



## *Corrigendum to* “A new methodology for upscaling semi-submersible platforms for floating offshore wind turbines” published in Wind Energ. Sci., 8, 1873–1891, 2023

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Published: 6 February 2024

During the preparation of the manuscript, there were a few oversights in table values. Table 11 has some duplicate numbers to those in Tables 9 and 10, but a few of these values were slightly different from each other, which should be the same. The biggest errors were in Table 10, in particular the values for stiffness, steel mass, and percentage steel mass. The errors were brought to the author’s attention when a wind energy professional reached out via email to understand a discrepancy with the steel mass numbers. Mistakes were found in Tables 9, 10, and 11. The corrected values are highlighted in bold in each table.

**Table 9.** Upscaled OC4 table of results. (See changes to center of mass of platform, center of mass of system, and moment of inertia.)

Rated power	MW	5	10	15	20
Sp	W m <sup>-2</sup>	401	401	401	401
R	m	63	89	109	126
Draft	m	20	20	20	20
CM <sub>platform</sub>	m	−13.6	<b>−12.9</b>	<b>−12.3</b>	<b>−11.7</b>
CM <sub>system</sub>	m	−10	<b>−7.8</b>	<b>−6.2</b>	<b>−4.8</b>
Pitch angle	°	3.5	3.5	3.4	3.3
Total stiffness	Nm rad <sup>-1</sup>	1.0E+09	2.7E+09	4.9E+09	7.6E+09
I <sub>system</sub>	kg m <sup>2</sup>	1.1E+10	<b>3.4E+10</b>	<b>6.7E+10</b>	<b>1.1E+11</b>
Pitch natural period	s	24.2	26.4	27.7	28.7
Natural frequency	Hz	0.26	0.24	0.23	0.22
Steel mass	kg	3.59E+06	5.60E+06	7.30E+06	8.86E+06
Ballast mass	kg	9.70E+06	2.0E+07	3.0E+07	4.0E+07
Total platform mass	kg	1.3E+07	2.5E+07	3.7E+07	4.9E+07
Percent steel mass		27 %	22 %	20 %	18 %

**Table 10.** Upscaled IEA 15 MW table of results. (See changes to stiffness, steel mass, ballast mass, and steel mass to total mass ratio.)

Rated power	MW	15	20	25	30
Sp	$\text{W m}^{-2}$	332	332	332	332
Rotor radius	m	120	138	155	170
Draft	m	20.0	22.1	24.0	25.7
$\text{CM}_{\text{platform}}$	m	-16.8	-18.6	-20.2	-21.6
$\text{CM}_{\text{system}}$	m	-5	-5.5	-5.8	-6.1
Platform pitch	$^{\circ}$	4.9	4.9	4.9	4.9
Total stiffness	$\text{Nm rad}^{-1}$	<b>3.2E+09</b>	<b>5.0E+09</b>	<b>7.1E+09</b>	<b>9.4E+09</b>
$I_{\text{system}}$	$\text{kg m}^2$	5.3E+10	8.9E+10	1.4E+11	1.9E+11
Pitch natural period	s	28.6	30.3	31.9	33.2
Natural frequency	Hz	0.22	0.21	0.20	0.19
Steel mass	kg	<b>3.9E+06</b>	<b>4.8E+06</b>	<b>5.6E+06</b>	<b>6.4E+06</b>
Seawater ballast mass	kg	5.7E+06	7.7E+06	1.0E+07	1.2E+07
Fixed ballast mass	kg	<b>8.8E+06</b>	<b>1.2E+07</b>	1.6E+07	<b>2.1E+07</b>
Total platform mass	kg	1.8E+07	2.5E+07	3.2E+07	3.9E+07
Percent steel mass		<b>21 %</b>	19 %	<b>18 %</b>	<b>16 %</b>

**Table 11.** Comparison of the upscaled 20 MW IEA system with the upscaled 20 MW OC4 system. (See changes to center of mass of platform, center of mass of system, pitch angle, stiffness, and ballast mass.)

		Upscaled IEA 20 MW	Upscaled OC4 20 MW
Sp	$\text{W m}^{-2}$	332	401
Rotor radius	m	138	126
Draft	m	22.1	20
Wall thickness	m	0.045	0.06
$\text{Dist}_{\text{cc}}$	m	100	84
$\text{CM}_{\text{platform}}$	m	<b>-18.6</b>	-11.7
$\text{CM}_{\text{system}}$	m	<b>-5.5</b>	-4.8
Pitch angle	$^{\circ}$	4.9	<b>3.3</b>
Total stiffness	$\text{Nm rad}^{-1}$	<b>5.0E+09</b>	7.6E+09
$I_{\text{system}}$	$\text{kg m}^2$	8.9E+10	1.2E+11
Pitch natural period	s	30.3	28.7
Steel mass	kg	4.8E+06	8.9E+06
Seawater ballast mass	kg	<b>7.7E+06</b>	4.0E+07
Fixed ballast mass	kg	1.2E+07	0
Total platform mass	kg	2.5E+07	4.9E+07
Steel mass ratio		19 %	18 %

On page 1882 in Sect. 4.2 there are mistakes in the following sentence: the ratio of the platform steel mass to the total platform mass is reduced as the turbines are upscaled; the IEA 15 MW system has 19 % steel mass, and the IEA 30 MW system has 19 % steel mass compared to the total platform mass including ballast.

The corrected sentence reads as follows: the ratio of the platform steel mass to the total platform mass is reduced as the turbines are upscaled; the IEA 15 MW system has 21 % steel mass, and the IEA 30 MW system has 16 % steel mass compared to the total platform mass including ballast.

Furthermore, on page 1883 in Sect. 4.3 the following sentence was corrected: the percentage of the platform steel mass relative to the total platform mass is relatively constant at 19 % for the IEA upscaling results (Table 10). In contrast, the percentage of the platform steel mass relative to the total platform mass decreases for the OC4 upscaling results (Table 9).

The corrected sentence now reads as follows: the percentage of the platform steel mass relative to the total platform mass is relatively similar for both designs (Tables 10, 11), and the percentage of platform steel mass decreases with upscaling for both designs.