

# Instruments

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# Legal measures

- Act 406/2000 on economic use of energy
- Energy Efficiency Audits
  - Means and strategies of decreasing consumption
  - Thermal properties of buildings
  - Large enterprises obliged to undertake once in 4 years
- Energy Efficiency Assessment
  - Feasibility of alternative sources of energy and energy intensity decrease in new/reconstructed buildings
- Public procurement must take EE into account

# Legal measures

- Obligation to check status of heating furnaces and/or air-conditioning devices
- Decreasing energy intensity in buildings
  - Passport of Energy Intensity of Building
  - Cost-effectiveness important
- Energy labelling
- Ecodesign standards

# Exemplary role of public buildings

- 975 buildings
- Alternative approach
  - Low-investment measures first – changes in utilization of energy in public buildings
  - Medium investment measures – replacement of heat sources, efficient regulation
  - High-investment measures last – measures where reconstruction and building jobs are necessary
- Many central public institutions' buildings are historic
- Consumption in public buildings monitored by MIT

# Passport of Energy Intensity of Building

## PRŮKAZ ENERGETICKÉ NÁROČNOSTI BUDOVY

vydaný podle zákona č. 408/2000 Sb., o hospodáření energií, a vyhlášky č. 78/2013 Sb., o energetické náročnosti budov

Ulice, číslo: .....

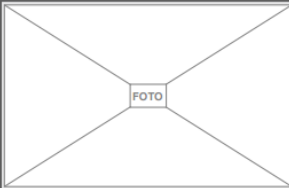
PSČ, místo: .....

Typ budovy: .....

Plocha obálky budovy: ..... m<sup>2</sup>

Objemový faktor tvaru A/V: ..... m<sup>3</sup>/m<sup>2</sup>

Celková energeticky vztažená plocha: ..... m<sup>2</sup>



FOTO

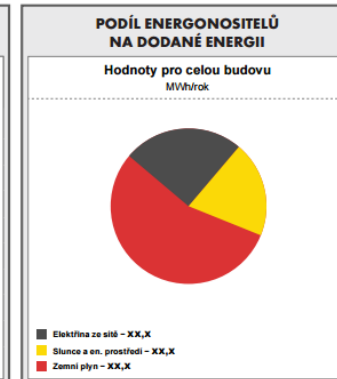
## ENERGETICKÁ NÁROČNOST BUDOVY

Celková dodaná energie (Energie na vstupu do budovy)		Neobnovitelná primární energie (Vliv provozu budovy na životní prostředí)	
Měrné hodnoty kWh/(m <sup>2</sup> ·rok)			
Mimořádně úsporná <b>A</b>	Dop. A		Dop.
Velmi úsporná <b>B</b>	XXX B		XXX
Úsporná <b>C</b>			
Méně úsporná <b>D</b>			
Nehospodárná <b>E</b>			
Velmi nehospodárná <b>F</b>			
Mimořádně nehospodárná <b>G</b>			
<b>Hodnoty pro celou budovu</b> MWh/rok	XX,X		XX,X

## DOPORUČENÁ OPATŘENÍ

Opatření pro	Stanovena
Vnější stěny:	<input checked="" type="checkbox"/>
Okna a dveře:	<input checked="" type="checkbox"/>
Střechu:	<input checked="" type="checkbox"/>
Podlahu:	<input type="checkbox"/>
Vytápění:	<input checked="" type="checkbox"/>
Chlazení/klimatizaci:	<input type="checkbox"/>
Větrání:	<input checked="" type="checkbox"/>
Přípravu teplé vody:	<input type="checkbox"/>
Osvětlení:	<input checked="" type="checkbox"/>
Jiné:	<input type="checkbox"/>

Popis opatření je v protokolu průkazu a vyhodnocení jejich dopadu na energetickou náročnost je znázorněno šipkou **Doporučeno!**



## UKAZATELE ENERGETICKÉ NÁROČNOSTI BUDOVY

Obálka budovy	Vytápění	Chlazení	Větrání	Úprava vlhkosti	Teplá voda	Osvětlení
U <sub>em</sub> W/(m <sup>2</sup> ·K)	Měrné hodnoty kWh/(m <sup>2</sup> ·rok)					
Mimořádně úsporná <b>A</b>	Dop.		Dop.		Dop.	
Velmi úsporná <b>B</b>		Dop.			XX	XX Dop.
Úsporná <b>C</b>	X,XX	XX				
Méně úsporná <b>D</b>	Dop.		XX			
Nehospodárná <b>E</b>	XX			Dop.		
Velmi nehospodárná <b>F</b>				XX		
Mimořádně nehospodárná <b>G</b>						
<b>Hodnoty pro celou budovu</b> MWh/rok	XX,X	XX,X	XX,X	XX,X	XX,X	XX,X

# Energy specialists

- Ministry of Industry and Trade certification of individual energy experts
- List of energy specialists maintained by Ministry of Industry and Trade
- Fairly important role in the system
- ~1500 certified experts

# Financial instruments

- Investment and non-investment subsidies
  - Investment subsidies
    - European sources – Operational Programmes
    - Domestic sources
  - Non-investment subsidies
    - Various feasibility analyses
    - Technical documentation subsidies
    - Energy audits, assessments
    - Energy Management Standards implementation
    - Information campaigns
- Low interest rate loan schemes and other instruments

# Energy Management Standards

- Implementation of energy management standard ISO 50001
  - In line with ISO 9001 (quality management) and ISO 14001 (environmental management)
- Energy savings stemming from analysis of processes in companies
- No particular requirement to implement yet in companies
- Public institutions encouraged to do so



# Energy Performance Contracting

- Energy companies offer services with a guarantee of energy savings
  - End-user is not responsible for achieving savings
  - Energy savings finance investment
- Financing sources not tied to EPC arrangement
- Purely commercial relationship
- Suitable for wide range of actors
- NAPEE 2014

# Communication

- Information campaigns
- Motivation of key stakeholders
- Explanation of savings' importance from government agencies

# Voluntary agreements

- Not yet present in Czech republic
- Applicability in Czech environment at large scale questionable