

### Historical Wind Dispatch Down (Constraint and Curtailment) Percentages for Ireland (IE), Northern Ireland (NI) and All Island (AI)

Month	2011			2012			2013			2014			2015			2016			2017			2018			2019			2020			2021			2022			2023		
	NI	IE	AI	NI	IE	AI	NI	IE	AI	NI	IE	AI	NI	IE	AI	NI	IE	AI	NI	IE	AI	NI	IE	AI	NI	IE	AI	NI	IE	AI	NI	IE	AI	NI	IE	AI	NI	IE	AI
Jan	0.0%	0.8%	0.6%	0.5%	2.2%	1.9%	0.7%	0.4%	0.5%	2.9%	4.9%	4.5%	4.3%	4.3%	4.3%	3.4%	3.5%	3.5%	2.4%	1.9%	2.0%	5.7%	3.5%	3.9%	9.7%	3.8%	5.1%	12.3%	9.0%	9.8%	5.2%	5.3%	5.3%	8.6%	9.1%	8.9%	14.1%	9.9%	10.8%
Feb	0.0%	0.6%	0.5%	0.2%	2.8%	2.2%	0.3%	0.7%	0.6%	3.2%	3.7%	3.6%	4.6%	4.1%	4.2%	2.3%	3.3%	3.1%	2.0%	1.7%	1.7%	2.9%	2.0%	2.2%	10.7%	6.8%	7.7%	17.4%	12.3%	13.4%	11.5%	10.2%	10.5%	8.0%	8.1%	8.1%	8.3%	4.9%	5.6%
Mar	2.7%	1.8%	2.0%	0.8%	2.4%	2.0%	0.6%	0.3%	0.3%	1.8%	4.0%	3.5%	11.4%	8.0%	8.8%	0.9%	2.4%	2.1%	3.0%	3.4%	3.3%	5.9%	4.4%	4.7%	11.8%	9.2%	9.8%	14.5%	10.7%	11.4%	9.8%	12.8%	12.2%	6.0%	7.4%	7.1%	11.1%	6.1%	6.9%
Qtr1	0.7%	1.0%	0.9%	0.5%	2.4%	2.0%	0.6%	0.4%	0.5%	2.7%	4.2%	3.9%	6.9%	5.4%	5.8%	2.4%	3.2%	3.0%	2.4%	2.3%	2.4%	4.9%	3.3%	3.6%	10.8%	6.8%	7.7%	14.9%	10.9%	11.7%	9.4%	9.7%	9.6%	7.7%	8.2%	8.1%	11.3%	7.1%	7.9%
Apr	1.3%	1.2%	1.3%	0.2%	1.4%	1.2%	2.6%	4.7%	4.3%	1.8%	4.2%	3.7%	2.8%	1.8%	2.0%	0.8%	1.4%	1.3%	4.2%	3.5%	3.6%	19.2%	7.4%	9.8%	11.4%	9.0%	9.6%	21.8%	9.0%	11.8%	4.7%	2.1%	2.5%	6.5%	5.5%	5.7%	13.1%	6.0%	7.3%
May	2.2%	3.5%	3.2%	0.6%	1.6%	1.4%	3.7%	6.1%	5.6%	1.5%	2.8%	3.5%	3.8%	4.5%	4.3%	1.1%	1.2%	1.2%	3.6%	3.5%	3.5%	6.1%	4.7%	5.0%	3.8%	4.1%	4.0%	19.8%	12.6%	13.9%	10.1%	11.8%	11.5%	6.7%	10.2%	9.4%	5.5%	2.9%	3.3%
Jun	0.4%	0.8%	0.7%	0.4%	4.0%	3.3%	1.9%	3.7%	3.4%	0.6%	3.3%	2.7%	4.2%	5.0%	4.8%	0.3%	0.7%	0.7%	4.7%	3.9%	4.1%	11.0%	8.0%	8.6%	11.2%	5.6%	6.7%	26.2%	15.4%	17.5%	2.1%	2.4%	2.4%	13.1%	10.1%	10.7%	5.2%	3.3%	3.6%
