



e-power®
the power of energy solutions



Case studies P-GRID

Case Waterzande

- 3 tower cranes
- 10 construction sheds
- 40 people working on site every day
- 2-year project
- Location: The Netherlands



P-GRID



P-GRID

Case Waterzande

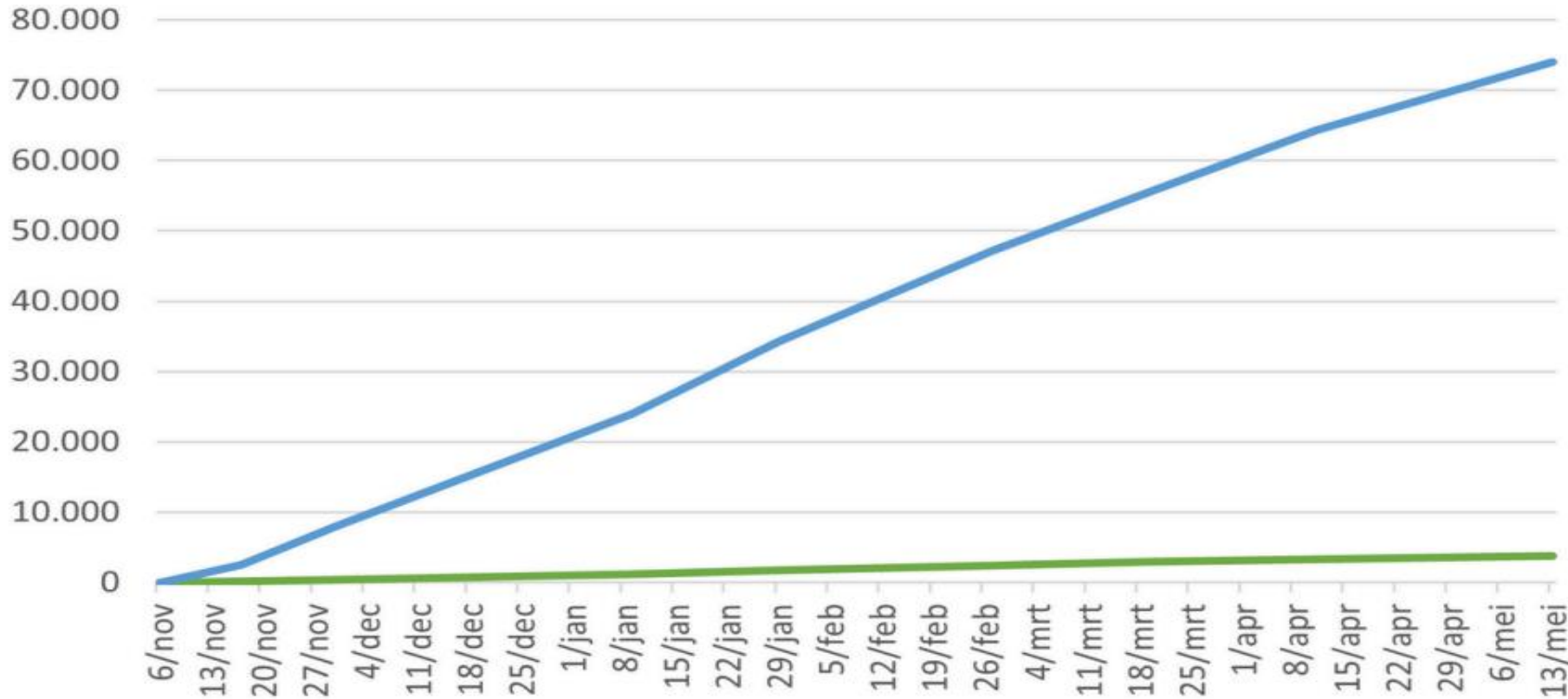
Original set-up

- 3 x 100kVA
- 1 x 40kVA
- Fuel consumption: 230 l/day
- Fuel cost: 342 Eur/day
- Rental cost: 2257 Eur/month

