UNIVERSITAT POLITÈCNICA DE CATALUNYA
BARCELONATECH
Escola d'Enginyeria de Barcelona Est

FINAL DEGREE PROJECT

Degree in Energetic Engineering

ENERGY-LEVEL SIMULATOR FOR MICRO-GRIDS

Volume II

Budget & Economic analysis

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1. Budget & Economic analysis

This economic analysis is divided in different sections where the situation of a self-employed engineer is considered. The derived costs will be necessary to be understood to set the final price.

1.1. Costs

This project took approximately 75 working days with 8 working hours. A little bit less than 4 working months. The costs related to meals and transport can be partially neglected if the working place is the home itself, if not these costs and the rent of a studio could be deducted and therefore included in the price.
The other costs are the ones concerning to materials and licenses.
The material used is a computer and the licenses of Matlab and Microsoft Office.

And finally the legal costs such the monthly payment 267 € for the fiscal state of self-employed and 100 € for the service of consulting.

Concept	Cost	% of application	Applied cost
Meals	1.950,00 €	10%	195,00 €
Transport	200,00 €	100%	200,00 €
Rent	1.600,00 €	0%	- €
Computer	1.000,00 €	10%	100,00 €
Matlab license	800,00 €	33%	266,67 €
Microsoft license	50,00 €	33%	16,50 €
RETA payment	1.068,00 €	100%	1.068,00 €
Consulting	400,00 €	100%	400,00 €
Total	7.068,00 €	32%	2.246,17 €

Table 8.. Project costs

1.2. Price of the project itself

This section is thought to reflect the expected salary of the engineer who worked on it. For a self-employee the final benefits of its activity represent its salary. On this price has to be taken into account a lot of uncontrollable variables such risk, publicity costs, or job insecurity in terms of finding work or not. These variables are not possible to be count easily. And other taxes such IRPF that are applied over the benefit and represent the 20 % and have to be paid.

Counting a price of 40 € per hour can be applied. Over 600 hours are spent on the project so this will represent 24.000 €. This will give consolidate a brut salary for the four months of 5.000 €. Extracting the 20 % of IRPF represents a net salary of 4.000 €, enough to survive more than four months. The other 4.000 € can be used for these other expenses mentioned above. But also if they are not used for job-related expenses will have to tribute in concept of IRPF.

2. The final price

The final price of the project will be the sum of the costs plus the price of the project and applying the correspondent taxes.

The client is a university so a legal person receiving a professional job, therefore the retention must be applied.

Concept	**Taxable base**	**Units**	**IVA**	**Retention**	**Final cost**
Material costs	2.246,17 €	1	21%	-7%	2.527,61 €
Engineering hours	40 €	600	21%	-7%	27.007,2 €
Total					29.534,81 €

Table 8.. Final invoice