.85	3.54	0.06	95.55
2006	0.40	0.08	0.10	99.42
2007	0.02	0.43	0.62	98.93
2008	1.25	0.07	0.41	98.27
2009	0.12	0.00	0.32	99.56
2010	0.53	0.17	4.71	94.59
2011	0.11	0.04	0.18	99.67
2012	0.01	2.09	0.00	97.90
2013	0.00	0.08	0.00	99.92
2014 YTD	0.00	0.14	0.00	99.86

¹ DAFOR is the ratio of equivalent forced outage time to equivalent forced outage time plus total equivalent operating time.

² For the purposes of Hydro System Planning the forced outage rate for hydro units owned by Newfoundland Power, Deer Lake Power, Exploits River and the Non-Utility Generators is based on the CEA average DAFOR rate of all reporting units in the 5 to 23 MW, or 24 to 99 MW classifications, as appropriate. For reference please see *Forced Outage Rates 2006 Update* authored by Hydro System Planning and included as Muskrat Falls Project – Exhibit 26 available on the PUB website.

³ Newfoundland Power operates 32 hydro generators in 23 plants across the Province. Only 7 of the 32 generators are large enough for inclusion in the CEA database. At 3.4 MW the Pierre's Brook generator would not be large enough for inclusion in the CEA database.

⁴ Maintenance downtime is associated with time spent maintaining the generating unit itself.

⁵ Planned downtime is associated with the plant being unavailable due to planned capital improvements to the plant, substation or transmission line.