



To: SEMAN SA (member of SEMAN Group)  
6 Parodos Grypari Str., Pefka  
Thessaloniki, Greece

Attention: Dr K.J. Satsios, CEO of SEMAN Group

Komotini, 04.03.2019

Dear Dr. Satsios,

We are pleased to inform you about the successful results of your customized electric energy saving project. Specifically, your company was contracted by SYSTEMS SUNLIGHT SA (SUNLIGHT RECYCLING) to carry out your Power Quality Improvement & Electrical Energy Saving (PQI & ES) Project by applying your scientific know how in the inner power distribution network of our plant in Komotini.

SEMAN designed and successfully installed various custom-made interventions, in compliance with the special technical and environmental requirements, in SUNLIGHT's plant. The custom-made equipment was delivered on time and included state-of-the art components from top industrial materials manufacturers around the globe. The SEMAN's PQI & ES Project was installed and set into operation in October 2016. During the collaboration we have had, SEMAN's staff of expert engineers & specialists technicians demonstrated excellent attitude, punctuality and professionalism. Furthermore, it has been more than two years now, since SEMAN set its PQI & ES Project into operation and it can be confirmed that the PQI & ES custom-made energy saving interventions are working completely fine and no issue occurred at all. That proves that SEMAN's staff did the best of their ability during design, construction and installation of above energy saving interventions to ensure robust operating results.

Throughout the operation of SEMAN's PQI & ES Project our plant has been undoubtedly benefited. First of all, Voltage-Current Harmonics have been drastically reduced, resulting in no more pollution into plant's power network. The interactions between the electric loads of the installation concerning various harmonics resonance scenarios have been eliminated. Moreover, the efficiency of motors as well as of the power transformers has been considerably improved and the thermal losses in cables have been drastically mitigated. Furthermore, Power Factor concerning not only reactive currents, but also harmonic currents, has been locally & centrally improved. Finally, we have observed a reduction of the maintenance cost of the existing electrical components and a big increase of the electrical installation reserve.

#### **SYSTEMS SUNLIGHT SA**

**Headquarters** 2 Ermou & Nikis Str., Syntagma Square, 105 63 Athens, Attica, Greece

**T** +30 210 6245400 **F** +30 210 6245409

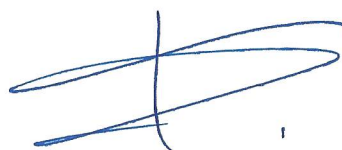
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**F** +30 25310 82489

The energy saving results were evaluated not only with measurements, but also according to the International Standards. Measurements, having to do with the project's technical evaluation, after it was set into operation, were carried out instantaneously, with and without the energy saving interventions into operation, regarding the rms value of consumption currents (Irms) of each electrical load. The weighted average result of the Irms currents reduction measured equal to 11,2%, greater than the guaranteed 9,3% as the contract stated.

The project's evaluation based on the International Standards concerned the correlation between our plant's electrical energy consumption and factors that affect it, such as production and environmental data, as given by SUNLIGHT's staff, for the time period before the project set into operation. Data had been processed and the correlation occurred was of an excellent accuracy according to the International Standards, with an average regression error only of 0,48%. Then, the above correlation had been applied for a period of 27 months after the project set into operation, whereas proved that the energy saving finally achieved was 12,22%, higher than the guaranteed 9,3%, which eventually resulted to a smaller payback period of the initial investment of the project.

Concluding, we consider SEMAN's PQI & ES project absolutely successful as it not only fulfilled but surpassed the initial conventional goals of the project and led to significant additional improvements, regarding the operational conditions inside the electrical installations of our plant. For all above reasons, we highly recommend SEMAN's energy saving project without hesitation.



Dr. Athanasios Karakatsanis  
Plant Director

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