New set-up

- 1 x P-GRID
- 1 x external 40kVA
- Fuel consumption: 108 l/day
- Fuel cost: 162 Eur/day
- Rental cost: 4453 Eur/month

Operating hours - Generated energy by internal + external generator



	6/nov	17/nov	30/nov	9/jan	29/jan	27/feb	20/mrt	11/apr	13/mei
Total of generated energy by external generator [kWh]	0	2458,3	7675,6	22820,4	32611,3	44731,9	52894,7	60966,5	70153,3
Operating hours of internal & external generator combined [h]	0	126	408	1.197	1.726	2.411	2.947	3.347	3.816

— Total of generated energy by external generator [kWh]
— Operating hours of internal & external generator combined [h]

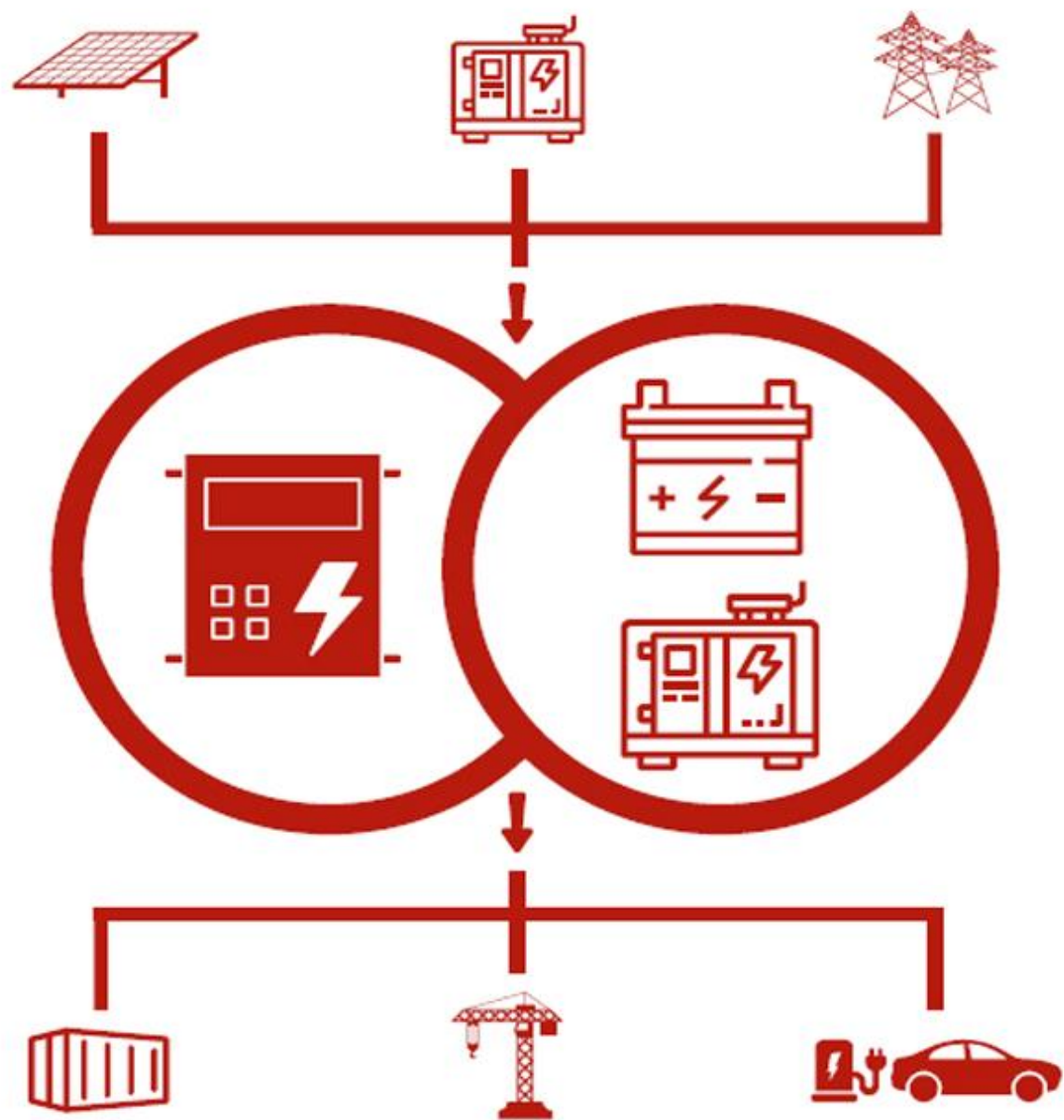
Case Waterzande results

- Fuel reduction per day: 122 l/day
- Total fuel cost reduction during project: 127.977 Eur

