



## Supply of energy efficient IT equipment

University of Split – University Department of  
Professional Studies, Croatia

- Replacement of outdated technology
- 58% CO<sub>2</sub> reductions and significant energy and costs savings
- Showing that the Croatian market can supply energy efficient IT products



Standard product / old tender  
= benchmark

- Replacement of outdated technology
- 129 t CO<sub>2</sub> emissions
- 417.247 kWh energy consumption

GPP 2020 tender

- Energy star technology
- 56 t CO<sub>2</sub> emissions
- 181.782kWh energy consumption

Results

- 20 toe energy savings
- 73 t CO<sub>2</sub> savings (-58%)

## Contract tendered

- Tender for energy efficient IT equipment tendered by the University of Split – University Department of Professional Studies
- 260 pieces of IT equipment including desktop computers, laptops and monitors
- 24 months contract with two bidders, each with contract duration of 12 months (one for each year)
- Total cost: 100.000,00 € (excluding VAT)
- This tender represents the commitment and contribution of the University to reduce carbon dioxide emissions and increase energy efficiency and thus reduce the adverse impact of climate changes.



## Procurement approach

Tendering followed the open procedure:

| <b>Desktop computers – 193 pcs</b>   |  |
|--|--|
| <b>Technical specifications</b> <ul style="list-style-type: none"> <li>- 3 years warranty</li> <li>- Equipment must fulfil the latest ENERGY STAR standards of energy efficiency</li> <li>- Built-in efficiency mode</li> <li>- All components labelled with the CE-mark</li> <li>- Easy accessible and replaceable RAM</li> </ul> | <b>Award criteria</b> <ul style="list-style-type: none"> <li>- Lowest price</li> </ul> |
| <b>Laptops – 18 pcs</b>  |  |
| <b>Technical specifications</b> <ul style="list-style-type: none"> <li>- 3 years warranty</li> <li>- Equipment must fulfil the latest ENERGY STAR standards of energy efficiency</li> <li>- Built-in efficiency mode</li> <li>- All components labelled with the CE-mark</li> <li>- Easy accessible and replaceable RAM</li> </ul> | <b>Award criteria</b> <ul style="list-style-type: none"> <li>- Lowest price</li> </ul> |
| <b>Monitors – 49 pcs</b>   |  |
| <b>Technical specifications</b> <ul style="list-style-type: none"> <li>- 3 years warranty</li> <li>- Equipment must fulfil the latest ENERGY STAR standards of energy efficiency</li> <li>- Built-in efficiency mode</li> <li>- All components labelled with the CE-mark</li> </ul>  | <b>Award criteria</b> <ul style="list-style-type: none"> <li>- Lowest price</li> </ul> |

### Contract clauses

Repair and maintenance: warrantee of compliance for following environmental aspects:

- Hazardous waste: separated collection and delivering to authorised waste managers.
- No hazardous waste: good management according to general law and local regulations.
- Upon delivery of equipment to contracting authority, supplier will also have to provide an instruction on lowering energy consumption in Croatian or English language. Information on factors that include energy consumption (e.g. standby and hibernation settings, screen luminance, screen dimming, USB ports, turned on wireless connection, etc.) and ways to save energy, related to this factors. Instructions on how to adjust settings that effect energy consumption and prolong notebook battery autonomy (adjusting screen luminance, turning off screen saver, turning on energy saving mode, etc.). Information on ways to prolong battery life span (ways of charging, discharging, etc.). Warnings on how charger must be unplugged from the socket when battery is full, because even then the charger still consumes energy. Warnings on how even in standby and hibernation modes, notebook still consumes energy and that in is best to shut down the notebook in case of longer disuse. This data should be provided in hard copy and electronically.



## Criteria development

- Offered models of equipment must fulfil the latest ENERGY STAR standards of energy efficiency, valid on the day of tender notice (here August 2014). Details are available at <http://www.energystar.gov/>

## Results

Energy savings and CO2 emission reductions were calculated using the GPP 2020 methodology and for a lifecycle of 5 years for desktop computers and 4 years for laptops and monitors. The results are as follows.

|                       | CO <sub>2</sub> emissions<br>(t CO <sub>2</sub> ) | Energy<br>consumption<br>(toe) |
|-----------------------|---|--------------------------------|
| (Low Carbon Solution) | 56  | 16                             |
| („Worst case“)        | 129   | 36                             |
| Savings               | 73 t CO <sub>2</sub>                              | 20 toe                         |

### Calculation basis

- New IT equipment consumes 181.782 kWh of energy, and emits 56 t CO<sub>2</sub> during lifetime. Previous, outdated IT equipment consumes an average of 417.247 kWh of energy, and emits 129 t CO<sub>2</sub> during lifetime
- Used Calculator was developed by U.S. EPA and DOE to estimate the energy consumption and operating costs of office equipment and the savings with ENERGY STAR.

## Lessons learned

The majority of producers of IT equipment label their products with ENERGY STAR. The tender model is easily replicable and will be used also for the next IT equipment tender for the University.

Using ENERGY STAR label to define IT equipment characteristics and performance secures benefits for the environment. In the future even more ambitious criteria (e.g. achieving energy consumptions that are 10-20% lower than given by ENERGY STAR could be applied due to a broad market availability of such IT products..

As a consequence and as the competitiveness was not compromised, in future, more ambitious criteria on the energy efficiency could be considered as an award criterion and also more ambitious technical specifications set with higher EE weight in the award criteria.

## Contact

University of Split – University Department of Professional Studies

Croatia

21000 Split

Livanjska 5

<http://www.oss.unist.hr/>

## About GPP 2020



GPP 2020 aims to mainstream low-carbon procurement across Europe in support of the EU's goals to achieve a 20% reduction in greenhouse gas emissions, a 20% increase in the share of renewable energy and a 20% increase in energy efficiency by 2020.

To this end, GPP 2020 will implement more than 100 low-carbon tenders, which will directly result in substantial CO<sub>2</sub> savings. Moreover, GPP 2020 is running a capacity building programme that includes trainings and exchange. – [www.gpp2020.eu](http://www.gpp2020.eu)

## About PRIMES



Across six countries in Europe; Denmark, Sweden, Latvia, Croatia, France and Italy, PRIMES project seeks to help municipalities overcome barriers in GPP processes, many of which lack capacity and knowledge.

PRIMES aims to develop basic skills and provide hands-on support for public purchasing organisations in order to overcome barriers and implement Green Public Purchasing. This will consequently result in energy savings and CO<sub>2</sub> reductions. – [www.primes-eu.net](http://www.primes-eu.net)



The sole responsibility for the content of this publication lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EACI nor the European Commission are responsible for any use that may be made of the information contained therein.