Qtr2	1.6%	2.3%	2.2%	0.4%	2.2%	1.9%	2.9%	5.0%	4.6%	1.5%	3.4%	3.0%	3.7%	3.9%	3.8%	0.8%	1.2%	1.1%	4.2%	3.7%	3.8%	13.0%	6.6%	8.0%	9.4%	6.6%	7.2%	22.7%	12.7%	14.6%	6.0%	6.1%	6.1%	8.6%	8.6%	8.6%	9.2%	4.4%	5.3%
Jul	0.2%	3.3%	2.8%	0.5%	1.9%	1.6%	0.8%	4.2%	3.4%	1.6%	3.9%	3.4%	2.8%	3.8%	3.7%	6.2%	2.3%	3.1%	4.4%	2.8%	3.2%	2.1%	1.9%	2.0%	8.2%	3.8%	4.8%	12.4%	9.2%	9.8%	5.9%	0.5%	1.2%	11.4%	3.2%	5.0%	28.2%	11.5%	14.4%
Aug	0.0%	0.7%	0.5%	4.0%	4.2%	4.1%	2.4%	5.4%	4.7%	3.8%	3.5%	3.6%	5.0%	5.8%	5.6%	7.0%	4.6%	5.0%	3.1%	3.1%	2.8%	5.8%	2.2%	3.0%	15.2%	8.4%	9.8%	14.4%	11.4%	11.9%	7.0%	7.1%	7.1%	8.9%	3.5%	4.6%	19.5%	7.7%	9.9%
Sep	2.4%	3.9%	3.7%	0.4%	4.8%	3.7%	0.5%	4.2%	3.3%	0.1%	2.2%	1.8%	1.5%	2.7%	2.5%	5.8%	5.6%	5.6%	4.2%	5.4%	5.1%	13.1%	5.5%	7.4%	8.4%	8.2%	8.2%	9.0%	9.0%	9.0%	7.5%	5.5%	5.9%	8.1%	7.0%	7.2%	25.4%	11.1%	13.8%
Qtr3	1.5%	3.1%	2.8%	1.5%	3.8%	3.3%	1.3%	4.6%	3.9%	2.4%	3.3%	3.1%	3.1%	4.1%	3.9%	6.3%	4.4%	4.8%	3.9%	3.9%	3.9%	8.7%	3.6%	4.8%	11.0%	7.3%	8.0%	11.6%	9.8%	10.2%	7.1%	5.1%	5.4%	9.4%	4.8%	5.8%	24.3%	10.1%	12.7%
Oct	2.4%	4.7%	4.3%	0.0%	0.3%	0.2%	1.6%	5.9%	5.0%	4.5%	8.2%	7.4%	4.2%	3.8%	3.9%	1.9%	1.8%	1.8%	14.6%	9.2%	10.6%	10.2%	6.9%	7.7%	7.4%	6.4%	6.6%	12.4%	13.9%	13.6%	9.7%	8.0%	8.4%	13.8%	11.8%	12.2%	27.4%	8.9%	13.2%
Nov	1.2%	2.3%	2.1%	0.1%	1.0%	0.8%	4.0%	3.0%	3.2%	2.0%	3.2%	3.0%	6.9%	6.8%	6.9%	2.7%	1.0%	1.3%	3.2%	2.5%	2.6%	10.2%	5.2%	6.4%	7.4%	3.9%	4.5%	12.8%	13.4%	13.3%	6.4%	6.1%	6.2%	11.3%	9.3%	9.7%			
Dec	0.7%	2.2%	1.9%	0.8%	2.8%	2.5%	2.0%	4.4%	3.8%	4.5%	5.0%	4.9%	6.2%	6.3%	6.3%	3.8%	3.1%	3.3%	5.3%	2.5%	3.1%	14.9%	7.2%	8.9%	16.2%	9.6%	11.0%	9.8%	9.7%	9.7%	6.4%	5.4%	5.6%	10.0%	7.5%	7.9%			
