

KEY FIGURES

Municipality surface: 335.27 km²
Inhabitants: 47,800
Municipal building stock:
45 facilities
Total surface area: 50,042 m²

Energy Consumption (2015):

Natural Gas: 1,940 MWh
Electricity: 1,886 MWh
Water: 61,197 m³
total energy costs: € 0.938m

REVOLVING FUND

Size of revolving fund:
€ 300,000
Ratio Seed Fund to annual
energy cost: 32%
Number of measures
implemented: 2
Investment covered:
€ 5,800 – € 145,000

4.3/ Águeda Fund

4.3.1/ Águeda's Internal Contracting scheme at a glance

Special features of Internal Contracting in Águeda

The FEWE has no legal status and is formed by the transfer to a specific heading in the municipal budget, established for this purpose, of an initial amount of funding created by the Municipality, as well as extra financing necessary to attain the objectives. After the formal decision by the Mayor, the proposal is forwarded for implementation to the Division of Environment and Sustainability. The Fund is 100% financed by the municipal budget, with €300,000 as a seed, and by the water and energy savings.



4.3.2/ Management of the fund

Águeda is considerably smaller than Stuttgart representing a 'typical' small EU city. It is important to note that half of the cities in the EU have a relatively small urban centre of between 50,000 and 100,000 inhabitants.

Águeda City Council approved the Finance Scheme on the 15th of March of 2016. The revolving fund for energy and water efficiency (FEWE) was provided with an initial amount of **€300,000** from the municipal budget, and integrated into the 2015/2016 City Plan and Budget.

The fund is managed by a core team, composed of technicians specialising in different fields (from different operational and technical divisions), and has political supervision. In Águeda, the fund can only be used for the following situations:

- a/ Eligible investments for the promotion of energy and water efficiency;
- b/ Maintenance and preservation of such investments.

All municipal departments may present proposals to be included as an eligible investment in energy and water efficiency, and should provide all the necessary elements for the analysis of the proposals, in particular:

- Initial Investment (€);
- Energy Consumption Reduction (kWh);
- Expected CO₂ Emission Reductions (tCO₂);
- Estimated Payback (years);
- Maintenance Value (€ / year).

The applications must be forwarded to the Division of Environment and Sustainability (hereafter DV-AS) for information.

Investment Criteria:

The project proposals are evaluated accordingly:

- 1/ The project has to be part of the SEAP (Sustainable Energy Action Plan).

2/ Deeper evaluation based on specific criteria (weighting factor/score):

- Payback (35%);
- Energy savings (30%);
- CO₂-emission reduction (15%);
- Contribution to the CoM (Covenant of Mayors) or Mayors Adapt objectives (10%);
- Innovation (10%).

Based upon the criteria each project is scored. Implementation of the project depends on its score and on the available funds. After the formal decision by the mayor, the proposal is forwarded to the corresponding Division.

The diagram below shows the use of the fund, which is described in Article 4 of the Internal Regulation of the Fund for Energy and Water Efficiency (FEWE):

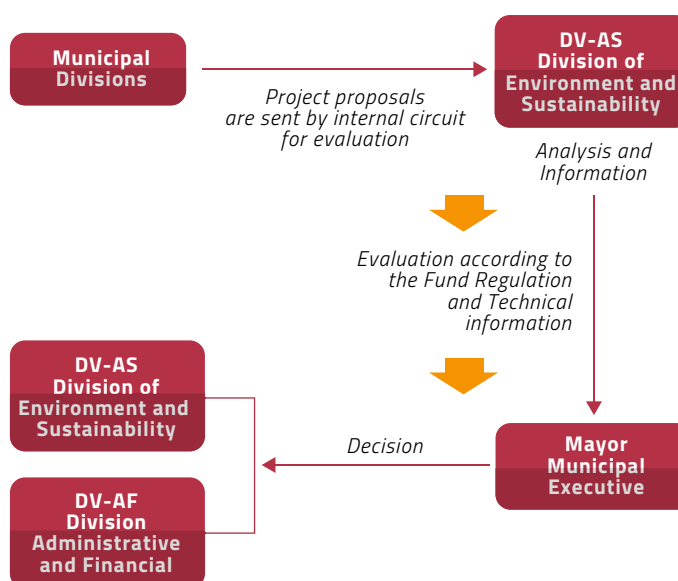


Figure 19: Diagram illustrating Article 4 of the FEWE Internal Regulation



4.3.3/ Measures financed through Internal Contracting

In Águeda prior to each measure first stage audits and local studies are carried out on energy and water efficiency measures for buildings.

The first Project financed by the fund was the **Wattguard System** installed in the Municipal Stadium. This system reduces the electricity consumed by the lamps and the range of the variation in current and voltage without changing the frequency, thus increasing light intensity by between 40% and 70%.

- Investment: €5,789 + VAT (23%)
- Energy savings: 9,660 kWh/a
- CO₂-emission reduction: 4t/a
- Payback: 4.23 years.



Figure 20: The Wattguard



Figure 21: Municipal Stadium in Águeda

The second project financed by the fund was the installation of photovoltaic panels, to be implemented in eleven municipality buildings: Municipal Library, 8 Schools, Municipal Stadium and Águeda Business Incubator.

- Investment: € 145,047 + VAT (23%)
- Energy savings: 209,900 kWh/a
- CO₂-emission reduction: 75,500 t/a
- Payback: 7.35 years.



Figure 22: Two different buildings with UPAC installed

top: Municipal Stadium, bottom: Fernando Caldeira school

The electric power production units called "Self-Consumption Production Units" (UPAC – Unidade de Produção para Auto Consumo) will reduce electricity costs associated with the operation of the selected buildings.

4.3.4/ Monitoring and evaluating the impact



Figure 23: Águeda Energy and Water Fund in figures

In Águeda all the municipal facilities will have smart meters to monitor and evaluate the impact of the implemented projects. A platform has also been created: the FEWE Platform (<http://fee-agueda.irradiare.com>), via which they can control the energy

consumption reduction, CO₂ emission reductions, savings and the remaining value of the FEWE in all buildings. If any measure does not work as expected, it will be investigated to find the reason why, and solutions will be found to improve the performance.

More information

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