

# ENcontrol system

**COMFORT | SAFETY | SAVINGS**

*Real effects introduction – experiences*

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[www.encontrol.cz](http://www.encontrol.cz)

## 1. Customer introduction

- Family house in a city
- 4 people in the household
- Electrical heating, boiler, pool filtration, other common appliances
- Main circuit breaker 3 x 50A
- Payments for electricity 2400 EUR / year, two tariffs
- Main goal: **To find possible savings and to increase comfort and safety**

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## 2. Appliances characteristics

- Electrical heating with accumulation into water container
- Boiler – water warming
- Swimming pool filtration
- Water kettle, oven, washing machine, dishwasher
- TV, video, DVD, fridge, freezer, PC
- Lighting
- Other small appliances

## 3. Measurement

- There were appliance circuits in the switching box and individual important appliances in sockets measured
- Time of measurement = 4 weeks
- Price of installation = 200 EUR

## 4. Main recognitions

- Heating use is not effective – sometimes, the heating is on while nobody is at home, and sometime the heating is off before people arrive
- Boiler is not switched off anytime – the water is continuously warmed, even if nobody uses it; temperature is set to 75°C
- Pool filtration is set constantly without relation to external temperature conditions
- TV and DVD are turned on constantly, even if nobody can use it; it is usually used only between 19-23 hours
- Freezer is old, its consumption is higher then today's standard
- Washing machine and dish washer don't use lower tariff

## 5. Recommendations

1. Set planned and remote control of the heating
2. Set planned and remote control of the boiler, set lower water temperature (50-60°C)
3. Swimming pool filtration set in relation to year season or in relation to external temperature (average day time of filtration should be longer in warm season and shorter in cold season)
4. Regularly automatically turn off TV and DVD in working days between 00–16 hours
5. Change old freezer for a newer one in consumption class “A”
6. Turn washing machine and dishwasher on in the time of low tariff
7. Guard possible water in bathroom
8. Imitate presence of people in the house in holiday time

## 6. Savings and realization costs

1. Electricity savings
  - Heating optimization = 200 EUR / year
  - Boiler and pool filtration optimization = 80 EUR / year
  - New freezer = 40 EUR / year (depends on the price of the freezer)
  - Using washing machine and dishwasher in the time of low tariff = 40 EUR / year
  - Others = 40 EUR / year
  - SUM = **400 EUR / year (17%)**
2. Other benefits
  - Increasing comfort mainly in the area of heating
  - Increasing safety
3. Realization costs
  - ENcontrol system components = **1400 EUR including installation**
  - **Return of investment in electricity area only = 4 years**