Qtr4	1.4%	2.9%	2.6%	0.4%	1.6%	1.4%	2.4%	4.5%	4.0%	3.9%	5.7%	5.3%	6.1%	6.0%	6.0%	3.0%	2.1%	2.3%	8.5%	4.9%	5.7%	11.7%	6.4%	7.7%	11.1%	6.9%	7.8%	11.6%	12.3%	12.2%	7.5%	6.4%	6.6%	11.9%	9.7%	10.1%	27.4%	8.9%	13.2%
Year Total DD	1.3%	2.4%	2.2%	0.7%	2.5%	2.1%	1.9%	3.5%	3.2%	2.8%	4.4%	4.1%	5.3%	5.1%	5.1%	3.2%	2.8%	2.9%	5.0%	3.7%	4.0%	9.4%	5.0%	6.0%	10.7%	6.9%	7.7%	14.8%	11.4%	12.1%	7.8%	7.3%	7.4%	9.4%	8.3%	8.5%	16.6%	7.6%	9.3%
Constraints	0.3%	0.5%	0.4%	0.3%	0.9%	0.8%	0.5%	1.0%	0.9%	1.0%	1.5%	1.4%	1.9%	1.8%	1.8%	1.3%	1.4%	1.4%	1.9%	1.0%	1.2%	4.0%	1.7%	2.2%	4.7%	3.8%	4.0%	6.6%	6.1%	6.2%	4.2%	4.5%	4.4%	5.8%	4.8%	5.0%	13.2%	4.2%	5.9%
Curtailments	1.1%	2.0%	1.8%	0.4%	1.5%	1.3%	1.3%	2.5%	2.3%	1.8%	2.9%	2.6%	3.4%	3.3%	3.3%	1.9%	1.4%	1.5%	3.1%	2.6%	2.7%	5.4%	3.3%	3.8%	6.0%	3.1%	3.7%	8.2%	5.3%	5.9%	3.6%	2.8%	3.0%	3.6%	3.5%	3.5%	3.3%	3.4%	3.4%
Wind Installed Capacity (MW)	512	1,585	2,097	600	1,703	2,303	640	1,923	2,563	729	2,266	2,996	751	2,447	3,198	943	2,795	3,737	1,154	3,312	4,466	1,276	3,667	4,943	1,276	4,120	5,396	1,276	4,300	5,576	1,351	4,332	5,683	1,351	4,527	5,878			
Wind Generation (GWh)	943	4,256	5,198	1,020	4,102	5,122	1,259	4,642	5,901	1,453	5,116	6,568	1,803	6,537	8,339	1,725	6,115	7,840	2,051	7,229	9,280	2,391	8,685	11,076	2,462	9,532	11,994	2,630	11,138	13,768	2,168	9,527	11,695	2,781	10,895	13,676			
Wind Capacity Factors	21%	31%	28%	21%	28%	27%	23%	29%	28%	24%	28%	27%	28%	32%	31%	23%	27%	26%	22%	27%	26%	22%	28%	27%	22%	28%	26%	24%	30%	29%	19%	25%	24%	24%	28%	27%			
SNSP Limit	50%			50%			50%			50%			55% Trial from Oct			55% Perm from Mar 60% Trial from Nov			60% Perm from Mar 65% Trial from Nov			65% Perm from Apr			65%			65%			70% Trial from Jan 70% Perm from Apr 75% Trial from Apr			75% Perm from Apr			75%		