**Total savings (including higher rental price):
75.273 Eur during 2-year project
or
3136 Eur/month**

Case Workington

- 1 tower crane (Wolff 8060.50)
- 3 construction sheds
- 10 people working on site every day
- 6 months project
- Location: United Kingdom



Case Workington

Original set-up

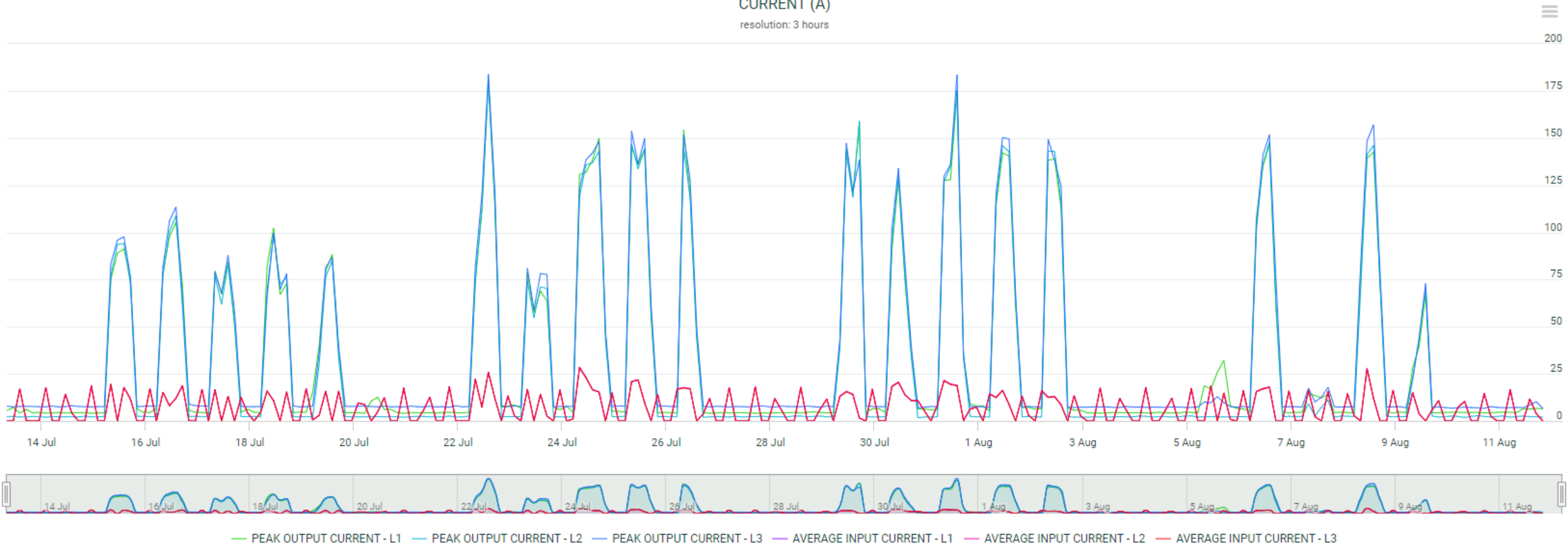
- 1 x 250kVA
- 1 x Flybrid
- 1 x batterypack 45/90kWh
- Fuel consumption: 204 l/day
- Fuel cost: 306 Eur/day
- Rental cost: 3500 Eur/month

New set-up

- 1 x P-GRID
- Fuel consumption: 60 l/day
- Fuel cost: 90 Eur/day
- Rental cost: 4000 Eur/month

