Additional Social welfare that could be gained with no network constraints:

Social welfare = Producer surplus + Consumer surplus + Congestion rent

<table>
<thead>
<tr>
<th></th>
<th>Value (€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Producer surplus</td>
<td>84,9 M€</td>
</tr>
<tr>
<td>Consumer surplus</td>
<td>-35,9 M€</td>
</tr>
<tr>
<td>Congestion Rent</td>
<td>-30,8 M€</td>
</tr>
</tbody>
</table>

NB: Producer surplus, Consumer surplus and Congestion Rent are calculated as such: Sum of daily (Value with ATC=∞) - (Historical value) The daily values being a Sum of hourly values.

In single hours the producer/consumer gain can be positive or negative. The highlighted value presents the sum of all hours of the respective month.
Additional Social welfare that could be gained with no network constraints \(\textit{(Definition/explanation)}\)

- The figure shows the additional social welfare that could be gained with no network constraints inside CWE (borders D-NL, NL-B, B-F, D-F).

- This key figure is calculated by hourly simulating/coupling the CWE-region with ATC=\(\infty\) at the borders D-NL, NL-B, B-F, D-F and comparing to real MC-results:
  - Producer surplus= Producer surplus (ATC=\(\infty\)) - Producer surplus(real ATC)
  - Consumer surplus=Consumer surplus (ATC=\(\infty\)) - Consumer surplus(real ATC)
  - Congestion rent= Congestion rent (ATC=\(\infty\)) - congestion rent(real ATC)

- \textbf{NB:} The simulations are made with ITVC flows remaining identical.
Additional Social welfare that could be gained with no network constraints (*Definition/explanation*)

- The purpose of the welfare reporting is the demonstration of the benefits of CWE ATC Market Coupling and future CWE FB MC.

- The monthly publishing of this figure was commonly agreed between the CWE Regulators and the CWE Project. It is one part of the welfare reporting.
October 2013

Evolution of social welfare that could be gained with no network constraints