**Example Calculations**

Case 1: Base case

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Visit | Berth (hr) | Engine (hr) | Power (MW) | Baseline Engine Emissions (MWh) | Actual Engine Emissions (MWh) |
|  |  |  |  | Berth\*Power | Engine\*Power |
| 1 | 70 | 70 | 1.5 | 105 | 105 |
| 2 | 75 | 2 | 1.5 | 112.5 | 3 |
| 3 | 72 | 72 | 1.5 | 108 | 108 |
| 4 | 70 | 3 | 1.5 | 105 | 4.5 |
| 5 | 65 | 2 | 1.5 | 97.5 | 3 |
| 6 | 67 | 2 | 1.5 | 100.5 | 3 |
|  |  |  | Totals: | 628.5 | 226.5 |
| (Baseline - Actual) / (Baseline) | Reduction: | (628.5 - 226.5) / 628.5 = 64% |
| (# SP Visits) / (# Visits) | Shore Power: | 4 / 6 = 67% |

Case 2: Base case, except an undocumented emergency occurred during visit 5.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Visit | Berth (hr) | Engine (hr) | Power (MW) | Baseline Engine Emissions (MWh) | Actual Engine Emissions (MWh) |
|  |  |  |  | Berth\*Power | Engine\*Power |
| 1 | 70 | 70 | 1.5 | 105 | 105 |
| 2 | 75 | 2 | 1.5 | 112.5 | 3 |
| 3 | 72 | 72 | 1.5 | 108 | 108 |
| 4 | 70 | 3 | 1.5 | 105 | 4.5 |
| 5 | 65 | 65 | 1.5 | 97.5 | 97.5 |
| 6 | 67 | 2 | 1.5 | 100.5 | 3 |
|  |  |  | Totals: | 628.5 | 321 |
| (Baseline - Actual) / (Baseline) | Reduction: | (628.5 - 321) / 628.5 = 49% |
| (# SP Visits) / (# Visits) | Shore Power: | 3 / 6 = 50% |

Case 3: Base case, except an emergency visits occurred during visit 5 that was documented and valid. In this case, the visit counts toward Shore Power, but the emissions are excluded from reduction calculations.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Visit | Berth (hr) | Engine (hr) | Power (MW) | Baseline Engine Emissions (MWh) | Actual Engine Emissions (MWh) |
|  |  |  |  | Berth\*Power | Engine\*Power |
| 1 | 70 | 70 | 1.5 | 105 | 105 |
| 2 | 75 | 2 | 1.5 | 112.5 | 3 |
| 3 | 72 | 72 | 1.5 | 108 | 108 |
| 4 | 70 | 3 | 1.5 | 105 | 4.5 |
| ~~5~~ | ~~65~~ | ~~65~~ | ~~1.5~~ | ~~97.5~~ | ~~97.5~~ |
| 6 | 67 | 2 | 1.5 | 100.5 | 3 |
|  |  |  | Totals: | 531 | 223.5 |
| (Baseline - Actual) / (Baseline) | Reduction: | (531 - 223.5) / 531 = 58% |
| (# SP Visits) / (# Visits) | Shore Power: | 4 / 6 = 67% |