Result report: Visionary V2 - Green Energy

Entity: Visionary - Visionary V2 - Green Energy
User: Anna Silovska - 19.05.2018
Indicator: LCA for BREEAM Int’l/NOR/SE
Details: This is officially approved LCA in compliance with BREEAM International NC 2013 and

Default values are used in calculation: Transportation distances, European. Results were also calculated again.

Life-cycle assessment results for BREEAM International versions as per EN 15978

<table>
<thead>
<tr>
<th>Sector</th>
<th>Global warming kg CO2e</th>
<th>Acidification kg SO2e</th>
<th>Eutrophication kg PO4e</th>
<th>Ozone depletion potential kg CFC11e</th>
<th>Formation of ozone of lower atmosphere kg Ethene</th>
<th>Nor hazardous waste disposed kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1-A3  Construction Materials</td>
<td>1,11E7</td>
<td>2,48E4</td>
<td>3,09E3</td>
<td>1,16E-2</td>
<td>2,54E3</td>
<td>2,16E6</td>
</tr>
<tr>
<td>A4     Transportation to site</td>
<td>2,28E5</td>
<td>5,29E2</td>
<td>1,12E2</td>
<td>4,02E-2</td>
<td>2,84E1</td>
<td>1,13E3</td>
</tr>
<tr>
<td>A5     Construction/Installation process</td>
<td>2,08E5</td>
<td>7,06E2</td>
<td>1,92E2</td>
<td>2,1E-2</td>
<td>1,6E1</td>
<td>1,64E4</td>
</tr>
<tr>
<td>B4-B5 Material replacement and refurbishment</td>
<td>8,21E6</td>
<td>0%</td>
<td>1,93E4</td>
<td>0%</td>
<td>2,37E3</td>
<td>0%</td>
</tr>
<tr>
<td>B6     Energy use</td>
<td>4,42E5</td>
<td>2,34E4</td>
<td>4,66E3</td>
<td>3,13E-1</td>
<td>1,12E3</td>
<td>0%</td>
</tr>
<tr>
<td>B7     Water use</td>
<td>1,08E6</td>
<td>5,82E3</td>
<td>2,95E3</td>
<td>1,7E-1</td>
<td>2,62E2</td>
<td>0%</td>
</tr>
<tr>
<td>C1-C4 Deconstruction</td>
<td>2,31E5</td>
<td>1,06E3</td>
<td>2,66E2</td>
<td>4,61E-5</td>
<td>1,49E2</td>
<td>0%</td>
</tr>
<tr>
<td>D      External impacts (not included in totals)</td>
<td>-2,39E5</td>
<td>-7,88E2</td>
<td>-6,12E1</td>
<td>-8,7E-5</td>
<td>-5,14E1</td>
<td>-3,47E4</td>
</tr>
<tr>
<td>D2     Exported energy (not included in totals)</td>
<td>2,55E7</td>
<td>7,56E4</td>
<td>1,37E4</td>
<td>5,07E-1</td>
<td>6,22E3</td>
<td>4,9E1</td>
</tr>
</tbody>
</table>

Comparing total results with: Visionary V2 - Energy mix CR

Visionary V2 - Energy mix CR Total | 5,28E7 | 2,59E5 | 3,73E4 | 2,22E0 | 1,48E4 | 5,83E1 |
Visionary V2 - Green Energy compared with Visionary V2 - Energy mix CR | -51% | -71% | -63% | -77% | -56% | -16% |

Results per denominator

Gross Internal Floor Area (IPMS/RICS) 24900.0 m2 | 1,02E3 | 3,04E0 | 5,49E-1 | 2,04E-5 | 2,5E-1 | 1,97E2 |

Methodologically consistent and regionally representative LCA data

Answer: Local compensation target region

Czech Republic

Compensation to local conditions, if applied by the user, is made according to CEN/TR 15941 and One Click LCA’s BRE-approved methodology.

Results visualisation for Global warming (GWP)

https://www.360optimi.com/app/sec/design/results?childEntityId=5af9fd9e8e202b6fdaae6f5f&indicatorId=LcaForBREEAM&entityId=56c1a21b7d1eea49166164eb
25 510 tons CO$_2$e

17 kg CO$_2$e / m$^2$ / year

€ 1 275 501 Social cost of carbon

Most contributing building elements (GWP) - A1-A3

- Horizontal structures: beams, floors and roofs: 45%
- Vertical structures and facade: 28%
- Foundations and substructure: 23%
- Other structures and materials: 4%
- External areas and site elements: 1%

Most contributing material types (GWP) - A1-A3

- Concrete: 55%
- Steel and other metals: 26%
- Wood: 15%
- Structural steel and steel profiles: 9%
- Fiberboard (MDF): 5%
- Glass facades and glazing: 4%

Most contributing material subtypes (GWP) - A1-A3

- Ready-mix for external walls and floors: 54%
- Reinforcement for concrete (rebar): 15%
- Doors, windows and parts: 9%

Most contributing materials (GWP) - A1-A3

1. Concrete, ready mixed C30/37: 53.6% - show sustainable alternatives
2. Reinforcement steel: 15.3% - show sustainable alternatives
3. Steel profile: 6.0% - show sustainable alternatives
4. Insulating glass - 2 panes: 3.9% - show sustainable alternatives
5. Raised floor system, 148 - 169 mm, 25.95 kg/m², Type LIGNA (Lindner): 2.8% - show sustainable alternatives
6. Frame profile, aluminium, thermally separated, powder-coated: 2.0% - show sustainable alternatives
7. Medium density fibreboard (MDF), coated, 2 - 50 x 590 - 2850 x 1025 - 3250 mm, 734 kg/m³ (Sonae Índustria): 1.8% - show sustainable alternatives
8. Tile cement: 1.4% - show sustainable alternatives
9. Elastomer joint sealer tape, silicon rubber: 1.3% - show sustainable alternatives
10. Hot-dip galvanised steel sheet: 1.3% - show sustainable alternatives

Datasets contain unclassified data (5)