CURRENT (A)

resolution: 3 hours



Case Workington results

- Fuel reduction per day: 144 l/day
- Total fuel cost reduction during project: 25.920 Eur

**Total savings (including higher rental price):
22.920 Eur during 6 months project
or
3820 Eur/month**

Case Mc Donalds

- 4 construction sheds
- 20 people working on site every day
- CTV system 24/7
- 6 months project
- Location: Belgium



Case Mc Donalds

Original set-up

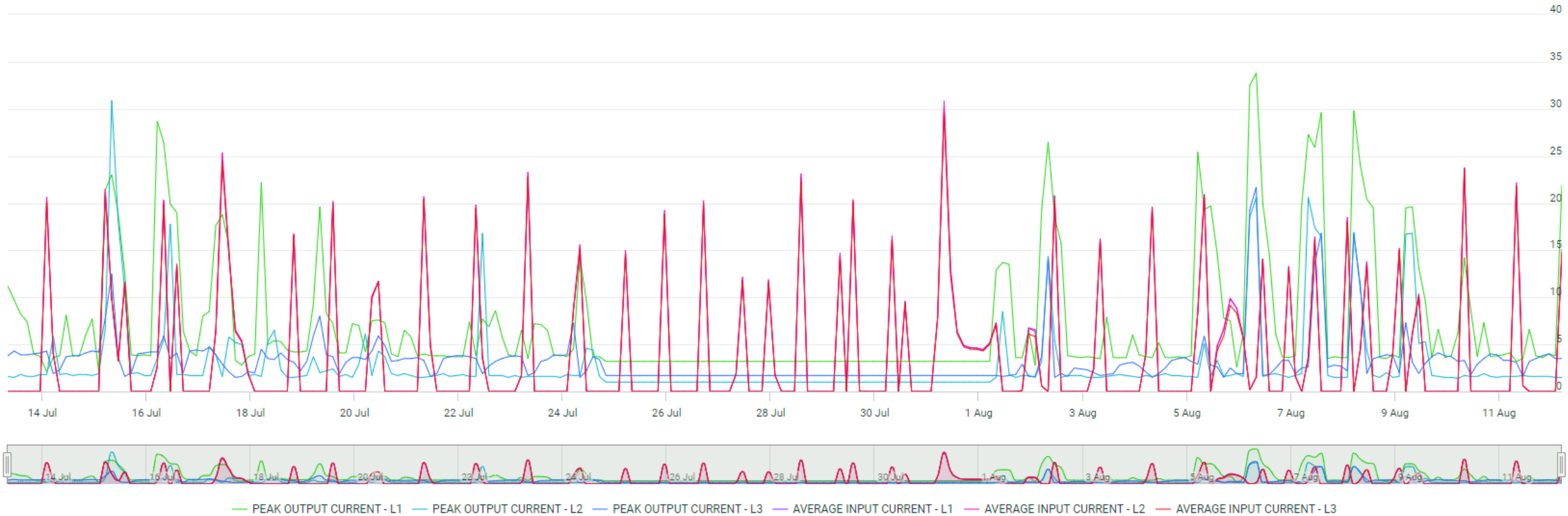
- 1 x 45kVA
- Fuel consumption: 150 l/day
- Fuel cost: 165 Eur/day
- Rental cost: 1000 Eur/month

New set-up

- 1 x P-GRID
- Fuel consumption: 23 l/day
- Fuel cost: 25 Eur/day
- Rental cost: 4000 Eur/month

CURRENT (A)

resolution: 3 hours



Case Mc Donalds results

- Fuel reduction per day: 127 l/day
- Total fuel cost reduction during project: 23.520 Eur

**Total savings (including higher rental price):
5.520 Eur during 6 months project
or
920 Eur/month**

Conclusion

- Fuel savings between 50% and 90%, depending on the application
- P-GRID can be used both as hybrid system and as a peak shaver
- The P-GRID has a high ROI. In general we can say around 3 years
- Lead Carbon batteries is, for now, the best technology for multi-purpose hybrid power units