**Notes:**

"Dispatch Down" consists of constraints + curtailments. All wind figures included (controllable + non-controllable).  
 The darker shaded cells indicate higher dispatch-down percentages in order to produce a graphical representation similar to a heat map.  
 A more accurate methodology for calculating wind dispatch down was implemented from 2016. Figures from previous years are best estimates.  
 Wind installed capacities, generation and capacity factors are indicative and based on the latest available information.  
 SNSP (System Non-Synchronous Penetration) is the sum of non-synchronous generation (such as wind, solar and HVDC imports) as a percentage of total demand and exports.  
 When the SNSP limit is raised, a trial period takes place before it becomes permanent. During the trial period, the system is operated at this increased SNSP limit except in times of extreme system events or during system testing.  
 For more information see our annual and monthly dispatch down reports on: <http://www.eirgridgroup.com/how-the-grid-works/renewables/> or: <https://www.soni.ltd.uk/how-the-grid-works/renewables/>

		2022																	
		Jan	Feb	Mar	Qtr1	Apr	May	Jun	Qtr2	Jul	Aug	Sep	Qtr3	Oct	Nov	Dec	Qtr4	2022	
Wind	AI	Dispatch Down	8.9%	8.1%	7.1%	8.1%	5.7%	9.4%	10.7%	8.6%	5.0%	4.6%	7.2%	5.8%	12.2%	9.7%	7.9%	10.1%	8.5%
		Constraints	1.6%	4.1%	4.4%	3.4%	3.4%	7.7%	10.2%	7.0%	4.6%	4.5%	5.6%	4.9%	6.4%	6.4%	2.1%	5.2%	5.0%
		Curtailments	7.3%	4.0%	2.7%	4.7%	2.3%	1.7%	0.6%	1.6%	0.4%	0.2%	1.7%	0.8%	5.8%	3.3%	5.8%	4.9%	3.5%
	IE	Dispatch Down	9.1%	8.1%	7.4%	8.2%	5.5%	10.2%	10.1%	8.6%	3.2%	3.5%	7.0%	4.8%	11.8%	9.3%	7.5%	9.7%	8.3%
		Constraints	1.7%	4.4%	4.8%	3.7%	3.1%	8.6%	9.6%	7.1%	2.7%	3.3%	5.3%	3.9%	6.1%	5.9%	1.7%	4.8%	4.8%
		Curtailments	7.3%	3.8%	2.6%	4.5%	2.4%	1.6%	0.5%	1.5%	0.4%	0.2%	1.8%	0.9%	5.7%	3.4%	5.8%	4.9%	3.5%
	NI	Dispatch Down	8.6%	8.0%	6.0%	7.7%	6.5%	6.7%	13.1%	8.6%	11.4%	8.9%	8.1%	9.4%	13.8%	11.3%	10.0%	11.9%	9.4%
		Constraints	1.2%	2.9%	2.9%	2.4%	4.4%	4.6%	12.2%	6.9%	11.3%	8.8%	6.9%	8.9%	7.8%	8.4%	4.1%	7.1%	5.8%
		Curtailments	7.4%	5.1%	3.2%	5.3%	2.1%	2.1%	0.9%	1.7%	0.1%	0.1%	1.2%	0.5%	6.0%	2.9%	5.9%	4.8%	3.6%

		2023																	
		Jan	Feb	Mar	Qtr1	Apr	May	Jun	Qtr2	Jul	Aug	Sep	Qtr3	Oct	Nov	Dec	Qtr4	2023	
Wind	AI	Dispatch Down	10.8%	5.6%	6.9%	7.9%	7.3%	3.3%	3.6%	5.3%	14.4%	9.9%	13.8%	12.7%	13.2%			13.2%	9.3%
		Constraints	4.3%	3.6%	3.8%	3.9%	4.2%	2.9%	3.1%	3.5%	9.4%	7.8%	8.9%	8.7%	10.1%			10.1%	5.9%
		Curtailments	6.5%	2.0%	3.1%	4.0%	3.1%	0.4%	0.5%	1.7%	4.9%	2.2%	4.9%	4.0%	3.1%			3.1%	3.4%
	IE	Dispatch Down	9.9%	4.9%	6.1%	7.1%	6.0%	2.9%	3.3%	4.4%	11.5%	7.7%	11.1%	10.1%	8.9%			8.9%	7.6%
		Constraints	3.4%	2.8%	3.2%	3.1%	3.1%	2.4%	2.8%	2.9%	6.8%	5.5%	5.7%	6.0%	5.3%			5.3%	4.2%
		Curtailments	6.6%	2.1%	2.9%	4.0%	2.8%	0.4%	0.5%	1.6%	4.7%	2.2%	5.4%	4.1%	3.6%			3.6%	3.4%
	NI	Dispatch Down	14.1%	8.3%	11.1%	11.3%	13.1%	5.5%	5.2%	9.2%	28.2%	19.5%	25.4%	24.3%	27.4%			27.4%	16.6%
		Constraints	7.9%	6.5%	6.9%	7.2%	8.6%	5.2%	4.7%	6.8%	22.0%	17.4%	22.8%	20.7%	25.6%			25.6%	13.2%
		Curtailments	6.2%	1.8%	4.2%	4.1%	4.5%	0.3%	0.5%	2.4%	6.2%	2.1%	2.6%	3.6%	1.8%			1.8%	3.3%

		2022																	
		Jan	Feb	Mar	Qtr1	Apr	May	Jun	Qtr2	Jul	Aug	Sep	Qtr3	Oct	Nov	Dec	Qtr4	2022	
Solar	NI	Dispatch Down	3.5%	2.8%	4.5%	4.0%	6.4%	3.4%	6.3%	5.4%	4.1%	4.2%	2.5%	3.7%	8.1%	1.9%	7.5%	6.1%	4.6%
		Constraints	0.6%	1.8%	2.5%	2.2%	6.3%	3.1%	6.0%	5.1%	4.1%	4.2%	2.5%	3.7%	6.0%	1.5%	6.0%	4.7%	4.1%
		Curtailments	2.8%	1.0%	1.9%	1.8%	0.1%	0.3%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	2.1%	0.3%	1.5%	1.5%	0.6%